



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Florida Air Inspector Reference (FAIR) Training Program

Reference Manual

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3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

More Protection, Less Process

Florida Department of Environmental Protection



Florida Air Inspector Reference (FAIR) Training

Reference Manual

Provided by:

Florida Department of
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REFERENCE MANUAL

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Introduction

Introduction



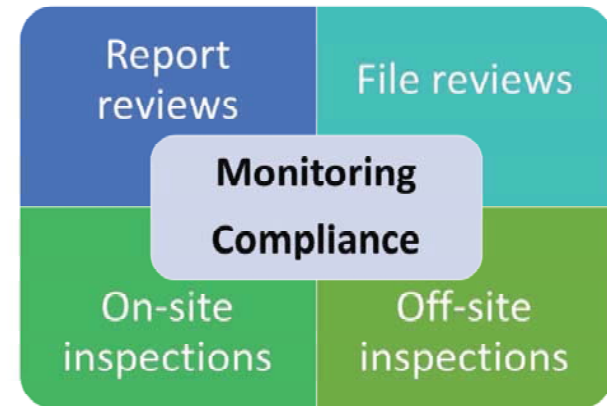
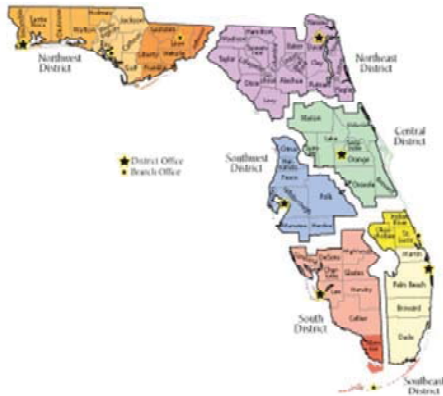
Florida Air Inspector Reference (FAIR)
Training Program

- As you are aware, this training has been created for air inspectors, but we have organized the content so that day one has general applicability to all programs. Even when discussing air specific content, the considerations involved are generally applicable so please be patient when I discuss air-specific content.
- Also, this training was designed for district air inspectors. Local programs may have different processes and procedures than what I present.

Did you know...

- > FL has over 4,000 permitted air facilities across the state
- > Florida Department of Environmental Protection (DEP or Department) has:
 - ❖ 6 district offices
 - ❖ 8 local programs
- > It is DEP's responsibility to:
 - ❖ Monitor the compliance of these facilities
 - ❖ Provide outreach and compliance assistance to the regulated community

DEP's Primary Objective *Compliance with Florida's Environmental Laws*



- Monitoring compliance is done in a variety of ways. Methods include:
 - report reviews
 - file reviews
 - on-site inspections
 - off-site inspections

Requirements

- > In-depth knowledge of facility's permit and it's requirements
- > Familiarity with type of facility
 - ❖ Equipment
 - ❖ Processes
- > Compliance determination regarding facility

Assisting With Compliance

- > Outreach, education, technical assistance
 - ❖ Pre-application meetings
 - ❖ Inspections
 - ❖ Site visits
- > Compliance Assistance
- > Clearer understanding of regulations
- > Less noncompliance
- > Decreased potential of environmental harm

- Assisting with compliance is an integral and fundamental part of the Department's work.
- One of the best ways for Florida to achieve its regulatory objective of compliance with Florida's environmental laws is to provide outreach, education, and technical assistance to regulated parties.
- By working with parties during pre-application meetings, inspections, and compliance assistance visits, facilities develop a clearer understanding of applicable regulatory requirements.
- Educating a facility prior to noncompliance results in fewer violations and decreases the potential for environmental harm.
- Enforcement actions are costly to both the state and regulated industry, and avoiding noncompliance results in a cost-savings to industry and the taxpayers of Florida.

Resolving Noncompliance

Objective → **Achieving compliance**

- > Noncompliance is identified as noncompliance
- > Resolution should focus on returning the facility to compliance
- > Formal Enforcement: when a party is compelled to do something
 - ❖ Corrective action
 - ❖ Pay Penalty
- > Informal Enforcement
 - ❖ Compliance without enforcement
 - ❖ Facility understands requirements and future noncompliance is unlikely

- It is necessary at times for district and local offices to resolve noncompliance using enforcement.
- Florida's focus when resolving noncompliance is achieving compliance with Florida's environmental laws.
- Each instance of noncompliance is unique and it is up to staff and management to decide what enforcement method is proper.
- For facilities with a long history of compliance, sometimes the most appropriate action is educating the facility on the requirement violated and ensuring processes are put in place to prevent future noncompliance. This is especially true when the noncompliance did not result in environmental harm.
- When a facility has a long history of noncompliance, or the noncompliance has led to environmental harm, corrective action or monetary penalties are appropriate.
- When using these enforcement methods, it is important that the corrective action or penalty be meaningful and addresses the harm incurred.
- A low-dollar penalty for an air emission exceedance at a multi-million dollar facility with a long history of noncompliance is not likely to discourage a facility from having future noncompliance. In that situation, a meaningful penalty taking into account the gravity of the noncompliance and the facility's history of permit violations is appropriate.

DEP's Air Resource Management System (ARMS) and AirCom



- The final step in conducting a compliance monitoring activity is documenting the activity in DEP's Air Resource Management System/AirCom.
- DEP has been approved by the United States Environmental Protection Agency to implement the Clean Air Act (CAA).
- DEP has agreed to provide specific data to EPA as part of its CAA approval.
- Nearly all programs have program-specific databases and have their own data reporting requirements and inspectors should be intimately aware of those requirements.
- AirCom is a new system enhancement that replaces the ARMS Compliance Assurance Module, EASIIR, and GPCI for reporting/maintaining compliance & enforcement data.

DEP's Air Resource Management System (ARMS) and AirCom

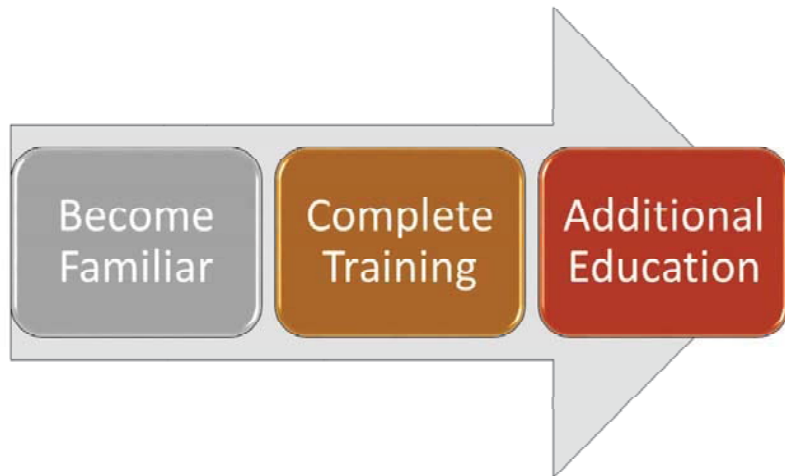
- To meet this obligation, the Division of Air Resource Management (DARM) regularly uploads data from ARMS/AirCom to EPA's Integrated Compliance Information System (ICIS)
 - ❖ Data process starts when a facility's basic "inventory" data is entered into ARMS, generally at the time of permit issuance
 - ❖ Inventory includes owner name, address, number and type of emission units and related emissions limits
 - ❖ Inventory data is then used by compliance and enforcement staff in the districts and local programs to conduct compliance monitoring activities
 - ❖ DARM requires compliance assurance activities to be entered into AirCom as soon as possible but no later than 30 days from the date the activity was performed

DEP's Air Resource Management System (ARMS) and AirCom

- ❖ EPA provides minimum data requirements regarding results of compliance monitoring activities
 - ❖ i.e. All stack test reviews must be uploaded into ICIS within 120 days of performance of the test
- ❖ Data quality is important (i.e. used when formulating environmental and energy policy)
- ❖ To ensure data provided by Florida is accurate, EPA reviews Florida's performance regarding the provision of data every 3-4 years during the State Review Framework process. EPA's findings are provided in a report made available to the public
- ❖ Elements of the State Review Framework need to be a focus for inspectors

- Data quality is important because EPA's regional office has agreed to provide EPA headquarters accurate data, and EPA headquarters has agreed to provide accurate data to the President and Congress, to be used, among other things, when formulating environmental and energy policy.
- EPA provides feedback regarding Florida's data quality and publishes a public report with the results.
- EPA's goal is 100% accuracy and timeliness.
- Facilities must transmit stack test reports to compliance authority within 45 days of test. Reports contain multiple "pollutant tests" and the total number of tests performed is what is tracked by EPA.

FAIR Roadmap



- Becoming familiar with the manual.
- Satisfactorily completing the classroom training.
- Taking any additional courses offered by APTI or CARB relevant to industries in the inspector's jurisdiction.
- This manual contains all the knowledge that will be provided in classroom training, and provides information regarding additional online training offered by such sources as EPA's Air Pollution Training Institute (APTI) and the California Air Resources Board (CARB) and Trinity Consultants. (See appendix to the Introduction section for available courses)

FAIR's Purpose

“Provide uniform and consistent training to district and local program staff”

- Consistent outreach, compliance assistance and monitoring is important so that all environmental resources are provided the same level of regulation and protection across the entire state.
- Consistency is also important to regulated industry. Industry needs to know that the same facility in two different parts of the state will be subject to the same regulation. Without that regulatory certainty, Florida businesses cannot adequately forecast costs and requirements, or properly assess liability.

FAIR's Purpose

> This manual will provide an inspector with the level of knowledge required to:

- ❖ Perform inspections
- ❖ Provide outreach and compliance assistance
- ❖ Inform enforcement measures
- ❖ Enter data into the Department's air database



Additional Training

Welcome to the APTI Learning Management System!

Welcome to APTI-Learn -- the Air Pollution Training Institute (APTI) Learning Management System APTI-Learn provides training for air pollution professionals, although others may benefit from online training. The goal is to facilitate professional development by enhancing the skills needed to understand and implement environmental programs and policies. The curriculum on APTI-Learn is divided by job function (e.g., air toxics, permit writing, ambient monitoring) and includes classroom, self-instructional, and web-based training. To access training opportunities on APTI-Learn, you will need to establish a user profile. APTI-Learn allows you to manage your own training program, track your training efforts, as well as print course completion certificates and training transcripts.

For more information, you can access:

<http://www.apti-learn.net/LMS/login.aspx?ReturnUrl=%2flms%2fdefault.aspx>

APTI CLASSROOM COURSES

APTI 345 Emission Capture and Gas Handling System Inspection (1995)

APTI 350 Asbestos NESHAP Inspection and Safety Procedures (2005)

APTI 380 Fugitive Source Inspection

APTI 400 Introduction to Hazardous Air Pollutants (2009)

APTI 413 Control of Particulate Emissions

APTI 415 Control of Gaseous Emissions (1999)

APTI 418 Control of Nitrogen Oxide Emissions (1999)

APTI 419B Preparation of Fine Particulate Emission Inventories

APTI 423 Air Pollution Dispersion Models - Applications

APTI 424 Introduction to Receptor Modeling

APTI 427 Combustion Evaluation (1980)

APTI 435 Atmospheric Sampling (1983)

(PM 2.5 Monitoring Update-1998)

APTI 444 Air Pollution Field Enforcement (1990)

APTI 445 Inspection of Particle Control Devices (2003) (formerly Baseline Source Inspection Techniques)

APTI 446 Inspection Procedures & Safety

APTI 450 Source Sampling for Pollutants (1995)

APTI 452 Principles & Practices of Air Pollution

APTI 454 Effective Permit Writing

APTI 455 Inspection of Gas Control Devices and Selected Industries (2003) (formerly Advanced Inspection)

APTI 461 Intermediate Permitting

APTI 464 Analytical Methods for Air Quality Standards

APTI 468 Monitoring Compliance Test and Source Test Observation

APTI 470 Quality Assurance for Air Pollution Measurement Systems

APTI 474 Continuous Emission Monitoring (1992)

APTI 482 Sources and Control of Volatile Organic Air Pollutants

APTI SELF-INSTRUCTIONAL COURSES

APTI OS:411A Series 411 - Computational Atmospheric Sciences: Essential Sciences for Air Quality Modeling

APTI OS:411B Series 411 - Computational Atmospheric Sciences: Essential Atmospheric Sciences

APTI OS:411C Series 411 - Computational Atmospheric Sciences: Meteorology for Air Quality Monitoring

APTI OS:411D Series 411 - Computational Atmospheric Sciences: Tropospheric Chemistry for Air Quality Modeling

APTI OS:411E Series 411 - Computational Atmospheric Sciences: Computation Science

APTI OS:411F Series 411 - Computational Atmospheric Sciences: Atmospheric Science Models

APTI RE:100 Basic Concepts in Environmental Sciences - Module 1: Basic Concepts

APTI RE:100 Basic Concepts in Environmental Sciences - Module 2: Characteristics of Gases

APTI RE:100 Basic Concepts in Environmental Sciences - Module 3: Characteristics of Particles

APTI RE:100 Basic Concepts in Environmental Sciences - Module 4: Liquid Characteristics

APTI RE:100 Basic Concepts in Environmental Sciences - Module 5: Flowcharts and Ventilation Systems

APTI RE:100 Basic Concepts in Environmental Sciences - Module 6: Air Pollutants and Control Techniques

APTI RE:100 Basic Concepts in Environmental Sciences - Module 7: Regulatory Requirements

APTI SI:100 Mathematics Review for Air Pollution Control

APTI SI:105 Introduction to Air Pollution Control

APTI SI:300 Introduction to Air Pollution Toxicology

APTI SI:303 Chain-of-Custody

APTI SI:400 Introduction to Risk Assessment/Risk Management

APTI SI:401 Risk-Based Air Toxics

APTI SI:409 Basic Air Pollution Meteorology

APTI SI:410 Introduction to Dispersion Modeling

APTI SI:412A Fabric Filter Operation Review

APTI SI:412B Electrostatic Precipitator Plan Review

APTI SI:412C Wet Scrubber Plan Review

APTI SI:417 Controlling VOC Emissions from Leaking Process Equipment

APTI SI:419A Introduction to Emission Inventories

APTI SI:422 Air Pollution Control Orientation Course

APTI SI:428A Introduction to Boiler Operations

APTI SI:431 Air Pollution Control Systems for Selected Industries

APTI SI:433 Network Design and Site Selection for Monitoring PM 2.5 and PM 10 in Ambient Air

APTI SI:434 Introduction to Ambient Air Monitoring

APTI SI:436 Site Selection for Monitoring of SO₂ and PM₁₀ in Ambient Air

APTI SI:437 Air Pollution Control Technology Series

APTI SI:445 Introduction to Baseline Source Inspection Techniques

APTI SI:446 Air Pollution Source Inspection

APTI SI:460 Introduction to Permitting

APTI SI:471 General Quality Assurance Considerations for Ambient Air Monitoring

APTI SI:473A Beginning Environmental Statistical Techniques

APTI SI:474 Introduction to Environmental Statistics

APTI SI:476B Continuous Emission Monitoring Systems - Operation and Maintenance of Gas Monitors

COMPLIANCE TRAINING COURSES

100 Series Courses

Course Name	Course #
Air Academy Online Training (AAOT)	190
Air Quality Training Program (AQTP) - Online Training	102
Fundamentals of Enforcement (FOE or Smoke School)	100
Visible Emission Evaluation (VEE) Day Certification	100.1
Visible Emission Evaluation (VEE) Night Certification	100.2

200 Series Courses

The 200 Series courses (below) are designed for environmental professionals in government or industry who specialize in air pollution compliance. Each 200 series course focuses on a specific source category and reviews the general process, theories and applications, source emissions and control techniques, applicable laws and regulations, typical source permit conditions, record keeping and monitoring requirements, and compliance inspection procedures. These one and two day courses are comprised of interactive classroom instruction followed by "hands-on" field training at a representative facility which enhances the student's learning experience. Classes generally start at 8:30 a.m. and conclude at 5:00 p.m. Students must bring applicable safety equipment such as hard hats, safety glasses, ear protection, and safety shoes to participate in the field visit. The field visit and the satisfactory completion of the course exam are required before a "Certificate of Completion" is issued. It is recommended that students complete the 100 level courses prior to attending the 200 level training.

Course Name	Course #
Above Ground Storage Tanks	268
Aggregate Plants	243
Aggregate, Asphalt, & Concrete Batching Operations	246
Asbestos Demolition and Renovation - Regulator Training	251
Asbestos Demolitions & Renovations for Contractors	250
Biomass Fired Boilers	274
Cement Plants	245
Chrome Plating ATCM - Regulator Training	290.3
Chrome Plating ATCM: Certification (Recorded)	290.7
Coatings: Auto, Metal Parts, and Products	231
Compliance Assurance Monitoring (CAM)	220
Continuous Emission Monitoring	221
Dry Cleaning	287
Fugitive Dust	252
Graphic Arts	230.4
Health and Safety	202
Health Risk Assessments & Dispersion Modeling	296
Hot Mix Asphalt Facilities	242
In-Station Diagnostics	267
Incinerators	270

COMPLIANCE TRAINING COURSES

200 Series Courses

Industrial Boilers	273
Landfill Gas Control Facilities	285
MACT General Background Information	290
New Source Review (NSR)	297
Observing Source Tests	224
Plastic Composites Manufacturing	261
Reciprocating Internal Combustion Engine Technology	271
Soil Decontamination	283
Solvent Cleaning: Degreasing Operations	233
Stationary Gas Turbines & Power Plants	272
The California Air Pollution Professional	200
Theory & Application of Air Pollution Control Devices	299
Title V Permitting Program Overview	298

300 & 400 Series Courses

The 300 and 400 Series courses (below) are comprised of symposiums, seminars, and workshops that address current and sometimes controversial environmental issues such as cross media training, legal issues, case development and variance/hearing board requirements. This dynamic program is designed for experienced environmental professionals from all levels of regulatory staff and industry. Because of the limited availability of these courses, early registration is highly recommended.

Course Name	Course #
Advanced Variance/Hearing Board Workshop	322
Cal/EPA Basic Inspector Academy	310
CAPCOA Permitting Staff Development Class	330
Chrome Plating (ATCM) - Industry Certification	390.3
Dry Cleaner Air Toxic Control Measure	387
Enhanced Vapor Recovery (EVR) Testing	340.2
Fundamental Inspector Course - Online Training (FIC)	300
Gasoline Facilities Phase I and II Seminar	340
Introductory Variance/Hearing Board Workshop	321
One-Day Cal/EPA Basic Inspector Academy	310.1
Portable Equipment Registration (PERP)/Portable Diesel Engine ATCM	302
RICE NESHAP / IC NSPS	304
RICE NESHAP / IC NSPS - Area Sources Only	304.1
RICE NESHAP / IC NSPS - For Major Sources Only	304.2
Smoke Management Training Workshop	375
Stationary Diesel ATCM	301

COMPLIANCE TRAINING COURSES

Course Name	Course #
Advanced Air Quality Enforcement Workshop	400
Comprehensive Continuous Emissions Monitoring	401

500 Series Courses

The 500 Series courses are focused primarily on Mobile Source Emissions.

Course Name	Course #
In-Use Off-Road Diesel Vehicle Regulation Training	504
Large Spark-Ignition (LSI) Fleet Regulation Training	505
Transportation Refrigeration Units	507
Diesel Exhaust After-treatment Devices	511
Overview of Diesel Emission Control Strategies	511.2
Diesel Vehicle Regulation Overview	512
Tractor-Trailer GHG Regulation Training and Truck and Bus Regulation Overview	514
Maintenance Worker Regulatory Overview	515
How To Comply with CARB Diesel Regulations	520

Additional Diesel Compliance/Retrofit Courses

Course Name	Course #
TRU Tutorial for Broker, Forwarder, Shipper, Receiver, Carrier, and Driver Requirements (online)	NA
Heavy-Duty Vehicle Inspection Program/Periodic Smoke Inspection Program (fee applies)	CCDET I
Diesel Exhaust After-Treatment and Maintenance Training Course (fee applies)	CCDET II

For more information, you can access:

<https://ssl.arb.ca.gov/training/training.htm>

COMPLIANCE TRAINING COURSES

Online Classes

Interactive Training		
Class Date	Class Name	Registration
anytime	#102 - Air Quality Training Program (AQTP) - Online Training	Register Online
anytime	#190 - Air Academy Online Training (AAOT)	Register Online
anytime	#300 - Fundamental Inspector Course - Online Training (FIC)	Register Online

Recorded Video		
Class Date	Class Name	Registration
anytime	#290.7 - Chrome Plating ATCM: Certification (Recorded)	Register Online

For more information, you can access:

<https://ssl.arb.ca.gov/training/training.htm>



TRINITY CONSULTANTS WORKSHOPS 2015

Online Workshops

Compliance Workshop for Ozone Depleting Substances

May 13 - Online

This ½ day course will focus on the compliance with the CFC regulatory requirements of 40 CFR Part 82. Each subpart of this rule will be discussed in detail, utilizing real examples from a variety of industries. The steps necessary to establish appropriate maintenance, recordkeeping, and reporting will be addressed.

Compliance Workshop for Ozone Depleting Substances

October 8 - Online

This ½ day course will focus on the compliance with the CFC regulatory requirements of 40 CFR Part 82. Each subpart of this rule will be discussed in detail, utilizing real examples from a variety of industries. The steps necessary to establish appropriate maintenance, recordkeeping, and reporting will be addressed.

Classroom Workshops

Air Quality Permitting in Florida

Sep 15 - Jacksonville, FL

Trinity Consultants is authorized to be a Florida Board of Professional Engineers Continuing Education Provider.

This popular course provides extensive training on Florida-specific air quality permitting and compliance programs. Attendees leave with a solid foundation of air permitting and regulatory requirements, both at the federal and state level. Emphasis is placed on state-specific construction and operating permitting requirements and the different county and local programs present in Florida.

Air Quality Permitting in Florida

Nov 4 - Tampa, FL

Trinity Consultants is authorized to be a Florida Board of Professional Engineers Continuing Education Provider.

This popular course provides extensive training on Florida-specific air quality permitting and compliance programs. Attendees leave with a solid foundation of air permitting and regulatory requirements, both at the federal and state level. Emphasis is placed on state-specific construction and operating permitting requirements and the different county and local programs present in Florida.

For more information, you can access:

<http://www.trinityconsultants.com/Training/>

Chapter 1

Chapter 1

Understanding Air Pollution and its Regulations



Florida Air Inspector Reference (FAIR)
Training Program

Overview

- > Understanding Air Pollution
 - ❖ The History of Air Pollution
 - ❖ Classification of Air Pollution
 - ❖ Basic Chemistry of Air Pollution
- > Regulation of Air Pollution
 - ❖ Federal
 - ❖ State
 - ❖ Permitting
 - ❖ Air Operation Permits
 - ❖ Permit Application Forms

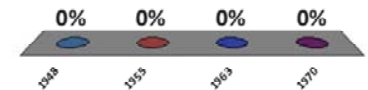
Common Acronyms

- > Clean Air Act (CAA)
- > Clean Air Act Amendments (CAAA)
- > Code of Federal regulations (CFR)
- > Florida Administrative Code (F.A.C.)
- > Florida Statutes (F.S.)
- > State Implementation Plan (SIP)
- > National Ambient Air Quality Standards (NAAQS)
- > National Emission Standards for Hazardous Air Pollutants (NESHAP)
- > New Source Performance Standards (NSPS)
- > New Source Review (NSR)
- > Nonattainment Area (NAA)
- > Prevention of Significant Deterioration (PSD)

- See chapter 1 appendices for additional list with common acronyms.

What year was the Air Pollution Control Act passed?

- A. 1948
- ✓ B. 1955
- C. 1963
- D. 1970



A Little History

"October, 1948 - a thick cloud of air pollution formed above the industrial town of Donora, Pennsylvania. The cloud which lingered for five days, killed 20 people and caused sickness in 6,000 of the town's 14,000 people."

"1952, over 3,000 people died in what became known as London's 'Killer Fog.' The smog was so thick that buses could not run without guides walking ahead of them carrying lanterns."

- > Events like these alerted us to the dangers that air pollution poses to public health.
- > Several federal and state laws were passed, including the original Clean Air Act of 1963, which established funding for the study and the cleanup of air pollution.

- The residents of Donora, a small mill town along the Monongahela River in western Pennsylvania, aren't much worried when a thick fog traps air pollution from the local zinc smelting plant and steel mills over the city. They're used to polluted air, and while the acrid yellow smoke burns eyes and throats, people go to work and kids head off to school. But the pollution, which contains unusually high levels of sulphuric acid, carbon monoxide and fluorine, never dissipates, and by the next day, doctors and health officials are warning anyone with respiratory conditions to get out of town. Unfortunately, the smoke is so thick that it's nearly impossible to drive. Not only are the hospitals soon overflowing, but firefighters with oxygen tanks begin going door to door. Many residents make a point of calling every one of Donora's eight physicians, hoping that will get a doctor to their houses sooner. People start getting very sick. Over the next few days, 20 will die and almost half the town's 14,000 residents will need treatment. Almost 800 animals also die. Still, it takes four days for local doctors to convince the owners of the smelting plant to shut it down temporarily. As it turns out, that same day, Halloween morning, a rainstorm finally clears the air.

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Taken at noon on October 29, 1948, this picture shows the deadly smog blanketing Donora.



Donora's mills belch forth smoke and other substances in a picture



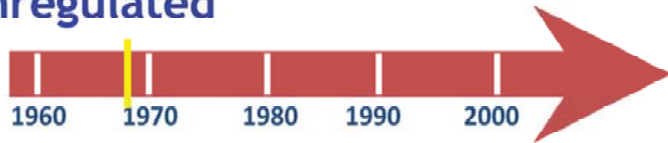
London's Killer Smog
December 5-9, 1952



A tugboat on the Thames near Tower Bridge is moored in heavy smog during the Great Smog of December 1952.

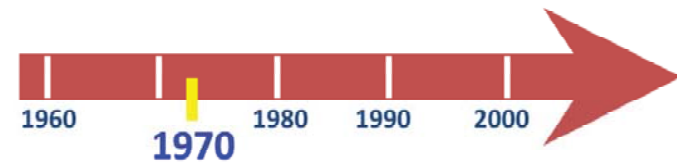
- Continued from previous page.
- Eventually, a local group called the Society for Better Living sued the Zinc Works. Its owners agreed to make a relatively small cash payment, but according to the agreement, the company was absolved of all responsibility for the deaths and illnesses caused by the smog. The U.S. Public Health Service released its own findings in 1949. It concluded that a temperature inversion—where cold air is held close to the Earth's surface by warmer air above it—was responsible. The incident, it said, was a "freak of nature" and an "act of God." Still, the disaster, for the first time, made Americans aware of just how dangerous air pollution could be. In 1955, Congress passed the Air Pollution Control Act, the first federal legislation that recognized pollution as a problem. That was followed by the Clean Air Act in 1963, the first federal law to set standards for air quality. And then, in 1970, President Richard Nixon signed an even tougher Clean Air Act, one that established the Environmental Protection Agency and gave it the authority to enforce air quality standards. By then, though, Donora's smelting plant had closed. So had two mills operated by U.S. Steel. Property values plummeted and people moved away. Donora's population is now less than half of what it was that grim late October week back in 1948. Five years ago, to commemorate the 60th anniversary of the tragedy, the Donora Smog Museum opened in a storefront on a downtown street. The sign out front carries the phrase, "Clean air started here."

Before 1967 - Industry Largely Unregulated



- > No federal environmental programs, few state or local programs
- > No environmental permits
- > No testing, monitoring, recordkeeping, reporting

At the National Level, Everything Started to Change After 1970

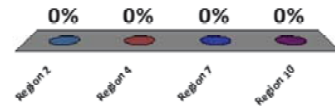


- > The National Environmental Policy Act led to the creation of the Environmental Protection Agency
- > The Clean Air Act was substantially amended



Florida is part of EPA Region __ ?

- A. Region 2
- ✓ B. Region 4
- C. Region 7
- D. Region 10



U.S. EPA - Regional Offices



- > 10 U.S. Regions
- > Florida located in Region 4
- > Region 4 headquarters in Atlanta
- > Air regulations and permitting for stationary sources under "Air, Pesticides, and Toxic Management Division"

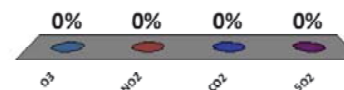
- Region 7 holds a database of Applicability Determinations that give further insights into the implementation and/or regulated sources for various rules.

U.S. EPA - Regional Offices



Which of the following is NOT a Criteria Pollutant?

- A. O_3
- B. NO_2
- ✓ C. CO_2
- D. SO_2



Classification of Air Pollution: Criteria Air Pollutants

- > The Clean Air Act requires EPA to set National Ambient Air Quality Standards for six criteria air pollutants
 - ❖ Ozone (O_3)
 - ❖ Particle pollution, including particulate matter with an aerodynamic diameter equal to or less than 10 microns (PM_{10}) and equal to or less than 2.5 microns ($PM_{2.5}$)
 - ❖ Carbon Monoxide (CO)
 - ❖ Nitrogen Dioxide (NO_2)
 - ❖ Sulfur Dioxide (SO_2)
 - ❖ Lead (Pb)

- EPA calls these pollutants "criteria" air pollutants because it regulates them by developing human health-based and/or environmentally-based criteria (science-based guidelines) for setting permissible levels.
- The set of limits based on human health is called primary standards. Another set of limits intended to prevent environmental and property damage is called secondary standards.
- Ozone, also referred to as "urban smog", is a secondary pollutant meaning that it is not typically emitted directly from industrial sources. It is created by chemical reactions between precursor pollutants, oxides of nitrogen (NO_x) and volatile organic compounds (VOC), in the presence of sunlight. Therefore, regulations require reductions in NO_x and VOC emissions to improve ozone air quality.

Classification of Air Pollution: National Ambient Air Quality Standards (NAAQS)

- > Criteria pollutants used as indicators of overall air quality
- > Maximum ambient concentration levels
 - ❖ Thresholds termed the "National Ambient Air Quality Standards"
 - ❖ Primary standards are health-based standards
- > Areas with ambient air concentrations exceeding NAAQS designated as "nonattainment"

- Primary standards - set at levels "allowing an adequate margin of safety . . . requisite to protect the public health" (based on most sensitive individuals) - 40 CFR 50.2.
- Secondary standards - set at levels adequate to protect "human welfare" where welfare is defined in terms of vegetation, soil, visibility, crops, buildings, property, animals, wildlife, weather, transportation - 40 CFR 50.2.
- NAAQS in Florida:
 - Florida SIP adopts federal NAAQS by reference [Rule 62-204.800(1), F.A.C.].
 - More stringent standards for SO_2 :
 - $260 \mu g/m^3$ (0.1 ppm) - 24-hr concentration not to be exceeded more than once per year.
 - $60 \mu g/m^3$ (0.02 ppm) - Annual arithmetic mean.

Classification of Air Pollution Based on NAAQS Monitoring in Florida

- > FL Spatial Air Quality System
 - ❖ 57 Ozone and 13 PM_{2.5} monitors
 - ❖ 31 counties
- > Air Quality Index (AQI)

Category	AQI	O ₃ 8-hr (ppb)	PM _{2.5} 24-hr (µg/m ³)
Good	0 – 50	0 to 59	0.0 to 15.4
Moderate	51 – 100	60 to 75	15.5 to 40.4
Unhealthy - Sensitive	101 – 150	76 to 95	40.5 to 65.4
Unhealthy	151 – 200	96 to 115	65.5 to 150.4
Very Unhealthy	201 – 300	116 to 374	150.5 to 250.4
Hazardous	301 – 500	-	250.5 to 500.4

- AQI is based on continuous data from ambient monitoring sites for ozone (aka: urban smog) and fine particle data (PM_{2.5}).
- AQI of 100 corresponds to NAAQS (directly of O₃, and indirectly of PM_{2.5} – due to standard being based on 98th percentile).
- *Good*: No health impacts.
- *Moderate*: Ozone: unusually sensitive people should consider reducing prolonged or heavy exertion outdoors. PM: Unusually sensitive people should consider reducing prolonged or heavy exertion.
- *Unhealthy for Sensitive Groups*: Ozone: Active children and adults, and people with respiratory disease should limit prolonged outdoor exertion. PM: People with heart or lung disease, older adults, and children should avoid prolonged or heavy exertion.
- *Unhealthy and Very Unhealthy*: Ozone: Active children and adults, and people with respiratory disease, such as asthma, should avoid all outdoor exertion: everyone else, especially children, should limit outdoor exertion. PM: People with heart or lung disease, older adults, and children should avoid prolonged or heavy exertion. Everyone else should reduce prolonged or heavy exertion.
- *Hazardous*: This would trigger a health warnings of emergency conditions. The entire population is more likely to be affected.

Classification of Air Pollution: Hazardous Air Pollutants (HAPs)

- > List of 187 HAPs found in Section 112(b)(1) - has been updated since initial publication
- > List can be revised through Administrator review per Section 112(b)(2)
- > Any person may petition the Administrator to modify the list per Section 112(b)(3)
- > The provisions of Title I Part C (PSD) do not apply to pollutants listed under this section
- > Common HAPs:
 - ❖ Benzene, Chlorine, Hydrochloric Acid, Perchloroethylene

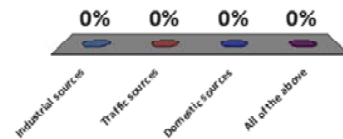
- Link to list of HAPs: <http://www.epa.gov/ttnatw01/188polls.html>

Common HAPs:

- **Benzene**: Benzene is used as a constituent in motor fuels; as a solvent for fats, waxes, resins, oils, inks, paints, plastics, and rubber; in the extraction of oils from seeds and nuts; and in photogravure printing. It is also used as a chemical intermediate. Benzene is also used in the manufacture of detergents, explosives, pharmaceuticals, and dyestuffs.
- **Chlorine**: Chlorine is a commonly used household cleaner and disinfectant. It is widely used as an oxidizing agent in water treatment and chemical processes. It is also used in the bleaching process of wood pulp in pulp mills.
- **Hydrochloric acid**: Used in the production of chlorides, for refining ore in the production of tin and tantalum, for pickling and cleaning of metal products, in electroplating, in removing scale from boilers, for the neutralization of basic systems, as a laboratory reagent, as a catalyst and solvent in organic syntheses, in the manufacture of fertilizers and dyes, for hydrolyzing starch and proteins in the preparation of various food products, and in the photographic, textile, and rubber industries.
- **Perchloroethylene (Tetrachloroethylene)**: Used for dry cleaning and textile processing, as a chemical intermediate, and for vapor degreasing in metal-cleaning operations.

Which of the following constitutes a source of air pollution?

- A. Industrial sources
- B. Traffic sources
- C. Domestic sources
- ✓ D. All of the above



Basic Chemistry: What Causes Air Pollution?

- > Industrial, domestic and traffic sources
- > Combustion of fossil fuels
 - ❖ High levels of smoke and sulfur dioxide
- > Traffic emissions (e.g. motor vehicles)
 - ❖ carbon monoxide (CO)
 - ❖ oxides of nitrogen (NO_x)
 - ❖ volatile organic compounds (VOCs)
 - ❖ particulates (PM₁₀)
- > Photochemical reactions
 - ❖ Ozone formation
 - ❖ Acid rain

- Primary pollutants are emitted directly from sources, such as SO₂ and PM₁₀.
- Secondary pollutants are formed from precursor pollutants in the atmosphere. Photochemical reactions resulting from the action of sunlight on NO_x and VOCs leads to the formation of ozone, a secondary long-range pollutant, which can impact rural areas often far from the original emission site.
- Industrial and domestic pollutant sources, together with their impact on air quality, tend to be steady-state or improving over time.
- However, traffic pollution problems are worsening world-wide. EPA regulates air pollution from vehicles.

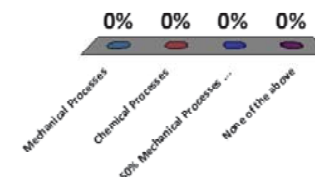
Basic Chemistry: Atmospheric Processes

- > Emission (e.g. cars, stationary sources)
- > Dispersion
 - ❖ Wind
 - ❖ Inversion
- > Transport
 - ❖ Transformation
 - ❖ Deposition

- **Transport.** Winds can carry pollutants far from their sources, so that emissions in one region cause environmental impacts far away. Long-range transport complicates efforts to control air pollution because it can be hard to distinguish effects caused by local versus distant sources and to determine who should bear the costs of reducing emissions.
- **Deposition.** Removal of gaseous or particulate material from the atmosphere by contact with the ground surface or vegetation (or even water surfaces) through transfer processes such as absorption and gravitational sedimentation (dry deposition) or removal through contact with snow, rain, or fog (wet deposition).

Secondary particles are created from:

- A. Mechanical Processes
- ✓ B. Chemical Processes
- C. 50% Mechanical Processes / 50% Chemical Processes
- D. None of the above



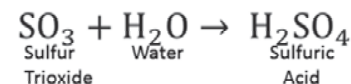
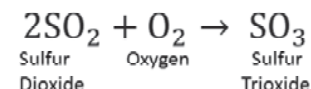
Basic Chemistry: Fine Particles

- > Primary Particles - wide range of materials and sources
 - ❖ Mechanical Processes
 - ❖ Chemical Processes
 - ♦ Weathering
 - ♦ Combustion
- > Secondary particles - formed from chemical reactions
 - ❖ Precursors & Catalysts
 - ❖ Reaction Rates
 - ❖ Growth and Volatility
- > NO_x, SO_x + OH to acids (Also in fog and clouds)
- > NH₃, salts + acids to nitrates, sulfates
- > Organic aerosols (Large alkenes + O₃, Large alkanes + OH Aromatics + OH)

- Primary particles sources: combustion sources (mainly road traffic).
- Secondary particles, mainly sulfate and nitrate formed by chemical reactions in the atmosphere, coarse particles, suspended soils and dusts, sea salt, biological particles and particles from construction work.
- Particles in the air are of different sizes. However, the finer fractions are becoming of increasing interest in terms of health effects.
- Fine particles can be carried deep into the lungs where they can cause inflammation and a worsening of the condition of people with heart and lung diseases. In addition, they may carry surface-absorbed carcinogenic compounds into the lungs.

Basic Chemistry: Sulfur Dioxide (SO₂)

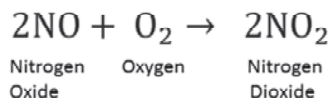
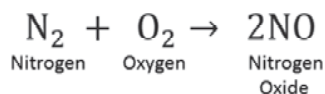
- > Primary air pollutant
- > Forms as a result of coal and petroleum products burning
- > SO₃ reacts with H₂O to produce sulfuric acid



- Sulfur trioxide is a highly irritating gas. It can produce choking, irritating sensations at concentrations as low as 1 ppm.
- Sulfuric acid is a major component of acid rain and a secondary air pollutant – a pollutant formed by the further reaction of a primary air pollutant.
- For simplicity, sulfur dioxide and sulfur trioxide are sometimes combined into the category of sulfur oxides and represented by the generalized formula SO_x.

Basic Chemistry: Nitrogen Oxides (NO_x)

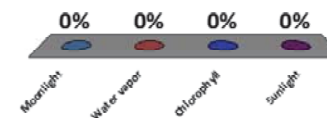
- > Primary air pollutant
- > NO reacts with O₂ to produce nitrogen dioxide



- Nitrogen oxide also forms naturally.
- Nitrogen dioxide is a red-brown, toxic gas that causes irritation to the eyes and the respiratory system.
- At levels of 100 to 200 ppm, nitrogen dioxide can produce an inflammation of the lungs that often appears minor at first but that can become fatal in a few days.
- Further reaction of nitrogen dioxide with atmospheric oxygen and water produces still other oxides of nitrogen, as well as nitric acid, HNO₃, another component of acid rain. In addition, the energetic ultraviolet radiation of sunlight can dislodge one of nitrogen dioxide's oxygen atoms.
- Reaction of this oxygen atom with a diatomic oxygen molecule produces ozone.
- The newly generated oxygen atom can also react with unburned hydrocarbons of auto exhausts to produce a variety of new pollutants.
- To make matters worse, these new pollutants can react further with oxygen molecules and with nitrogen oxides to produce additional pollutants. The complex combination of all these products of the initial interaction of sunlight and nitrogen dioxide is known as photochemical smog.

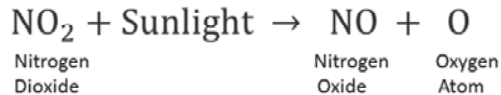
Which of the following is necessary for the formation of photochemical smog?

- A. Moonlight
- B. Water vapor
- C. Chlorophyll
- ✓ D. Sunlight

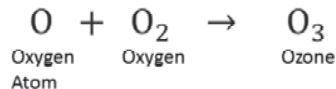


Basic Chemistry: Ozone (O₃)

> Photochemical Smog



> Ozone Formation



- The brown haze of photochemical smog is especially noticeable during periods of thermal inversion, which occur during abnormal weather.
- Normally, air temperature decreases with altitude, with warmer layers of air lying near the ground and cooler air above. Occasionally a layer of warm air moves over a cooler layer below it.
- This inversion of the normal temperature profile traps the cooler air and all the gases in it, including pollutants, until more normal atmospheric conditions return.
- Ozone (O₃) is not emitted directly from any man-made source in any significant quantities. In the lower atmosphere, O₃ is primarily formed by a complicated series of sunlight-initiated oxidation of volatile organic compounds (VOCs) in the presence of nitrogen oxides (NO_x).
- The chemical reactions resulting in the formation of ozone do not take place instantaneously, but can take hours or days, therefore ozone measured at a particular location may have arisen from VOC and NO_x emissions many hundreds or even thousands of miles away. Maximum concentrations, therefore, generally occur downwind of the source areas of the precursor pollutant emissions.
- Ozone irritates the airways of the lungs, increasing the symptoms of those suffering from asthma and lung diseases.

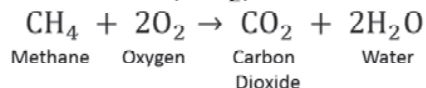
The complete combustion of carbon forms carbon dioxide (CO₂)

- ✓ A. True
B. False

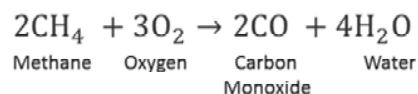


Basic Chemistry: Carbon Monoxide (CO)

- > Complete combustion of carbon forms carbon dioxide (CO₂)



- ❖ With incomplete combustion (i.e. limited supply of air means less available oxygen) and CO is formed instead



- Carbon monoxide is a colorless, odorless gas emitted from combustion processes.
- It can reduce a person's ability to think clearly, and causes visual impairment and headaches if high enough concentrations are experienced for a long period of time. At extremely high levels, CO can cause death.
- Nationally and, particularly in urban areas, the majority of CO emissions to ambient air come from mobile sources.

Basic Chemistry: Lead (Pb)

- > Lead emissions can be emitted directly in various chemical forms and are specific to the process
- > The major sources today are ore and metals processing
- > Metal processing includes lead smelting and electric arc furnaces

- Lead can affect the central nervous system and lead to anemia. The young and the elderly are most susceptible to the harmful effects of lead.
- Lead is a metal found naturally in the environment as well as in manufactured products.
- The major sources of lead emissions have historically been from fuels in on-road motor vehicles (such as cars and trucks) and industrial sources.
- As a result of EPA's regulatory efforts to remove lead from on-road motor vehicle gasoline, emissions of lead from the transportation sector dramatically declined by 95 percent between 1980 and 1999, and levels of lead in the air decreased by 94 percent between 1980 and 1999.
- The major sources of lead emissions to the air today are ore and metals processing and piston-engine aircraft operating on leaded aviation gasoline.
- The highest levels of lead in air are usually found near lead smelters. There is a small lead nonattainment area in Hillsborough County, which includes a lead battery recycling facility (lead smelting).

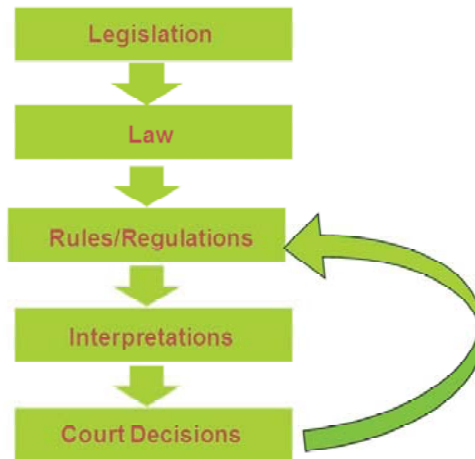
Regulation of Air Pollution

Regulatory Programs

Jurisdiction	Agency	Primary Regulations
Federal	EPA	Code of Federal Regulations
State	DEP	Florida Administrative Code
Local	Local Air Programs	County Ordinances

Permits identify applicable federal, state, and local air quality requirements to provide consistency and promote regulatory certainty.

Federal Regulatory Process Overview



- Rules and Regulations – EPA.
- The rule writers can never adequately write a rule that covers every application of that rule. Interpretations will help cover the different applications.
- EPA regulations are argued in the Washington DC district court system.
- Recently, many promulgated rules have been challenged by both environmental groups and regulated industries.
- Court decisions often “throw out” portions of a rule, rather than the entire rule, making for a confusing implementation process. It's good to collect and store EPA guidance associated with court decisions, so that only the portions of a rule that have been upheld are implemented. A recent example is the Summit Energy case regarding what should be considered “contiguous property” for the purposes of Title V applicability. (See case in attachments.)
- Other important guidance may be found on EPA's Applicability Determination Index (ADI) available on its website.

Federal Regulatory Process Overview

- > Rules and regulations issued by the EPA
- > DEP implements federal regulations on behalf of EPA
 - ❖ Federal regulations that have been adopted or incorporated by reference in Florida regulations are located in 62-204.800, F.A.C.
 - ❖ Non-adopted federal regulations (e.g., 40 CFR 63 Subpart HHHHHH) are administered through EPA Region 4

- For non-adopted federal regulations, all notifications, reports, and petitions must be sent to EPA Region 4 instead of the Florida DEP.

Federal Laws

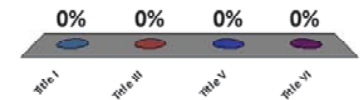
- > 1955 Air Pollution Control Act
- > 1963 Clean Air Act
- > 1967 Air Quality Act
- > 1970 Clean Air Act (as amended)*
- > 1977 CAA Amendments
- > 1990 CAA Amendments

* Although the 1970 Clean Air Act was essentially the first federal legislation for the control of air pollution, it was technically an amended version of the 1963 Clean Air Act. Therefore, it is referred to as both the 1970 CAA and 1970 CAAA.

- The Air Pollution Control Act of 1955 was the first federal legislation involving air pollution. This Act provided funds for federal research in air pollution.
- The Clean Air Act of 1963 was the first federal legislation regarding air pollution control. It established a federal program within the U.S. Public Health Service and authorized research into techniques for monitoring and controlling air pollution.
- The Air Quality Act in 1967 was enacted in order to expand federal government activities. In accordance with this law, enforcement proceedings were initiated in areas subject to interstate air pollution transport. As part of these proceedings, the federal government for the first time conducted extensive ambient monitoring studies and stationary source inspections.
- The Clean Air Act of 1970 (1970 CAA) resulted in a major shift in the federal government's role in air pollution control. This legislation authorized the development of comprehensive federal and state regulations to limit emissions from both stationary (industrial) sources and mobile sources. Four major regulatory programs affecting stationary sources were initiated: the National Ambient Air Quality Standards (NAAQS, pronounced "nax"), State Implementation Plans (SIPs), New Source Performance Standards (NSPS), and National Emission Standards for Hazardous Air Pollutants (NESHAPs).
- *Continued on next page*

Which title of the CAA deals with operating permits?

- A. Title I
- B. Title III
- ✓ C. Title V
- D. Title VI



- *Continued from previous page*
- The 1977 CAA Amendments primarily concerned provisions for the Prevention of Significant Deterioration (PSD) of air quality in areas attaining the NAAQS. The 1977 CAAA also contained requirements pertaining to sources in non-attainment areas for NAAQS. A non-attainment area is a geographic area that does not meet one or more of the federal air quality standards. Both of these 1977 CAAA established major permit review requirements to ensure attainment and maintenance of the NAAQS.
- The 1990 CAA Amendments included new regulatory programs for control of acid deposition (acid rain) and for the issuance of major stationary source operating permits (Title V). The NESHAPs were incorporated into a greatly expanded program for controlling toxic air pollutants based on the Maximum Achievable Control Technology (MACT). The provisions for attainment and maintenance of NAAQS were substantially modified and expanded. Other revisions included provisions regarding stratospheric ozone protection, increased enforcement authority, and expanded research programs.

Titles of the Clean Air Act (CAA)

- > Title I - Provisions for Attainment and Maintenance of National Ambient Air Quality Standards
- > Title II - Provisions Relating to Mobile Sources (not covered in this course)
- > Title III - Air Toxics
- > Title IV - Acid Deposition Control
- > Title V - Operating Permits
- > Title VI - Stratospheric Ozone Protection and Global Climate Protection
- > Additional miscellaneous provisions

- Title I –
 - Air quality and emissions limitation.
 - Ozone protection (now in Title VI).
 - Prevention of Significant Deterioration (PSD) of air quality.
 - Plan requirements for attainment/nonattainment areas.
- Title II –
 - Motor vehicle emission and fuel standards.
 - Aircraft emission standards/establishment of standards.
 - Clean fuel vehicles.

Another View of the CAA

- > EPA regulates air quality using two basic approaches
 - ❖ Establishment of Health-Based Air Quality Standards
 - ❖ Establishment of Technology-Based Emission Standards
- > Challenge: categorize the various elements of the CAA into one, both or neither of these two categories (e.g. administrative)

- Health-based approach: Under the GW Bush and Obama administrations there were a number of changes to standards for pollutants that already had a standard, tightening already existing pollutant standards.

Code of Federal Regulations (CFR)

- > Rules of the Executive departments and agencies of the U.S. Government
- > 50 Titles
 - ❖ Title 40: Protection of Environment
- > Chapter 1, Subchapter C (Parts 50 to 99) contain air regulations

<http://www.gpoaccess.gov/cfr/index.html>

Location of Federal Regulations

Regulation	CAA Section	40 CFR Part
NAAQS	109	50
SIPs		51
Non-Attainment	171-193	52.24 51 Appendix S
NSPS	111	60
NESHAPs	112	61
NESHAP (MACT)	112	63
Accidental Release	112	68
CAM	114	64
Acid Rain	401-416	72-77
Operating Permits	501-507	70-71
Stratospheric Ozone Protection	601-618	82
Federal NOx Budget	126	96-97
CAIR	126	96-97
GHG Reporting	114&208	98

Federal Register

- > The Federal Register (the daily newspaper of the Federal government) is a legal newspaper published every business day by the National Archives and Records Administration (NARA)
- > The Federal Register Contains:
 - ❖ Federal Agency Regulations
 - ❖ Proposed Rules and Public Notices
 - ❖ Executive Orders
 - ❖ Proclamations
 - ❖ Other Presidential Documents

<http://www.gpo.gov/fdsys/browse/collection.action?collectionCode=FR>

- The Federal Register notices can provide useful information regarding EPA's intent on the requirements for a proposed or final rule.

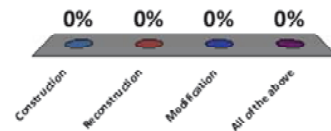
CAA: New Source Performance Standards (NSPS) (1 of 2)

- > Regulations developed by EPA for specific industries or types of emission units
- > Effective date is typically the proposal date
- > Appear in 40 CFR 60 (mandated under CAA Section 111)
- > Based on:
"the best system of continuous emission reduction which (taking into consideration the cost of achieving such emission reductions and any non-air quality health and environments)...has been adequately demonstrated" (40 CFR 60)

- "40 CFR 60" means Title 40, Part 60 NSPS, Code of Federal Regulations.
- Commonly Applicable NSPS Subparts:
 - Subpart A - general provisions.
 - Applicable only to facilities subject to another NSPS subpart.
 - Definitions - Construction, Reconstruction, Modification.
 - Initial Performance Test Requirements.
 - Initial Reporting Requirements.
 - Subpart Db - industrial steam generating units >100 MMBtu/hr after 6/19/84.
 - Subpart Dc - industrial steam generating units >10 and <100 MMBtu/hr after 6/9/89.
 - Subpart Kb - volatile organic liquid storage vessels >10,567 gals (40 m3) after 7/23/84.
- Exception: CAA Section 129 requires EPA to promulgate regulations for incinerators in Part 60, which includes requirements for both criteria and hazardous air pollutants

What triggers NSPS applicability?

- A. Construction
- B. Reconstruction
- C. Modification
- ✓ D. All of the above



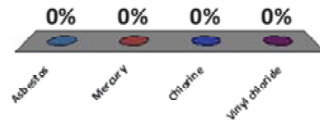
CAA: New Source Performance Standards (NSPS) (2 of 2)

- > Standards typically consist of:
 - ❖ Emission limitations
 - ❖ Stack testing
 - ❖ Monitoring requirements
 - ❖ Record keeping
 - ❖ Notification requirements
 - ❖ Reporting requirements
- > Applicability triggered by *construction, reconstruction, or modification*

- Affected facility - with reference to a stationary source, any apparatus to which a standard is applicable. Example of a "facility" is a boiler or a tank.
- Construction - fabrication, erection, or installation of an affected "facility". Relocating an affected facility is not construction.
- Reconstruction - The replacement of components of an existing facility to such an extent that:
 - The fixed capital cost of the new components exceeds 50% of the fixed capital cost that would be required to construct a comparable entirely new facility.
 - It is technologically and economically feasible to meet the applicable standards set forth in this part (rarely used defense). (40 CFR §60.2)
 - EPA guidance: costs for non-routine renovations must be aggregated over the life of the unit for comparison to the 50% level. (ADI Memo #PS41)
- *Continued on next page*

Which of the following is NOT a Part 61 NESHAP pollutant?

- A. Asbestos
- B. Mercury
- ✓ C. Chlorine
- D. Vinyl chloride



- Continued from previous page
- **Modification** - Any physical or change in the method of operation of an existing facility (a boiler, a storage tank, etc.) which increases the amount of any air pollutant (to which a standard applies) emitted into the atmosphere by that facility or which results in the emission of any air pollutant (to which a standard applies) into the atmosphere not previously emitted. (40 CFR 60.2 & 60.14)
 - Definition of “increases the amount of any air pollutant”:
 - HOURLY emissions rate change. (40 CFR §60.14(b))
 - Interpreted as increase in short-term mass emission rate.
 - Increasing hours of operation alone without an increase in hourly emissions rate does not constitute a modification. (40 CFR §60.14(e)(3))
 - Definition of “to which a standard applies”:
 - An increase in emissions of a pollutant not regulated by the NSPS Subpart is not a modification.
 - Applicability is pollutant-specific: The only applicable sections of an NSPS Subpart are those which regulate the pollutant whose emissions increased due to the modification. (40 CFR 60.14(a))
 - Modification Exception: Maintenance, repair, and replacement (RMRR) of equipment that is routine which does not constitute a reconstruction. (40 CFR §60.14(e)(1))

CAA: Part 61 NESHAP Pollutant-Specific, Health-Based Standards

- > Section 112 of the 1970 Clean Air Act Amendments
- > EPA established National Emission Standards for Hazardous Air Pollutants (NESHAPs)
- > Provides “an ample margin of safety to protect the public health”
- > Part 61 NESHAP Pollutants:
 - ✦ Inorganic arsenic
 - ✦ Asbestos
 - ✦ Benzene from fugitive sources
 - ✦ Beryllium
 - ✦ Radionuclides
 - ✦ Radon
 - ✦ Mercury
 - ✦ Vinyl chloride

- 40 CFR 61 = “Title 40, Part 61 NESHAP, Code of Federal Regulations”
- Difficulties with the Pre-1990 CAAA approach included:
 - Developing regulations on a pollutant-by-pollutant vs. source-by-source basis.
 - Establishing risk-based standards (acceptable risk vs. ample margin of safety).
 - Substantial delays in developing these NESHAPs caused by challenges in court.

Part 63 NESHAP standards are industry-specific.

- ✓ A. True
- B. False



CAA: Part 63 NESHAP Industry-Specific, Maximum Achievable Control Technology (MACT) (1 of 2)

- > List of industrial categories emitting substantial quantities of HAPs
- > EPA published initial list July 16, 1992
 - ❖ 166 categories of major sources
 - ❖ 8 categories of area sources
- > List can be revised per 112(c)(9) procedures
- > Regardless of its potential to emit HAPs, a facility is only subject to Section 112(d) if it belongs to one of the listed source categories OR if it contains a unit that is listed as such a source category

- Commonly Applicable MACT:
 - A - General Provisions.
 - MACT standards, 112(d).
 - Case-by-Case MACT, 112(j).
 - Modification, 112(g).
 - Early reductions, 112(i).
 - BB - Phosphate Industry.
 - EEEE - Organic Liquids Distribution (OLD).
 - ZZZZ - Reciprocating Internal Combustion Engines (RICE).
 - Final Rule 1/30/13.
 - Reconsideration announced 9/5/13.
(<http://www.gpo.gov/fdsys/pkg/FR-2013-09-05/pdf/2013-21626.pdf>)
 - DDDDD - Industrial Boilers (Boiler MACT):
 - Finalized 1/31/13 - Existing boilers must comply by 1/31/16.
 - JJJJJ - Industrial Boilers located at Area Sources:
 - New boilers subject as of May 20, 2011.
- MACT Schedule for Emission Standards and Review:
 - Section 112(e) requires that EPA establish a schedule for promulgating standard for sources in the listed categories.
 - Source categories that are subsequently added to the initial list are required to have standard promulgated by 2000 or 2 years after listing, whichever is later.

CAA: Part 63 NESHAP Industry-Specific, Maximum Achievable Control Technology (MACT) (2 of 2)

- > For each MACT standard there are two levels of control requirements
 - ❖ MACT for new sources
 - ❖ MACT for existing sources
- > For each source category there are at least two rounds of MACT
 - ❖ Round 1 - technology-based MACT - defined regardless of risk (Section 112(d))
 - ❖ Round 2 - residual risk standard - second round 8 years later which sets new standards based upon risk (Section 112(f))
 - ❖ Review every 8 years thereafter

- MACT Emission Reduction EPA estimates:
 - Annual reductions in HAP of 1.5 MMtons from already promulgated rules.
 - An additional 0.5 million tons in annual reductions will occur when all MACT rules (including residual risk rules) are in place.
- MACT Operation and Maintenance Requirements:
 - Requirements are enforceable.
 - Source must develop and implement a written start-up, shutdown, and malfunction plan (SSMP).
 - Describe procedures for operating and maintaining the source during start-up, shutdowns, and malfunctions.
 - Describe a program of corrective action for malfunctioning process and air pollution control equipment.
 - Must keep records demonstrating that plan was followed.
 - Must be developed by the source's compliance date in standard.
 - Must be incorporated by reference into source's Title V permit.
 - **Note:** certain MACT standards have had recent court decisions remove their SSM allowances. See EPA's "Kushner Letter" (<http://www.epa.gov/oecaerth/civil/caa/ssm-memo080409.pdf>) for a list of MACTs that have been affected by this court ruling.

CAA: New Source Review (NSR) Reform

- > EPA's NSR reform included following elements
 - ❖ Plant-wide Applicability Limits (PALs)
 - ❖ Emission Change Calculations
 - ❖ Reasonable Possibility Provisions
- > NSR Reform in Florida
 - ❖ Construction permit required for a "PAL"
 - ❖ Since construction permit required for addition of pollution controls and most physical or operational changes, FL did not adopt the concept of "reasonable possibility"
 - ❖ Regulated air pollutant for purposes of PSD is each "PSD Pollutant", which includes mercury but not ozone-depleting substances

- EPA proposed revisions to the Prevention of Significant Deterioration (PSD) and Nonattainment New Source Review (NNSR) rules on July 23, 1996 (61 FR 38250).
- EPA proposed additional revisions to the PSD and NNSR rules over the next 10 years, many to address lawsuits and court decisions regarding the 1996 proposal.
- NSR Reform originally included 6 elements; 3 were vacated by DC Court rulings:
 - Clean Unit Provisions (vacated by 6/24/2005 DC Circuit Court ruling);
 - Pollution Control and Prevention Projects (vacated by 6/24/2005 DC Cir.);
 - Equipment Replacement Rule (ERP) (vacated by 3/17/2006 DC Cir.).
- Reasonable possibility:
 - Projects that do not result in a "significant net emissions increase" are exempt from NSR permitting however EPA has required facilities to document their determinations and track future emissions if there is a "reasonable possibility" that a significant emission increase could occur.
- NSR Reform in Florida:
 - Ch. 62-210, 62-212 amendments adopted, effective February 2, 2006;
 - Ch. 62-204, 62-296 amendments adopted, effective February 12, 2006;
 - Proposed SIP Revision submitted to EPA on February 3, 2006 and approved June 2008.

CAA: NSR Reform - Plantwide Applicability Limitations

- > PAL means a pollutant specific limit derived from the baseline actual emissions of all emissions units at the source that emit or have the potential to emit the specific pollutant
- > The PAL is set equal to the sum of the baseline actual emissions of all emission units at the source plus the applicable significant emission rate (SER) for the specific pollutant
- > PAL is valid for 10 years
 - ❖ Upon renewal, emissions level may be reevaluated based on air quality needs, advances in technology, and control cost effectiveness considerations

- PALs negate the need for the RMRR exclusion (and eliminate questions of emission increase accounting, debottlenecking and aggregation as well).
- General requirements for PALs:
 - PAL imposes an annual emission limitation in tons per year (a 12-month total, rolled monthly).
 - PAL must be established with public participation.
 - PAL must be established in a permit with specific PAL conditions (including monitoring, recordkeeping, and reporting requirements).
 - PAL must include fugitive emissions and emissions due to maintenance, startup, and shutdown.
- Monitoring Requirements:
 - Mass balance calculations for activities using coatings or solvents.
 - Continuous Emissions Monitoring Systems (CEMS).
 - Continuous Parameter Monitoring Systems (PEMS).

CAA: NSR Reform - Emissions Change Calculations

- > PAE vs BAE test for PSD applicability

- Baseline actual emissions means the rate of emissions (in tons per year) of a regulated NSR pollutant averaged over a consecutive 24-month period and within the most recent 10 years (5 years for EUSGUs).
- Fugitive emissions (to the extent quantifiable) and emissions from start-up, shutdown, and malfunctions must be included in baseline actual emissions.
- Actual emissions must be adjusted downward to exclude emissions that would have exceeded an emissions limitation with which the source must currently comply. (Part 63 mandates reduction of HAPs. When using a control device to reduce HAPs, one often gets a reduction in criteria pollutants as well. These reductions are generally not excluded from baseline emission calculations.)

EPA is Florida's lead agency for environmental management and stewardship of the state's natural resources.

A. True

✓ B. False



Florida Department of Environmental Protection

- > State's lead agency for environmental management and stewardship of State's natural resources
 - ❖ Air, water, and land
- > Executive agency led by Secretary
- > Secretary appointed by Florida's Governor
- > Implements the federal CAA by means of state regulations and State Implementation Plan (SIP)

Florida Department of Environmental Protection

- > Chapter 403 of the Florida Statutes (F.S.), entitled “Environmental Control”, provides legal authority for most Air Resource Management within the Florida Department of Environmental Protection (DEP)

<http://www.dep.state.fl.us/air/rules/flstatutes.htm>

Division of Air Resource Management Vision



“As part of Florida's lead environmental management and stewardship agency, we encourage healthy communities and a prosperous economy by fairly and responsibly regulating Florida's air resource. Through effective partnerships, sound practices, and innovative solutions, we envision a future where the need for regulation of air pollution is minimized.”

Division of Air Resource Management Mission Statement

“The Division will responsibly manage Florida's air resource and provide a predictable legal and regulatory environment through consistent and efficient regulation of industry and accountability to our customers. The Division is mindful that the manner in which it executes its duties affects Florida's economy. Our mission recognizes that consistent and fair regulation is integral to maintaining a prosperous State.”

Division of Air Resource Management Organization (1 of 4)

- > DEP's Division of Air Resource Management (DARM) includes four “offices” in Tallahassee associated with air pollution rules, permitting, compliance assurance, and emissions monitoring
 - ❖ Office of Air Monitoring
 - ❖ Office of Business Planning
 - ❖ Office of Permitting and Compliance
 - ❖ Siting Coordination Office

- The Division of Air Resource Management is charged with regulation of Florida's air resource, including air monitoring, permitting and compliance of emission sources, and implementing the Siting Acts.
- The Division primarily focuses on meeting federal requirements and ensuring consistent regulation across the state and setting statewide policy for compliance and enforcement.

Division of Air Resource Management Organization (2 of 4)

- > **Office of Air Monitoring (OAM)** is responsible for coordinating the statewide ambient air quality monitoring network
 - ❖ Ambient Monitoring
 - ❖ Air Quality Index
- > **Office of Business Planning (OBP)** is responsible for developing air pollution rules as directed by the Florida Statutes and federal Clean Air Act
 - ❖ Regulatory Reform, Legislative Affairs, and Policy Support
 - ❖ Meteorology and Predictive Air Modeling
 - ❖ Budget, Contracts, Grants and Training
 - ❖ Administrative Support

Division of Air Resource Management Organization (3 of 4)

- > **Office of Permitting and Compliance (OPC)** is responsible for coordinating statewide permitting, compliance assurance, and enforcement among state's air programs, local air programs and the EPA
- > **Compliance and Enforcement Section**
 - ❖ Oversight of statewide compliance/enforcement activities including asbestos
 - ❖ Data management systems and tools
 - ❖ General permit processing
 - ❖ Small Business Environmental Assistance Program
- > **Permitting Section**
 - ❖ Process all PSD and Title V permits for major industry groups
 - ❖ Oversight of District/Local permit programs

- The Division processes all air construction permits subject to major new source review (PSD and NAA preconstruction review).
- The Division processes all air construction and Title V air operation permits for acid rain sources (large power plants), waste-to-energy plants, and Class I municipal waste landfills.

Division of Air Resource Management Organization (4 of 4)

> Siting Coordination Office (SCO)

- ❖ Coordinates the interagency review and certification for building and operating power plants, transmission lines and natural gas pipelines
- ❖ Responds to questions regarding electric and magnetic fields (EMF) generated by electrical transmission lines, which are also regulated by DEP.
- ❖ Reviews required compliance reports submitted by companies that construct or operate transmission lines.
- ❖ Assists county tax appraisers in determining eligibility for ad valorem tax reductions for air or water pollution control equipment.

- DEP's Siting Coordination Office and Office of General Counsel provide administrative and legal support for the certification process. Certification is an all encompassing license for affected state, regional and local agencies, and includes any regulatory activity which would be applicable under these agencies regulations for the facility. Though DEP is responsible for coordinating the certification process, the Governor and Cabinet issue siting certifications.

DEP Districts and Local Air Programs

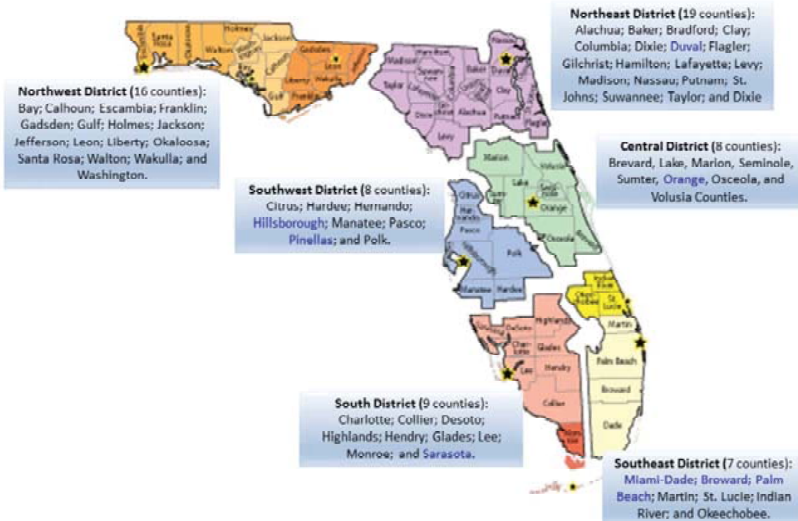
- > Six (6) DEP districts: Central, Northeast, Northwest, South, Southeast, Southwest
- > Local Air Programs:

Broward County (DPEP)	Orange County (EPD)
City of Jacksonville/Duval (EQD)	Palm Beach County (DOH)
Hillsborough County (EPC)	Sarasota
Miami-Dade County (RER)	Pinellas *

Pinellas – Not a permitting authority. This Local Air Program only does compliance and enforcement

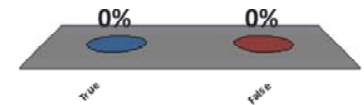
- DPEP -> Department of Planning and Environmental Protection
- EQD -> Environmental Quality Division
- EPC -> Environmental Protection Commission
- RER -> Regulatory and Economic Resources
- EPD -> Environmental Protection Division
- DOH -> Department of Health
- The Districts cover specific geographical areas of the State and are responsible for conducting compliance activities (inspections, report reviews, etc.), performing compliance assistance, resolving noncompliance, permitting minor sources and permitting some categories of Title V major sources.
- The eight approved Local Air Pollution Control Programs perform work on behalf of the State pursuant to specific operating agreements (SOAs) with the Department.
 - Not all local air programs perform the same tasks on behalf of the Department; some only monitor air quality and perform compliance activities while others conduct a broader range of permitting and compliance activities.

DEP District and Local Programs - Map



Florida's State Implementation Plan (SIP) is approved by EPA.

- ✓ A. True
- B. False



Florida Air Pollution Control Programs (1 of 2)

- > Title 62, Florida Administrative Code (F.A.C.)
- > State Implementation Plan (SIP)
- > Emissions Guidelines for Existing Sources (111(d) Plan)
- > Standards of Performance for New Stationary Sources (NSPS)

- **Title 62, Florida Administrative Code** - All of the Department's rules are encompassed within Chapter 62 of the *Florida Administrative Code*. This includes state-initiated rules as well as rules implementing the federal CAA requirements., F.A.C. Chapters 403, 120, 320, and 376, *Florida Statutes*, provide the authority for the Department to implement Florida's air program.
- **State Implementation Plan (SIP)** - The SIP is approved by EPA pursuant to section 110 of the Clean Air Act. On May 31, 1972, EPA approved Florida's original plan. The SIP is identified at 40 CFR 52, Subpart K, and the list of approved SIP revisions is found at 40 CFR 52.520.
- **Emissions Guidelines for Existing Sources (111(d) Plan)** - The 111(d) Plan is similar to the SIP but is approved by the EPA pursuant to section 111(d) of the CAA, rather than section 110. As Emissions Guidelines are promulgated by EPA for a category of "designated facilities," the state must revise its 111(d) Plan to implement them. The Florida 111(d) Plan is identified at 40 CFR 62, Subpart K, and the list of approved plan revisions is found at 40 CFR 62.2350.
- **Standards of Performance for New Stationary Sources (NSPS)** - The original delegation of authority was made by EPA on June 10, 1982. Since then, EPA has expanded the delegation several times to include new NSPS provisions adopted by reference by the Department. Florida's delegated program includes the NSPS provisions of 40 CFR Part 60, adopted by reference at Rule 62-204.800, F.A.C.

Florida Air Pollution Control Programs (2 of 2)

- > National Emission Standards for Hazardous Air Pollutants (NESHAPs)
- > Acid Rain Program (Title IV)
- > Air Operating Permits Program (Title V)

- **National Emission Standards for Hazardous Air Pollutants (NESHAPs)** - Florida's delegated program includes the NESHAP provisions of 40 CFR Part 61, adopted by reference at Rule 62-204.800, F.A.C., and 40 CFR Part 63, also adopted by reference at Rule 62-204.800, F.A.C. The original delegation of authority (of the Part 61 NESHAPs) was made by EPA on June 10, 1982, and updated several times thereafter. Authority to continue implementing the Part 61 NESHAPs, and to implement the new Part 63 NESHAPs, was delegated to the Department concurrent with EPA's interim approval of the State's Title V air permitting program, effective October 25, 1995. As part of this approval, EPA approved Florida's program for receiving future delegation of section 112 standards that are adopted by reference unchanged. Therefore, all NESHAP provisions adopted by reference since October 25, 1995, become part of Florida's delegated program immediately upon adoption by the Department.
- **Acid Rain Program (Title IV)** - Authority to issue Phase II acid rain permits pursuant to Title IV of the CAA is granted by EPA to states that have approved Title V air permitting programs. On December 7, 1995, EPA provided notice that Florida is authorized to accept Phase II acid rain permit applications and issue acid rain permits. The Department implements this authority by including an "Acid Rain Part" in each Title V permit for an "Acid Rain Source."

Florida State Implementation Plan

- > SIPs are developed by state and local agencies and approved by the EPA
- > Purposes of the SIP:
 - ❖ Demonstrate that the state has the basic air quality management program components in place to implement a new or revised NAAQS
 - ❖ Identify the emissions control requirements the state will rely upon to attain and/or maintain the primary and secondary NAAQS
 - ❖ Review the impacts for new growth
- > Recent revisions have focused on ozone (NO_x/VOC) and PM₁₀ and PM_{2.5}
- > Florida SIP:
<http://www.epa.gov/region4/air/sips/fl/contents.htm>

- **Air Operating Permits Program (Title V)** - Effective October 25, 1995, EPA gave interim approval to Florida's Title V air permitting program and full approval effective October 31, 2001. The purpose of the Title V program is to collect together into a single permit all SIP, 111(d), NSPS, section 112, Title IV, and other applicable requirements. As such, the Title V program is not part of the SIP, and Title V permits cannot be used to alter SIP-established requirements.
- **State Implementation Plan (SIP)** - The SIP is approved by EPA pursuant to section 110 of the Clean Air Act. On May 31, 1972, EPA approved Florida's original plan. The SIP is identified at 40 CFR 52, Subpart K, and the list of approved SIP revisions is found at 40 CFR 52.520.
- The SIP includes Florida's preconstruction review program for both minor sources and PSD major stationary sources.

Florida Air Regulations

- > Air regulatory programs are identified in Title 62, F.A.C
- > There are 13 chapters covering all air programs and rules
- > Current version of regulations available from DEP
 - ❖ Contact Marnie Brynes at (850) 717-9029
Marnie.Brynes@dep.state.fl.us
 - ❖ www.dep.state.fl.us/air/rules/current.htm

F.A.C. Primary Chapters

F.A.C. Chapter	Title	Effective
Chapter 62-4, F.A.C.	Permits	10/1/13
Chapter 62-204, F.A.C.	Air Pollution Control - General Provisions	1/14/15
Chapter 62-210, F.A.C.	Stationary Sources - General Requirements	8/25/14
Chapter 62-212, F.A.C.	Stationary Sources - Preconstruction Review	3/28/12
Chapter 62-213, F.A.C.	Operation Permits For Major Sources of Air Pollution	12/31/13
Chapter 62-214, F.A.C.	Requirements For Sources Subject to the Federal Acid Rain Program	3/11/10
Chapter 62-243, F.A.C.	Tampering With Motor Vehicle Air Pollution Control Equipment	2/16/12
Chapter 62-252, F.A.C.	Gasoline Vapor Control	9/24/13
Chapter 62-256, F.A.C.	Open Burning	10/6/08
Chapter 62-257, F.A.C.	Asbestos Program	2/16/12
Chapter 62-285, F.A.C.	Greenhouse Gas Emissions Reduction	2/16/12
Chapter 62-296, F.A.C.	Stationary Sources - Emission Standards	7/10/14
Chapter 62-297, F.A.C.	Stationary Sources - Emissions Monitoring	3/9/15

- The Department can also adopt the federal air pollution regulations of the Environmental Protection Agency (EPA) from Title 40 of the Code of Federal Regulations (CFR):
 - o Part 60, New Source Performance Standards (NSPS);
 - o Part 61, National Emission Standards for Hazardous Air Pollutants (NESHAP), which regulate a specific hazardous air pollution;
 - o Part 63, NESHAP, which regulate specific industrial categories.
 - o The adoption of federal regulations is identified in Chapter 62-204, F.A.C.
- Similar to the Federal Register (FR), the Florida regulations are posted in the Florida Administrative Register (FAR): <https://www.flrules.org/>.
- See chapter 1 appendices for copies.

Permitting

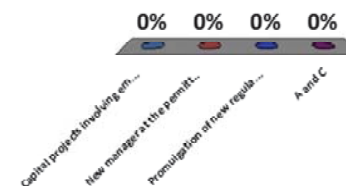
Permitting: General Information

- > Depending on location and type of permit, applications are processed by:
 - ❖ Department's Office of Permitting and Compliance in the Division of Air Resource Management
 - ❖ Department's District offices
 - ❖ Approved local air program offices with delegated air permitting responsibilities

- The Department's Office of Permitting and Compliance in the Division of Air Resource Management is responsible for processing applications for: air construction permits subject to the preconstruction review requirements for the prevention of significant deterioration (PSD) of air quality; air construction permits subject to the preconstruction review requirements for nonattainment areas; air construction permits for all large power plants including waste-to-energy plants; Title V air operation permits for all acid rain sources; and all air permits for Class I municipal waste landfills. This office also handles the registrations for all air general permits throughout the state.
- The Department's District offices are responsible for processing applications for the following facilities located within the District office boundaries and not under the permitting authority of the Division or one of the approved local air program offices including the following types: air construction and operation permits for minor sources; federally enforceable state operation permits (FESOP); and some Title V air operation permits.
- *Continued on next page*

What triggers the need for an air permit?

- A. Capital projects involving emission units
- B. New manager at the permitted facility
- C. Promulgation of new regulations
- ✓ D. A and C



- *Continued from previous page*
- The following counties operate local air program offices with air permitting programs approved by the Department through specific operating agreements (SOAs): Broward, Duval, Hillsborough, Miami-Dade, Orange, Palm Beach, and Sarasota (non-Title V permitting). As authorized under the SOA, each program is responsible for processing air permit applications for facilities located within its boundaries and not under the permitting authority of the Division or one of the District offices, which generally includes the following types: air construction and operation permits for minor sources; federally enforceable state operation permits (FESOP); and some Title V air operation permits. Also, the SOA precludes a local air program office from processing applications for county-owned or operated facilities to prevent a possible conflict of interest.
- In addition, the Department's District offices and approved local air program offices are responsible for making determinations on requests for case-by-case exemptions from air permitting requirements pursuant to Rule 62-4.040, F.A.C. for the facilities over which it has permitting jurisdiction.

What Triggers the Need for Air Permitting?

- > Capital projects involving emission units
 - ❖ Construct a new emission unit
 - ❖ Reconstruct an existing emission unit
 - ❖ Modify an existing emission unit (and affect emissions)
 - ❖ Modify method of operation
- > New regulations are promulgated
 - ❖ Title V of 1990 Clean Air Act
 - ❖ NO_x SIP Call
 - ❖ Change in attainment status

- Examples of Capital Projects:

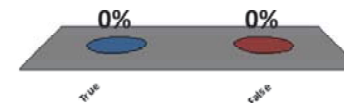
- Purchase and install new steam boiler.
- Install a new spray booth line.
- Change burners in boiler to use alternate fuel or increase capacity.
- Install thermal oxidizer (control equipment).

- Examples of New Regulations:

- Non-attainment designation or air quality maintenance areas - RACT (NO_x, VOC, PM, lead).
- Title V regulations require submittal of major source operating permit applications.

A facility can operate under an air construction permit.

- ✓ A. True
- B. False



FL State Permit Applicability

Rule 62-210.200, F.A.C.

- > An air construction permit shall be obtained for any proposed new, reconstructed, or modified facility or emissions unit, or any new pollution control equipment prior to the beginning of construction, reconstruction, or modification of the facility or emissions unit or addition of the air pollution control equipment
- > Facility can operate under air construction permit until operation permit is obtained

- *Construction* – act of performing on-site fabrication, erection, installation or modification of an emissions unit or facility of a permanent nature ... Land clearing and other site preparation activities are not a part of the construction activities. See definition of construction in 62-210.200, F.A.C.
- *Modification* – any physical change in, change in the method of operation of, or addition to a facility which would result in an increase in the actual emissions of any air pollutant subject to regulation, including any not previously emitted, from any emissions unit or facility.
- Modification Exemptions:
 - Routine maintenance, repair or replacement.
 - Change in ownership of an emission unit or facility.
 - Increase in production rate (if not exceeding design capacity nor production rate in permit).
 - Increase in hours of operation (as long as not exceeding permitted hours).
 - Alternative fuels if the emission unit is designed and permitted to accommodate.

FL State Permit Exemptions (1 of 4)

- > Exemptions By Category
 - ❖ Rule 62-210.300(3)(a), F.A.C.
- > Examples:
 - ❖ Multiple fossil fuel steam generators and hot water generating units exemptions based on heat input capacities and amount of fuel combusted
 - ❖ Emergency generators exemptions based on units not being subject to federal Acid Rain Program and amount of fuel combusted
 - ❖ Surface coating operations utilizing only coatings containing 5.0 % or less VOC, by volume
 - ❖ Brazing, soldering or welding equipment

FL State Permit Exemptions (2 of 4)

- > Generic Emission Unit Exemptions
 - ❖ Rule 62-210.300(3)(b)(1), F.A.C.
- > **Unit** not entitled to a categorical exemption is exempt from permitting requirements if it meets the following criteria:
 - ❖ Not subject to unit-specific limitation or requirement
 - ❖ PTE < 500 lb/yr of lead
 - ❖ PTE < 1,000 lb/yr of any individual HAP
 - ❖ PTE < 2,500 lb/yr of total HAPs
 - ❖ PTE < 5 tons/yr of any other regulated pollutant
 - ❖ PTE in combination with other emission units would not cause the PTE of any pollutant to exceed the Title V source threshold
 - ❖ Not constitute a modification for an existing non-Title V source or existing non-insignificant emission unit at a Title V source

FL State Permit Exemptions (3 of 4)

- > Generic Facility Exemptions
 - ❖ Rule 62-210.300(3)(b)(2), F.A.C.
- > **Facility** not entitled to a categorical exemption is exempt from permitting requirements if it meets the following criteria:
 - ❖ Facility not subject to unit-specific limitation or requirement
 - ❖ PTE < 1,000 lb/yr of lead
 - ❖ PTE < 1 ton/yr of any individual HAP
 - ❖ PTE < 2.5 tons/yr of total HAPs
 - ❖ PTE < 25 tons/yr of CO, NOX, SO2
 - ❖ PTE < 10 tons/yr of any other regulated pollutant
 - ❖ PTE in combination with other emission units would not cause the PTE of any pollutant to exceed the Title V source threshold

FL State Permit Exemptions (4 of 4)

- > Case-by-Case Exemptions
 - ❖ Rule 62-4.040, F.A.C.
- > Applicants may request from the permitting authority a case-by-case exemption from air permitting requirements for minor activities
- > A public notice may be required

62-4.040 Exemptions.

- (1) The following installations are exempted from the permit requirements of this Chapter. The following exemptions do not relieve any installation from any other requirements of Chapter 403, F.S., or rules of the Department. Other installations may be exempted under other Chapters of Title 62.
 - (a) Structural changes which will not change the quality, nature or quantity of air and water contaminant emissions or discharges or which will not cause pollution.
 - (b) Any existing or proposed installation which the Department shall determine does not or will not cause the issuance of air or water contaminants in sufficient quantity, with respect to its character, quality or content, and the circumstances surrounding its location, use and operation, as to contribute significantly to the pollution problems within the State, so that the regulation thereof is not reasonably justified. Such a determination is agency action and is subject to Chapter 120, F.S. Such determination shall be made in writing and filed by the Department as a public record. Such determination may be revoked if the installation is substantially modified or the basis for the exemption is determined to be materially incorrect.
- (2) These exemptions do not apply to the discharge to waters of the state from any article, machine, equipment, contrivance or their exhaust system, which contains water-borne radioactive material in concentrations above the natural radioactive background concentration in the receiving water.

There are approximately 2,600 Air General Permit categories in Florida.

- A. True
✓ B. False



Air General Permits

Rule 62-210.310, F.A.C. (1 of 2)

- > Miscellaneous facilities subject to specific applicable requirements of an air general permit
- > Existing air operation permits are surrendered
- > Facility complies with the terms and conditions of the particular air general permit throughout the term of the air general permit
- > Note - air general permits are not transferable
- > Specific requirements and limitations based on type of facility

- An air general permit, also known as a "permit-by-rule", regulates the construction and operation of a specific industrial operation such that an individual case-by-case permit is not necessary.
- An air general permit is not typically available for a facility with a wide variety of miscellaneous activities or several similar units, even if each unit might individually qualify for an air general permit.
- This is because of the conservative specifications and potential emissions calculations made when developing these permits.
- However, some air general permits do accommodate multiple units and each rule must be reviewed carefully for this option.
- Activities, units, and facilities covered by an air general permit require proper registration and the submittal of a fee to the Division's headquarters office, but no formal application is required.
- To simplify this process, the Division now has the online Air General Permits Electronic Registration System (AGPERS) available at:
<http://www.dep.state.fl.us/air/emission/agpers.htm>.
- There are also worksheets available for hardcopy submittals.

Air General Permits

Rule 62-210.310, F.A.C. (2 of 2)

- > Notification for Air General Permit Sources
 - ❖ Concrete Batching Plant
 - ❖ Surface Coating Operation
 - ❖ Casting Polymer Operation
 - ❖ Bulk Gasoline Plant
 - ❖ Reciprocating Internal Combustion Engines
 - ❖ Nonmineral Metallic Processing Plant
- > DEP Worksheet 62-210.920(1)(a-f) - facilities claiming conditional exemption from Title V Permitting
- > DEP Worksheet 62-210.920(2)(a-e) - miscellaneous facilities

Air General Permit Categories

- | | |
|--|--|
| 1. Asbestos Manufacturing and Fabrication Facilities | 11. Nonmetallic Mineral Processing Plants |
| 2. Animal Crematory | 12. Perchloroethylene Dry Cleaners |
| 3. Bulk Gasoline Plants | 13. Printing Operations |
| 4. Cast Polymer Operations | 14. Reciprocating Internal Combustion Engines (RICE) |
| 5. Chromium Electroplaters | 15. Reinforced Polyester Resin Operations |
| 6. Concrete Batching Plants | 16. Secondary Aluminum Sweat Furnace |
| 7. Ethylene Oxide Sterilizers | 17. Surface Coating Operations |
| 8. Halogenated Solvent Degreaser | |
| 9. Human Crematory | |
| 10. Mercury Recovery and Reclamation | |

- When this manual was being developed in 2013, there were approximately 2,600 facilities holding air general permits in the 17 different categories of air general permits.
- The majority of existing facilities with air general permits are dry cleaners, concrete batch plants, and nonmetallic mineral processing plants (rock crushers).

Permit Issuance Sequence (1 of 2)

- > Prepare and submit application to DEP or local agency with permitting authority
- > Florida registered P.E. certification required for all air permit applications except the renewal of a minor source air operation permit
http://tlhora6.dep.state.fl.us/www_pa/Pa_statewide_count.asp
- > Agency makes completeness determination - notify any deficiencies in permit application

- *Application:* An applicant must submit a sufficient processing fee along with an application on the appropriate state forms including any supplemental information needed to adequately describe the project and applicable regulatory requirements. There are specific application forms depending on the project size and type. Also, the Division developed and maintains the Electronic Permit Submittal of Application for Permit (EPSAP) to simplify the application process. For existing facilities, information can be downloaded from the Division's Air Resource Management System (ARMS) into the EPSAP tool for editing. The permit processors can review and edit this information electronically and directly upload the new data back into the ARMS database.
- *Completeness Review:* Once the application and processing fee are submitted, the permitting authority has 30 days to determine whether the application is complete or to request additional information required by rule. Applicants have up to 90 days to provide the requested information or the permit may be denied.
- *Preliminary Determination:* As discussed, the permitting authority must make a preliminary determination to issue or deny a permit within 90 days of a complete application. Permit denials are not typical. Applicants will generally withdraw an application before a denial is issued or the agency will issue a draft permit with specific conditions intended to address the controversial issue. In the latter case, an applicant may file a petition for an administrative hearing over the specific conditions. The following summarizes the items that make up a draft permit package:
- *Continued on next page*

Construction of a new emission source can begin before the construction permit is issued.

- A. True
- ✓ B. False



- Continued from previous page (under Preliminary Determination)
- The written notice of intent to issue the permit informs the applicant and other identified parties of the agency's plans to issue a permit for the proposed project. This notice specifies a period of time to provide technical comments on the draft permit, which can vary depending on permit type. In addition, notice provides 14 days in which the applicant and other identified parties can file a petition for administrative hearing. These periods begin on the date the applicant and other identified parties received notice, regardless of the public notice date.
- Similar to the written notice, the public notice of intent to issue the permit informs the general public that the agency's plans to issue a permit for the proposed project. This notice is published in a newspaper of general circulation and establishes comment and petition periods of the same duration as the written notice; however, these periods begin on the date of publication unless you are the applicant or one of the other identified parties on the written notice. The same comment, administrative, and petition requirements and rights apply.
- The Technical Evaluation and Preliminary Determination (TEPD) is a report that summarizes the applicant's request, identifies the potential emissions, presents the regulatory applicability, and provides the agency's rationale for permit issuance as well as for including specific requirements or limitations.
- Continued on next page

Permit Issuance Sequence (2 of 2)

- > Agency provides public notice of draft permit
- > Applicant publishes notice in newspaper
- > Comments considered, action on final permit
- > Construction can only begin once permit is issued
- > Facility must obtain operation permit after startup

- Continued from previous page (under Preliminary Determination)
 - The draft permit identifies the emissions units, capacities, control equipment, monitoring systems, processes, fuels, raw materials, emissions standards, work practices, compliance assurance methods, record keeping provisions, reports required, etc. Descriptions within the permit may be included for informational purposes to improve understanding. In addition to equipment specifications, numbered permit conditions identify the applicable state and federal requirements, which are appropriately cited in the permit conditions.
- *Final Determination:* Assuming there are no petitions, the permitting authority must review the merit of any comments received, which shall be made available for public inspection. Comments shall be considered in making a final determination to approve or deny the permit. If comments are received that result in substantial changes to the draft permit, a revised draft permit package must be re-issued. Otherwise, a final permit package is distributed, which includes the agency's response to any comments received.
- Continued on next page

Air Construction Permitting: General Requirements (1 of 2)

- > Sources will be designed, constructed, and operated to comply with all applicable air pollution rules (e.g., NAAQS, NSPS, PSD/NNSR, SIP, and/or NESHAPs)
- > Sources will comply with all provisions in their construction and/or operating permit(s)
- > Sources will be constructed and operated in accordance with all representations in their permit application

- *Continued from previous page*
- *Expiration:* An air construction permit is issued for a period of time sufficient to allow construction and operation of the new equipment in order to conducting tests or otherwise demonstrate initial compliance with the conditions of the air construction permit. Once an air construction permit expires, the authority to construct and perform the proposed work under the air construction permit is lost. If additional work remains, a construction permit may be extended, which may require a public notice. Once construction is complete on an emissions unit, all limitations and requirements applicable to its design and operation remain in effect until the emissions unit is permanently shut down, except for any such limitation or requirement that is obsolete by its nature (such as a requirement for initial compliance testing).
- *Application for Construction Permit requires:*
 - Complete Forms.
 - Plot plan(s).
 - Source specifications.
 - Supporting engineering and technical data.
 - Compliance status review.
 - Monitoring, recordkeeping.
 - Plan dealing with air pollution emergencies.

Air Construction Permitting: General Requirements (2 of 2)

- > Permit identifies expiration date for authorized construction period
- > Permit identifies requirements to demonstrate initial compliance
- > Permit identifies deadline for submittal of air operation permit

- *Application for Construction Permit requires:*
 - Complete Forms.
 - Plot plan(s).
 - Source specifications.
 - Supporting engineering and technical data.
 - Compliance status review.
 - Monitoring, recordkeeping.
 - Plan dealing with air pollution emergencies.

Air Construction Permitting: Public Review (1 of 2)

- > Applicable to some new sources and modifications (construction permit app.)
 - ❖ Required for all PSD and NAA NSR permits
- > The agency shall make available to the public copies of all materials submitted by the applicant as well as the review completed by the agency
- > Public notice is required in newspapers of general circulation

- Modifying a specific condition created in an air construction permit requires a modification of that permit and a public notice.
- For an extension of the permit expiration date to complete construction, a public notice can be required, although this is not typical.

Air Construction Permitting: Public Review (2 of 2)

- > The Permitting Authority will accept written comments concerning the draft permit and requests for a public meeting for a period of 14 days for minor source construction permits and 30 days for major source construction permits from the date of publication of the Public Notice
 - ❖ Specific requirements for PSD/NNSR contained in federal regulations
 - ❖ PSD/NNSR includes comment period/notification to EPA and FLMS
- > A public meeting may be requested within the public comment period to discuss issues

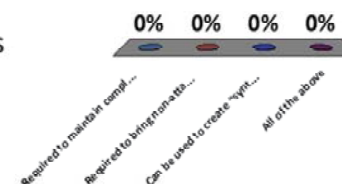
- The purpose of a public meeting is to take comments on the proposed permitting action.

Air Construction Permitting: Permit Application Fees

- > Refer to Rule 62-4.050(4)(a), F.A.C.
 - ❖ PSD or NSR construction permit - \$7,500
 - ❖ Non-PSD or NSR construction permit - varies depending on potential emissions from defined units
 - ❖ Non-Title V operating permit - varies depending on the type of emissions monitoring
- > Permit application fee required with permit application submittal
- > No fees for Title V operating permit applications (and subsequent construction permit applications)

Which of the following statements is TRUE about Minor New Source Review (NSR) permitting?

- A. Required to maintain compliance with the NAAQS
- B. Required to bring non-attainment areas into attainment with NAAQS
- C. Can be used to create "synthetic minor" sources - this allows sources to avoid major source permitting requirements like NSR and Title V
- ✓ D. All of the above



- Other factors that can require an air permit:
 - Potential impact on nonattainment areas.
 - Sources subject to any NSPS or NESHAP.
 - Sources desiring a limit on "potential to emit".
- Sources that are exempt may be required to notify state or local agency.
- Sources required to obtain a permit must do so prior to commencement of construction, modification, or operation.

Minor New Source Review (NSR) Permitting

- > States develop construction permitting programs for projects that do not trigger major NSR review
 - ❖ Often called Minor NSR
 - ❖ Required to maintain compliance with the NAAQS
 - ❖ Required to bring non-attainment areas into attainment with NAAQS
 - ❖ Can be used to create “synthetic minor” sources - this allows sources to avoid major source permitting requirements like NSR and Title V
- > Applicable to:
 - ❖ New minor sources
 - ❖ Modifications at minor sources
 - ❖ Minor modifications at major sources

• Definitions:

- Potential to Emit - The maximum capacity of a source to emit. May be limited by:
 - Physical and operational limits;
 - Air pollution control equipment;
 - Restricted hours of operation; or
 - Type or amount of material combusted, stored, or processed.
 - The limits must be practicably enforceable.
- “True Minor Source” - The Potential to Emit is less than the major source threshold, even without any federally enforceable limits on emissions and/or operations.
- “Synthetic Minor Source” - The actual emissions are less than major source levels but Potential to Emit is greater than major source levels. A synthetic minor source is a facility that has chosen to reduce its PTE to minor source levels from major source levels.
 - PTE can be limited only by adopting federally enforceable limits on emissions and/or operations.
 - Federally enforceable limits are adopted by obtaining permit conditions in an air operation permit.
- “Synthetic Minor 80” - EPA term to denote that a facility is synthetically limited below major source thresholds, but with a PTE of 80% or more of a major source threshold.

Prevention of Significant Deterioration (PSD) Permitting

- > PSD permitting is triggered by an event
 - ❖ Construction of a new major source
 - ❖ Major expansion or modification of an existing source
 - ❖ Physical or operational change at an existing major source (i.e., a “project”)
- > PSD applicability is evaluated on a pollutant-by-pollutant basis
 - ❖ Can trigger PSD review for one or more regulated pollutants

• PSD Source Definition (major stationary source):

- All of the pollutant-emitting activities which:
 - belong to the same SIC major group (or “support activity”); and
 - are located on one or more contiguous or adjacent properties; and
 - are under common control.
- There are numerous EPA memos that address this issue (e.g., Spratlin). See EPA’s online applicability determination Index (ADI).
- PSD Applicability for New PSD Sources:
 - PSD is triggered (for a certain pollutant) when potential emissions from new source exceed thresholds that define a major source under PSD.
 - Major source threshold of 250 tons/year or 100 tons/year for specific PSD facility categories.
- PSD Applicability for Existing Minor Sources:
 - PSD triggered at a minor source with a modification that in and of itself is “major”.
 - Major source threshold of 250 tons/year or 100 tons/year for specific PSD facility categories.

Major Modification (under PSD)

- > ANY physical change in or change in the method of operation of a major stationary source that would result in:
 - 1) a significant emissions increase and
 - 2) a significant net emissions increase
(unless meet exemption criteria...)
- > Emissions increases are evaluated on an actual annual basis

- PSD Applicability for Existing Major PSD Sources:
 - PSD is triggered (for a certain pollutant) when net emission increases exceed thresholds (also called PSD Significant Emission Rates or PSD SERs that define a major modification).
 - The trigger thresholds are smaller for existing major sources than new sources.
 - Existing major sources may “net out” of PSD review.
- Once it is determined that PSD applies to a project, PSD preconstruction review (BACT and air quality analysis) is conducted for each significant pollutant (i.e., pollutants with emissions increases exceeding a PSD significant emissions rate).
- See PSD Applicability Flowchart in appendix for more details.
- Comparison of a Modification under the NSPS program:
 - Any physical or operations change to an existing *facility* (a boiler, a storage tank, etc.) which results in an increase in the emission rate of any pollutant to which a standard applies (40 CFR 60.14).
 - NSPS emissions increases are evaluated on a maximum hourly mass emissions rate basis.

Mercury (Hg) is considered a PSD pollutant by EPA.

- A. True
 ✓ B. False



- PSD Major Modification Exceptions:
 - Use of an alternative fuel or raw material (if capable of using before January 6, 1975).
 - Increase in hours of operation or production rate (unless prohibited).
 - Change in ownership.
 - Routine maintenance, repair, & replacement (RMRR).
 - RMRR Question: Does project qualify for routine maintenance, repair, replacement exemption? Assess:
 - 1) Nature;
 - 2) Extent;
 - 3) Purpose;
 - 4) Frequency; and
 - 5) Cost of project.
 - Situations that probably DO NOT qualify for as RMRR exemptions:
 - 1) Adding new equipment;
 - 2) Changing process design or control technologies;
 - 3) Life extension projects;
 - 4) Changes that affect capacity;
 - 5) Changes that enable production of alternate product;
 - 6) Relatively high cost projects; or
 - 7) Changes that have never been performed previously.

PSD Significant Emission Rates

<u>Pollutant</u>	<u>SER</u> (tons/year)
Carbon Monoxide	100
Nitrogen Oxides	40
Sulfur Dioxide	40
PM	25
PM ₁₀	15
PM _{2.5}	10
VOCs	40
Lead	0.6
Mercury**	0.1

** Mercury considered PSD pollutant in DEP rules only, not by EPA.

Project Emission Increase Calculation

- > Emissions increase equals projected actual emissions (PAE) minus past baseline actual emissions (BAE)
- > BAE must be adjusted downward to reflect any legally enforceable emissions limitations imposed after the selected baseline period
- > Only one 24-month baseline period can be used per project per pollutant
 - ❖ Projects that involve multiple emissions units cannot choose different periods for each emissions unit

- For existing emission units, you further exclude the portion of the post-change emissions that both:
 - Could have been accommodated during the baseline period (before the change); and
 - Is unrelated to the particular project, including emissions attributed to an increase in projected capacity utilization due to product demand growth.
- For new emission units, the actual emissions baseline is zero and the projected future actuals is the unit's potential-to-emit.
- Reasonable Possibility Provision of NSR Reform:
 - For non-EUSGUs, owners must maintain records of actual emissions for five years after the proposed project; ten years if the project changes the design capacity or the potential to emit of a NSR regulated pollutant. Records must be submitted to the permitting authority if post change actual emissions exceed the baseline by a significant amount.
 - For EUSGUs, same as non-EUSGUs, but must submit projected post-change emissions estimates to the permitting authority prior to beginning construction and the post change emissions calculations must be submitted whether or not a significant increase has occurred.

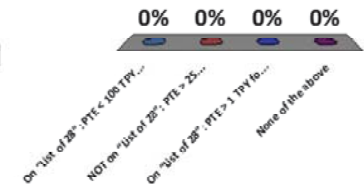
Emissions Netting

- > If project emissions increases (PEI) are greater than the PSD significance levels, a source *may* attempt to “net-out” of PSD review
- > Net emissions change (NEC) equals:
 - ❖ emission increases from proposed project/ modification (PEI) **minus**
 - ❖ source-wide creditable contemporaneous decreases (CCD) **plus**
 - ❖ Source-wide creditable contemporaneous increases (CCI)
- > The contemporaneous period is the period beginning 5 years before construction commences on a particular project to the time normal operation commences for that change

- Contemporaneous Period:
 - The contemporaneous period is the period beginning 5 years before construction commences on a particular project to the time normal operation commences for that change.
 - The contemporaneous period is typically longer than 5 years when construction is involved.
- Creditable Emission Increases/Decreases:
 - Emissions associated with a change (including contemporaneous changes) are considered creditable only if they are federally enforceable (permitted) on and after the date construction on the proposed modification commences.
 - Generally, actual reductions must take place before the date the emissions increase from any of the new or modified emissions units occurs.
 - An increase or decrease in emissions is creditable (included in the netting calculation) if it was NOT previously “relied on” in issuing an enforceable PSD permit for the source.
 - Generally, reductions in PSD regulated pollutants due to installation of controls to comply with HAP rules (MACT, etc.) are creditable.

Which of the following is considered a PSD major source threshold?

- A. On “List of 28”: PTE < 100 TPY for at least 1 regulated pollutant
- ✓ B. NOT on “List of 28”: PTE > 250 TPY for at least 1 regulated pollutant
- C. On “List of 28”: PTE > 1 TPY for at least 1 regulated pollutant
- D. None of the above



- Project emissions increases (PEI) can be further evaluated as the sum of two components:
 - Modified unit(s) emissions increases (MUEI) - these units are being physically or operationally changed.
 - Associated unit(s) emissions increases (AUEI) - these units are not physically changed as part of the project, but have emissions increases as a result of the project – “debottlenecked” units.
 - Formula: $PEI = MUEI + AUEI$

PSD Major Source Thresholds

- > Two thresholds depending on whether in one of 28 named source categories
 - ❖ On “List of 28” : Major Source if PTE > 100 TPY for at least one regulated pollutant
 - ❖ NOT on “List of 28” : Major Source if PTE > 250 TPY for at least one regulated pollutant
- > PSD only covers certain regulated pollutants

- 28 Listed PSD Source Categories (1 through 14):
 1. Fossil-fuel fired steam electric plants of > 250,000,000 Btu/hr heat input
 2. Coal cleaning plants (with thermal dryers)
 3. Kraft pulp mills
 4. Portland cement plants
 5. Primary zinc smelters
 6. Iron and steel mills
 7. Primary aluminum ore reduction plants
 8. Primary copper smelters
 9. Municipal incinerators capable of charging > 50 tons of refuse/day
 10. Hydrofluoric acid plants
 11. Sulfuric acid plants
 12. Nitric acid plants
 13. Petroleum refineries
 14. Lime plants
- *Continued on next page*

PSD Regulated Pollutants

- > CO, NO_x, SO₂, PM, PM₁₀, PM_{2.5}
- > NO_x and VOC (ozone precursors)
- > Lead
- > Hydrogen sulfide (H₂S)
- > Total reduced sulfur (including H₂S)
- > Reduced sulfur compounds (including H₂S)
- > Sulfuric Acid Mist
- > Fluorides (other than HF)
- > Municipal waste combustor acid gases, metals, and organics
- > Municipal solid waste landfill emissions (NMOC)
- > Mercury

- *Continued from previous page*
- 28 Listed PSD Source Categories (15 through 28):
 15. Phosphate rock processing plants
 16. Coke oven batteries
 17. Sulfur recovery plants
 18. Carbon black plants (furnace process)
 19. Primary lead smelters
 20. Fuel conversion plants
 21. Sintering plants
 22. Secondary metal production facilities
 23. Chemical process plants
 24. Fossil-fuel boilers of >250,000,000 Btu per hour heat input
 25. Petroleum storage and transfer facilities with a capacity exceeding 300,000 barrels
 26. Taconite ore processing facilities
 27. Glass fiber processing plants
 28. Charcoal production facilities
- Significant emissions rate also means any emissions rate or any net emissions increase associated with a major stationary source or major modification which would construct within 10 kilometers of a Class I area and have an impact on such area equal to or greater than 1 microgram per cubic meter, 24-hour average.

PSD Key Requirements

- > Control Device Review (BACT)
- > Air Quality Review
 - ❖ NAAQS analysis
 - ❖ PSD increment analysis
- > Preconstruction Monitoring Requirements
- > Class I Areas
- > Additional Impacts Analysis
 - ❖ Growth
 - ❖ Visibility
 - ❖ Soils, Vegetation, Animals
- > Public Comments

- PSD application has a lot of additional components that must be included and evaluated including a BACT analysis and potential air modeling.
- EPA Approval of BACT:
 - EPA intends to issue BACT comments to state agency before or during public comment.
 - EPA questioning of past BACT determinations has been a controversy in Title V permitting program in other states.

PSD Key Requirements: BACT

- > Rule 62-210.200, F.A.C., BACT means, "An emission limitation ... based on the maximum degree of reduction ... which the Department, on a case by case basis, determines is achievable through application of production processes and available methods, systems and techniques... taking into account:
 - ❖ Energy, environmental and economic impacts, and other costs;
 - ❖ All scientific, engineering, and technical material and other information available to the Department; and
 - ❖ The emission limiting standards or BACT determinations of Florida and any other state
- > Case-by-case BACT analysis performed by the applicant in form of report and approved by agency through issuance of permit
- > At a minimum, meet emission limitations contained in the SIP and meet the requirements of NSPS & NESHAPs (for the same or similar pollutants)

- BACT emission limits must be practicably enforceable:
 - Averaging time consistent with test method.
 - Method of compliance delineated in permit (testing, monitoring, recordkeeping, and reporting).
 - Assumptions of BACT analysis incorporated into limits and/or compliance methods.
 - Design, equipment, or work practice standards may be used in lieu of emission limits if application of measurement technology is determined to be infeasible based on technological or economic limitations.
- BACT Emission Unit Applicability:
 - BACT is applied to each new and/or modified "emissions unit" at which a net emission increase occurs (NEI>0).
 - Emissions Unit: Any "part" of a stationary source that emits.
 - BACT applies to each pollutant subject to PSD review (i.e., for each pollutant regulated under the CAA for which there is a significant increase in emissions at the source).
 - No exemptions for small emission increases.
 - BACT must be reviewed and modified for "phased" construction projects (i.e., BACT must be justified within 18 months of commencement of construction of each independent phase of a project).

PSD Key Requirements: Air Quality Review

- > Modeling to determine:
 - ❖ Attainment of NAAQS
 - ❖ Compliance with PSD increments
 - ❖ Need for pre-construction monitoring
- > Pre-construction monitoring (if required)
- > Basis:
 - ❖ National Ambient Air Quality Standards (NAAQS), 1970 CAAA (40 CFR 50)
 - ❖ Prevention of Significant Deterioration (PSD) Increments, 1977 CAAA (40 CFR 52)

- NAAQS analysis is based on the total estimated air quality concentration – the sum of ambient estimates resulting from new and existing source. It consists of the following:
 - Modeled ambient impact from all existing sources (including inventory);
 - Modeled ambient impact of proposed emissions increase; and
 - Measured background concentrations.
- PSD Increment limits specify the maximum increase in pollutant concentration over the “baseline concentration” that is allowed.
 - Different PSD increments for Class I and Class II areas.
 - Emissions units that have been modified (or added as a new unit) since the baseline date may have an effect on the increment and must be addressed in the PSD application (under the increment analysis section).
 - The baseline date for emissions units located at major sources is the same everywhere and is only dependent upon the pollutant.
- Four Step PSD Modeling Analysis:
 1. Identify pollutants subject to review based on emission increase.
 2. Identify radius of impact for each pollutant/averaging period (Tier 1 modeling).
 3. Develop source inventory (NAAQS and PSD increments).
 4. Perform full impacts analysis to demonstrate compliance with NAAQS and PSD increments (Tier 2 modeling).

PSD Key Requirements: Class I Areas

- > International Parks (in existence on 8/7/77)
- > National Wilderness Areas (including certain national wildlife refuges)
- > National Memorial Parks (> 5,000 acres)
- > National Parks (> 6,000 acres)
- > These areas cannot be reclassified
- > Mandatory Class I Areas in Florida
 - ❖ Chassahowitzka Wilderness Area
 - ❖ Everglades National Park
 - ❖ St. Marks Wilderness Area

- Additional Class I areas can be designated by states and tribal organizations.
- Class I areas in other nearby states may be included in the review based on vicinity of project (e.g., Wolf Island in Georgia)
- Visibility requirements under Section 169A of the CAA apply only to the mandatory Class I areas.
- The PSD rules protect Class I area in two ways:
 - Class I PSD Increment (see Air Quality Review).
 - Air Quality Related Values (AQRV).

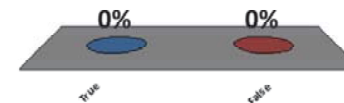
PSD Key Requirements: Additional Impact Requirements

- > Required in all PSD permit applications
- > Consult with permitting authority to determine scope of analyses
- > Analysis tends to be qualitative (in most applications)
- > Analyzes impairment to Visibility, Soils, Vegetation that occurs as a result of:
 - ❖ The new source or modification
 - ❖ General commercial, residential, industrial, or other growth associated with the source or modification (secondary emissions)

- Analysis tends to be qualitative (in most applications):
 - Potential adverse impacts can often be discerned against secondary NAAQS (public welfare, including environment).
 - Impacts often considered as part of non-air quality assessments (e.g., geotechnical, surveying, construction).
- Visibility (near-field):
 - Perform VISCREEN/PLUVUE modeling.
 - EPA may require monitoring.
- Soils:
 - Effect of acidic deposition on soils.
- Vegetation:
 - Any known effects on vegetation with significant commercial or recreational value.
 - Sensitive plant species.

Nonattainment Area (NAA) permitting applies in areas where pollutant concentrations exceed the NAAQS.

- ✓ A. True
B. False



- Amended Lead Non-Attainment Area Plan in Florida's SIP:
 - http://www.dep.state.fl.us/air/rules/regulatory/lead_pb_nonattainment_area_plan.htm
- Ozone Air Quality Maintenance Plans:
 - These regulations require that a 10-year air quality maintenance plan be developed in support of the 8-hour ozone National Ambient Air Quality Standard (NAAQS) promulgated by EPA in 1997. This requirement applies to areas that have a section 175A maintenance plan under the former 1-hour ozone air quality standard and are currently in attainment with the 1997 8-hour ozone standard.
 - In Florida, the Southeast Florida area comprising Miami-Dade, Broward, and Palm Beach counties, the Tampa Bay area comprising Hillsborough and Pinellas counties, and the Northeast Florida area comprising Duval County are all subject to the new section 110(a)(1) maintenance plan requirement.

Nonattainment Area (NAA) Permitting

- > Applies in areas where pollutant concentration exceeds the NAAQS
- > Current NAA in Florida:
 - ❖ Hillsborough Co (* Tampa, FL) for Lead (2008)
 - ❖ Hillsborough Co (* Tampa, FL) and Nassau Co (*Fernandina Beach, FL) for 1-hr SO₂ NAAQS (10/4/2013)
- > Ozone Air Quality Maintenance Plans:
 - ❖ The area consisting of Broward, Palm Beach, and Miami-Dade Counties
 - ❖ The area consisting of Hillsborough and Pinellas Counties
 - ❖ Duval County
 - ❖ Orange County

- Preconstruction Review for Nonattainment Areas (62-212.500, F.A.C.):
 - “(a): *Except as provided in this rule, the Department shall not permit the construction or modification of any emissions unit or facility that would cause or contribute to a violation of any ambient air quality standard. The Department shall ensure that the combined impact of new emissions, emissions offsets, temporary emissions and existing emissions within any nonattainment area or area of influence shall not interfere with reasonable further progress (RFP) toward attainment of ambient air quality standards.*”
- While developing this training program, the Department was in the process of updating this rule.
- FL pre-construction review for NAA (Rule 62-212.500, F.A.C.)

Nonattainment Area (NAA) Permitting: Major Modification

- > “Major Modification”
 - ❖ Increase in emissions above the pollutant and nonattainment severity specific SER
 - ❖ Accumulation of *de minimis* increases required by the Clean Air Act in “serious” and “severe” ozone nonattainment areas
 - ❖ Accumulation period differs (generally 5-years)

- Major Modification Thresholds:
 - SO₂ - 40 TPY.
 - CO - 100 TPY (50 TPY in Serious).
 - PM₁₀ - 15 TPY.
 - PM_{2.5} - 10 TPY.
 - Pb - 0.6 TPY.
 - Ozone (NO_x and VOC as precursors):
 - Marginal - 40 TPY.
 - Moderate - 40 TPY.
 - Northeast Ozone Transport Region - 40 TPY.
 - Serious - 25 TPY, aggregated over 5 years.
 - Severe - 25 TPY, aggregated over 5 years.
 - Extreme - any increase.

NAA Potential Obligations to Existing Permitted Sources

- > Lower VOC/NO_x Title V thresholds
 - ❖ Re-evaluate if facility is still minor
- > RACT requirements
 - ❖ What units are subject?
 - ❖ Permitting requirements
- > Areas of influence
 - ❖ Will other counties not included in nonattainment designation be considered area of influence?

- Construction permitting required if RACT is applicable for existing sources due to nonattainment designations.
 - Modification to incorporate new emission limit for existing operations, or
 - Modification to incorporate new air pollution control devices.
- Presumptive RACT: Rule 62-296.500-516, F.A.C. for Maintenance Areas.
- Current RACT requirements for ozone nonattainment and air quality maintenance areas (VOC and NO_x emissions).
 - Ozone air quality maintenance areas:
 - Orange County,
 - Duval County,
 - Area – Broward, Palm Beach, and Miami-Dade counties,
 - Area – Hillsborough and Pinellas counties.
- Coating operations, Petroleum liquid storage, Bulk gasoline terminals.
- If there are more stringent RACT requirements established...
 - Applicable to more operations and source types.
 - Emission limiting standards.
 - Air pollution control measures.
- Example of anti-backsliding. 1-hr nonattainment severe only moderate under 8-hr. Small cogen was TV major when severe, but not to 50/100 TPY thresholds of moderate. However, must remain TV due to anti-backsliding provisions.

NAA Potential Obligations to New or Modified Permitted Sources

- > Lower VOC/NO_x Title V thresholds
 - ❖ Small changes may now result in major NSR
- > Fugitive emissions
 - ❖ Aggregation for minor changes?
- > Costs
 - ❖ Emission Offsets
 - ❖ Lowest Achievable Emission Rate (LAER)
 - ❖ Alternatives Analysis
 - ❖ Compliance issues with other sister sites

- Alternatives analysis includes an alternative sites analysis – but much more.
- Rockgen example - alternatives analysis is quite different for PSD v. NNSR.
- Justify size, technology, location and why positive impact to already burdened area and why better than further air quality degradation.
- May request permit for 10 TPY, but may only get a permit for 5 TPY - opportunity to re-engineer during permit process. Or could come out with no-build in conclusion of alt analysis. Can meet LAER, offsets, etc., but if impacts outweigh benefits, can reach a conclusion of denial (no-build)
- Applicable for nonattainment areas and areas of influence:
 - Will this include ozone air quality maintenance areas?
 - What counties will be designated as area of influence?
- Combined impact of new emissions, emission offsets, existing emissions must not interfere with reasonable further progress toward attainment.
- Lower permitting threshold(s).

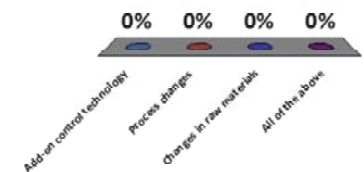
NAA Permitting: Emission Offsets

- > Clean Air Act, Section 173 requires that emission increases be offset with actual reductions in same area of equal or greater amount
- > Amount of offset depends on severity of nonattainment problem
 - ❖ Marginal 1.1:1
 - ❖ Moderate 1.15:1
 - ❖ Transport Region 1.15:1
 - ❖ Serious 1.2:1
 - ❖ Severe 1.3:1
 - ❖ Extreme 1.5:1

- Emission reductions qualifiers:
 - Same pollutant.
 - Same nonattainment area. Can use nearby nonattainment area of equal or higher classification *if* that area contributes to nonattainment where subject facility is located.
- Emission reductions through offsets must be in effect by the time a project commences OPERATION.
- Emission reductions required by other regulatory programs are not creditable as offsets.
 - Incidental reductions beyond those required ARE creditable.

LAER is the emission rate that can be achieved by the following:

- A. Add-on control technology
- B. Process changes
- C. Changes in raw materials
- ✓ D. All of the above



NAA Permitting: Lowest Achievable Emission Rate (LAER)

- > LAER is the most stringent emission limitation derived from either of the following:
 - ❖ the most stringent emission limitation contained in the implementation plan of any State for such class or category of source; or
 - ❖ the most stringent emission limitation achieved in practice by such class or category of source
- > LAER is the emission rate that can be achieved by any or all of the following:
 - ❖ Add-on control technology
 - ❖ Process changes
 - ❖ Changes in raw materials

- Applicant can not use economic, energy, or other environmental factors to disqualify a process/technology in LAER Determinations.
 - Exception: No plant in industry could bear the costs of such technology.
- Substituting BACT for LAER:
 - If PTE < 100 TPY, many state SIPs automatically allow substitution of BACT for LAER.
 - If PTE > 100 TPY, can internally offset at 1.3 to 1 to avoid LAER.

NAA Permitting: Alternative Analysis

- > Applicant must consider alternatives to executing project in nonattainment area
 - ❖ Sites
 - ❖ Size
 - ❖ Production processes
 - ❖ Control techniques
- > Do benefits SIGNIFICANTLY outweigh the environmental and social costs of the project?
- > In some areas, this can be the biggest hurdle to nonattainment NSR permitting

State Operation Permits apply only to minor sources.

- ✓ A. True
- B. False



State Operation Permit Rule 62-210.300(2), F.A.C.

- > Applies ONLY to minor sources
- > Construction permit for new or modified emission units will specify operation permit application submittal due date (varies)
- > Application for Air Permit - Non-Title V Source
 - ❖ DEP Form 62-210.900(3)
- > Issued in 2 - 3 months, with a duration of 5 years
- > Permit renewal applications are required to be submitted at least 60 days prior to expiration
- > Permit application fee; no annual emissions fee

- Example - Big Bend Terminal

Federally-Enforceable State Operation Permit (FESOP)

- > Applicant requests that the permit be made federally enforceable (i.e., synthetic minor source)
- > Permit is conditioned such that any emissions limitation or other requirement assumed by the facility is quantifiable and enforceable
 - ❖ Emission limitation to avoid Title V program
 - ❖ Control requirement to avoid Title III program
- > Permit used to incorporate existing unpermitted emission unit in one permitting step

- The FESOP was originally developed as a facility-wide operation permit that could synthetically limit facilities with HAP emissions below the major source thresholds.

A Title V operating permit is optional for sources with potential emissions greater than the major source threshold.

- A. True
✓ B. False



Title V Operating Permit

- > Required for sources of air pollution regulated by the Title V of the Federal Clean Air Act
- > These sources include those that are subject to acid rain rules, and those certified under the Power Plant Siting Act

- Purpose of the Title V from the Federal Register (09/04/1992):
 - *"The program will generally clarify, in a single document, which requirements apply to a source and, thus, should enhance compliance with the requirements of the Act. Currently, a source's obligations under the Act (ranging from emissions limits to monitoring, recordkeeping, and reporting requirements) are, in many cases, scattered among numerous provisions of the SIP or Federal regulations. ... As a result, EPA often has no easy way to establish whether a source is in compliance with regulations under the Act."*
- Benefits of the Title V (from the Federal Register (09/04/1992):
 - Enable source, States, EPA, and public to better understand requirements.
 - Enhance EPA's ability to implement air quality planning and control.
 - Easy vehicle for States to enforce MACT standards and Title IV.
 - Ensure States have sufficient resources to administer the program.
- Other Title V Compliance Improvements:
 - Provide practical methods for determining compliance with applicable requirements.
 - Require regular monitoring, recordkeeping, and reporting.
 - May add new compliance demonstration requirements (testing, monitoring, etc.) for limits with "gaps".
 - Requires annual certification of compliance.

Title V Permit Applicability

Criteria Pollutants	HAPs
Contiguous and adjacent property	Contiguous and adjacent property
Under common control	Under common control
Same 2-digit SIC	No SIC condition
PTE = 100 TPY (attainment)	PTE = 10 TPY single HAP OR PTE = 25 TPY aggregate
Include fugitives only if on List of 28	Include fugitives

- If you are responsible for, or become responsible for, currently non-major sources, watch out for the following.

Title V Permit Applicability

> Major Source Threshold Levels

Nonattainment classification	VOC or NO _x	CO	PM ₁₀
Marginal	100 TPY	--	--
Moderate	100 TPY	100 TPY	100 TPY
Serious	50 TPY	50 TPY	70 TPY
Ozone transport region (other than severe or extreme)	50 TPY (VOC only)		
Severe	25 TPY	--	--
Extreme	10 TPY	--	--

PM_{2.5} nonattainment area – 100 TPY

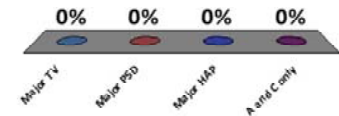
- NO_x thresholds in table will not apply in ozone non-attainment areas where Administrator has found Section 182(f)(1) or (2) (42 U.S.C. § 7511a(f)) do not apply, i.e., area is VOC limited.

Major Source Example

Spray Booth with PTE:

- > PM: 10 tpy
- > VOC: 50 tpy
- > Ethylbenzene: 30 tpy
- > Attainment Area?

- A. Major TV
- B. Major PSD
- C. Major HAP
- ✓ D. A and C only



Title V Exemptions

- > Deferral - All non-major sources are deferred from Title V permitting requirements until the Administrator completes rulemaking
- > Any Section 111/112 regulations (NSPS/MACT) promulgated after 07/21/1992 will be identified as Title V subject or exempt in the promulgation
- > Minor sources that are exempt from Title V under the rule
 - ❖ Sources subject to 40 CFR 60, Subpart AAA, Residential Wood Heaters
 - ❖ Sources subject to 40 CFR 61, Subpart M, Asbestos NESHA

Title V Permit Structure

- > Facility-wide/Source identification
- > General provisions
 - ❖ Permit shield, renewal requirements
- > Facility-wide requirements
- > Standards/conditions/requirements
 - ❖ Emission unit specific
- > Compliance Assurance
 - ❖ Testing
 - ❖ Monitoring
 - ❖ Recordkeeping
- > Reporting
- > Attachments - sometimes
 - ❖ Insignificant activities
 - ❖ Source list and control equipment

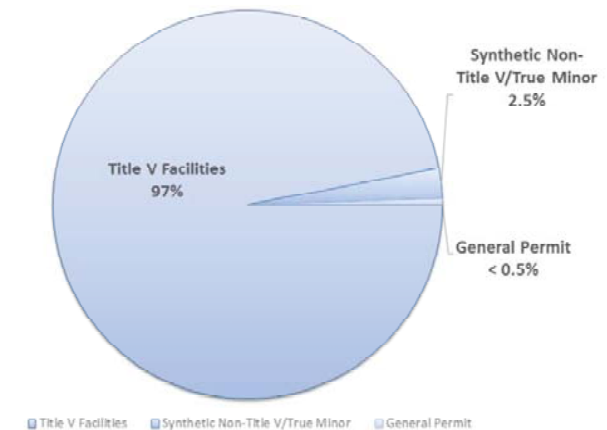
- Recordkeeping:
 - File retention timeframes.
 - NSPS notifications.
 - Performance testing.
 - Initial compliance notification.
 - e.g., Notice of Compliance Status.
 - Compliance certification.
 - e.g., NSPS Subpart OOO.
- Reporting:
 - Annual operating report.
 - Semi-annual or quarterly excess emissions reports.
 - Semi-annual monitoring report.
 - Certification of Annual Statement of Compliance report.

Title V Certification Signatory

- > Responsible Official
 - ❖ For a corporation, the individual in charge of a principal business function/responsible for the overall operation;
 - ❖ For a partnership or sole proprietorship, a general partner or the proprietor, respectively;
 - ❖ For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official; or
 - ❖ The designated representative at an Acid Rain source or CAIR source
- > Duly authorized representative
 - ❖ Requires notification to and approval from the agency
 - ❖ Oversees 250 employees OR
 - ❖ Annual sales in excess of \$25 million
- > Partnership - only a general partner

- Definition from 40 CFR 70.2:
 - *Responsible official* means one of the following (1 through 2):
 1. For a corporation: a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either:
 - (i) The facilities employ more than 250 persons or have gross annual sales or expenditures exceeding \$25 million (in second quarter 1980 dollars); or
 - (ii) The delegation of authority to such representatives is approved in advance by the permitting authority;
 2. For a partnership or sole proprietorship: a general partner or the proprietor, respectively;
- Continued on next page

% of Total Emissions from Various Permit Types



- Continued from previous page
- Definition from 40 CFR 70.2:
 - *Responsible official* means one of the following (3 through 4):
 1. For a municipality, State, Federal, or other public agency: Either a principal executive officer or ranking elected official. For the purposes of this part, a principal executive officer of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of EPA); or
 2. For affected sources:
 - (i) The designated representative in so far as actions, standards, requirements, or prohibitions under title IV of the CAA or the regulations promulgated thereunder are concerned; and
 - (ii) The designated representative for any other purposes under part 70.

Florida Permit Application Forms

- > Different forms for non-Title V and Title V permit applications
- > Number of forms depends on equipment/project being permitted
- > Information requirements are identical for construction versus synthetic minor/major source operation permits

- *Permit Application Forms* - The following Division of Air Resource Management forms are available for download:
 - [Application for Air Permit Forms, Rules 62-210.900\(1\), \(3\), and \(4\)](#), F.A.C.
 - Applications may be submitted electronically through the Electronic Permit Submittal and Processing (EPSAP) system at: <http://www.dep.state.fl.us/air/emission/epsap/default.htm>. This system allows an existing facility to download data from the state database and pre-fill the application as a starting point.
 - Acid Rain and CAIR/CAMR Programs Forms, Rules 62-210.900(1)(a), (1)(a)1., (1)(a)2., (1)(b), (1)(c), (1)(d), F.A.C.
 - Annual Operating Report, Rule 62-210.900(5), F.A.C.
 - Facility Relocation Notification, Rule 62-210.900(6), F.A.C.
 - Application for Air Permit Transfer, Rule 62-210.900(7), F.A.C.
 - Title V Annual Emissions Fee Form, Rule [62-213.900\(1\)](#), F.A.C.
 - Title V Statement of Compliance, Rule 62-213.900(2), F.A.C.
 - Title V Responsible Official Notification, Rule [62-213.900\(3\)](#), F.A.C.
 - Notice of Demolition or Asbestos Renovation, Rule [62-257.900\(1\)](#), F.A.C.
 - Air General Permit Example Registration (worksheet). The Department maintains an electronic system for registering a facility for an air general permit. The Air General Permit Registration System (AGPRS) may be accessed through the Department's Business Portal at: <http://www.fldepportal.com/go/>.

1. Acronym List

Air Permitting and Clean Air Act Related Acronyms

ACC	Annual Compliance Certification
ACE	Any Credible Evidence
ACGIH	American Conference of Governmental Industrial Hygienists
ACM	Asbestos-Containing Material
AERMOD	AERMIC Model
AERMIC	In 1991, the American Meteorological Society (AMS) proposed to EPA the formation of a working group, the AMS/EPA Regulatory Model Improvement Committee.
AIRS	Aerometric Information Retrieval System
AP-42	Compilation of Air Pollutant Emission Factors
API	American Paper Institute/American Petroleum Institute
AQCR	Air Quality Control Region
ASTM	American Society for Testing & Materials
AWMA	Air & Waste Management Association
BACT	Best Available Control Technology
BAE	Baseline Actual Emissions
BART	Best Available Retrofit Technology
BDT	Best Demonstrated Technology
BID	Background Information Documents
BIF	Boilers and Industrial Furnaces (EPA's)
BMP	Best Management Practices
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
CALPUFF	CALPUFF dispersion model
CAM	Compliance Assurance Monitoring
CAS	Chemical Abstract Service
CEM	Continuous Emissions Monitoring
CEMS	Continuous Emission Monitoring System
CERCLA	Comprehensive Environmental Responsibility, Compensation and Liability Act
CFC	Chlorofluorocarbon
CFR	Code of Federal Regulations
CIBO	Council of Industrial Boiler Owners
CMA	Chemical Manufacturers Association
CMS	Compliance Monitoring System
COM	Continuous Opacity Monitor
CTG	Control Technique Guideline CAA Section 183
CWA	Clean Water Act
DGE	Demand Growth Exclusion
DOE	Department of Energy
DOJ	Department of Justice
DOT	Department of Transportation
DSCF	Dry Standard Cubic Feet (or Foot)
DSCM	Dry Standard Cubic Meters
EA	Environmental Assessment
EHS	Extremely Hazardous Substances
EI or EIQ	Emissions Inventory
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
ESP	Electrostatic Precipitator
FGR	Flue Gas Recirculation
FIP	Federal Implementation Plan
FR	Federal Register
FRP	Facility Response Plan

Air Permitting and Clean Air Act Related Acronyms

GACT	Generally Available Control Technology
GAQM	Guideline on Air Quality Models
GEP	Good Engineering Practice
GIS	Geographic Information System
HAP	Hazardous Air Pollutant
HHV	Higher Heating Volume
HON	Hazardous Organic NESHAP (see NESHAP below)
IAC	Iowa Administrative Code
ICCR	Industrial Combustion Coordinated Rulemaking
IDLH	Immediate Danger to Life & Health
ISCST3	Industrial Source Complex Short-Term Model (Version 3)
IUR	Inventory Update Rule
LAER	Lowest Achievable Emission Rate
LEPC	Local Emergency Planning Committee
LDR	Land Disposal Restrictions
LHV	Low Heating Value
LQG	Large Quantity Generator
MACT	Maximum Achievable Control Technology
MMBtu	Million British Thermal Units
MON	Miscellaneous Organic NESHAP (see NESHAP below)
MPTEP	Multiple Point Gaussian Dispersion Algorithm with Terrain Adjustment
MSDS	Material Safety Data Sheet
MSW	Municipal Solid Waste
MWC	Municipal Waste Combuster
NA	Nonattainment
NAAQS	National Ambient Air Quality Standards Title I
NADP	National Atmospheric Deposition Program
NAICS	North American Industrial Classification System
NAPAP	National Acid Precipitation Assessment Program
NCASI	National Council of the Paper Industry for Air and Stream Improvement
NESHAPs	National Emission Standards for Hazardous Air Pollutants
NFPA	National Fire Protection Association
NOV	Notice of Violation
NPDES	National Pollutant Discharge Elimination System
NSPS	New Source Performance Standard
NSR	New Source Review
NRC	National Response Center
OAQPS	Office of Air Quality Planning and Studies
OMB	Office of Management and Budget
OSHA	Occupational Safety and Health Administration
OTAG	Ozone Transport Assessment Group
PAE	Projected Actual Emissions
PAL	Plantwide Emissions Cap or Plantwide Emissions Limit
PBT	Persistent Bioaccumulative and Toxic
PEMS	Predictive Emissions Monitoring System
PCB	Polychlorinated Biphenyls
PHA	Process Hazard Analysis
PSD	Prevention of Significant Deterioration
POTW	Publicly Owned Treatment Works
PSM	Process Safety Management
PTE	Potential To Emit
RACM	Regulated Asbestos-Containing Material
RACT	Reasonably Available Control Technology
RCRA	Resource Conservation and Recovery Act

Air Permitting and Clean Air Act Related Acronyms

RDF	Refuse Derived Fuel
RFP	Reasonable Further Progress
RICE	Reciprocating Internal Combustion Engine
RIM	Regulatory Interpretive Memorandum
RMP	Risk Management Program or Risk Management Plan
RMRR	Routine Maintenance, Repair, and Replacement
ROM	Regional Oxidant Model
SARA	Superfund Amendments and Reauthorization Act
SCAQMD	South Coast Air Quality Management District (in California)
SCC	Source Classification Code/Source Category Code
SCR	Selective Catalytic Reduction
SIC	Standard Industrial Classification (replaced by NAICS in 1998)
SERC	State Emergency Response Commission
SIP	State Implementation Plan
SNCR	Selective Non-Catalytic Reduction
SPCC	Spill Prevention, Control, and Countermeasure
SOCMI	Synthetic Organic Chemical Manufacturing Industry
SSM	Start-up, Shut-down, Malfunction
SQG	Small Quantity Generator
TAPPI	Technical Association of the Pulp and Paper Industry
TCLP	Toxicity Characteristic Leaching Procedure
TLV	Health Threshold Limit Value
TPQ	Threshold Planning Quantity
TPY	Tons Per Year
TRI	Toxic Releases Inventory
TRIS	Toxic Release Information System
TSCA	Toxic Substances Control Act
TSDF	Treatment, Storage or Disposal Facility
UAM	Urban Airshed Model
USC	United States Code
USGS	U.S. Geological Survey
UST	Underground Storage Tank
UTM	Universal Transverse Mercator
WWTP	Waste Water Treatment Plant

2. List of Title III Hazardous Air Pollutants (HAPs)

List of Title III HAP (189 initially)

Chemical Name	CAS No.	Chemical Name	CAS No.
Acetaldehyde	75070	Diethyl aniline (N,N-) (N,N-Dimethylaniline)	121697
Acetamide	60355	Diethyl sulfate	64675
Acetonitrile	75058	Dimethoxybenzidine (3,3'-)	119904
Acetophenone	98862	Dimethyl aminoazobenzene	60117
Acetylaminofluorene (2-)	53963	Dimethyl benzidine (3,3-)	119937
Acrolein	107028	Dimethyl carbamoyl chloride	79447
Acrylamide	79061	Dimethyl formamide	68122
Acrylic acid	79107	Dimethyl phthalate	131113
Acrylonitrile	107131	Dimethyl sulfate	77781
Allyl chloride	107051	Dimethylhydrazine (1,1-)	57147
Aminobiphenyl (4-)	92671	Dinitro-o-cresol (4,6-) and salts	534521
Aniline	62553	Dinitrophenol (2,4-)	51285
Anisidine (o-)	90040	Dinitrotoluene (2,4-)	121142
Asbestos	1332214	Dioxane (1,4-) (1,4-Diethyleneoxide)	123911
Benzene	71432	Diphenylhydrazine (1,2-)	122667
Benzidine	92875	Epichlorohydrin	106898
Benzotrichloride	98077	Epoxybutane (1,2-)	106887
Benzyl Chloride	100447	Ethyl acrylate	140885
Biphenyl	92524	Ethyl benzene	100414
Bis(2-ethylhexyl)phthalate (DEHP)	117817	Ethyl carbamate (Urethane)	51796
Bis(chloromethyl)ether	542881	Ethyl chloride	75003
Bromoform	75252	Ethylene dibromide (Dibromoethane)	106934
Butadiene (1,3-)	106990	Ethylene dichloride (1,2-Dichloroethane)	107062
Calcium cyanamide	156627	Ethylene glycol	107211
Captan	133062	Ethylene imine	151564
Carbaryl	63252	Ethylene oxide	75218
Carbon disulfide	75150	Ethylene thiourea	96457
Carbon tetrachloride	56235	Ethylidene dichloride (1,1-Dichloroethane)	75343
Carbonyl sulfide	463581	Formaldehyde (Solution)	50000
Catechol	120809	Heptachlor	76448
Chloramben	133904	Hexachloro-1,3-butadiene	87683
Chlordane	57749	Hexachlorobenzene	118741
Chlorine	7782505	Hexachlorocyclopentadiene	77474
Chloroacetic acid	79118	Hexachloroethane	67721
Chloroacetophenone(2-)	532274	Hexamethylene-1,6-diisocyanate	822060
Chlorobenzene	108907	Hexamethylphosphoramide	680319
Chlorobenzilate	510156	Hexane	110543
Chloroform	67663	Hydrazine	302012
Chloromethyl methyl ether	107302	Hydrochloric Acid	7647010
Chloroprene	126998	Hydrogen fluoride/hydrofluoric acid (EPA Conc>=50%)	7664393
Cresol (m-)	108394	Hydroquinone	123319
Cresol (o-)	95487	Isophorone	78591
Cresol (p-)	106445	Lindane (all isomers)	58899
Cresols/Cresylic acids (mixed isomers)	1319773	Maleic anhydride	108316
Cumene	98828	Methanol	67561
D, Salts and Esters	94757	Methoxychlor	72435
DDE	3547044	Methyl bromide	74839
Diazomethane	334883	Methyl chloride	74873
Dibenzofurans	132649	Methyl chloroform (1,1,1-Trichloroethane)	71556
Dibromo-3-chloropropane (1,2-)	96128	Methyl hydrazine	60344
Dibutylphthalate	84742	Methyl iodide	74884
Dichlorobenzene(1,4-)	106467	Methyl isobutyl ketone (Hexone)	108101
Dichlorobenzidine(3,3-)	91941	Methyl isocyanate	624839
Dichloroethyl ether (Bis(2-chloroethyl)ether)	111444	Methyl methacrylate	80626
Dichloropropene(1,3-)	542756	Methyl tert butyl ether	1644044
Dichlorvos	62737	Methylene bis(2-chloroaniline) (4,4)	101144
Diethanolamine	111422	Methylene chloride (Dichloromethane)	75092

List of Title III HAP (189 initially)

Chemical Name	CAS No.	Chemical Name	CAS No.
Methylene diphenyl diisocyanate (MDI)	101688	Toxaphene (chlorinated camphene)	8001352
Methylenedianiline (4,-4)	101779	Trichlorobenzene (1,2,4-)	120821
Naphthalene	91203	Trichloroethane (1,1,2-)	79005
Nitrobenzene	98953	Trichloroethylene	79016
Nitrobiphenyl (4-)	92933	Trichlorophenol (2,4,5-)	95954
Nitrophenol (4-)	100027	Trichlorophenol (2,4,6-)	88062
Nitropropane (2-)	79469	Triethylamine	121448
Nitroso-N-methylurea (N-)	684935	Trifluralin	1582098
Nitrosodimethylamine (N-)	62759	Trimethylpentane (2,2,4-)	540841
Nitrosomorpholine (N-)	59892	Vinyl acetate	108054
Parathion	56382	Vinyl bromide	593602
Pentachloronitrobenzene (Quintobenzene)	82688	Vinyl chloride	75014
Pentachlorophenol	87865	Vinylidene chloride (1,1-dichloroethylene)	75354
Phenol	108952	Xylenes (isomers and mixture)	1330207
Phenylenediamine (P-)	106503	Xylenes (m-)	108383
Phosgene	75445	Xylenes (o-)	95476
Phosphine	7803512	Xylenes (p-)	106423
Phosphorus	7723140	Antimony Compounds	
Phthalic anhydride	85449	Arsenic Compounds (inorganic including arsine	
Polychlorinated biphenyls (Arochlors)	1336363	Beryllium Compounds	
Propane sultone (1,3-)	1120714	Cadmium Compounds	
Propiolactone (beta-)	57578	Chromium Compounds	
Propionaldehyde	123386	Cobalt Compounds	
Propoxur (Baygon)	114261	Coke Oven Emissions	
Propylene dichloride (1,2-Dichloropropane)	78875	Cyanide Compounds ¹	
Propylene oxide	75569	Fine mineral fibers ²	
Propylenimine (1,2-) (2-Methyl aziridine)	75558	Glycol ethers ³	
Quinoline	91225	Lead Compounds	
Quinone	106514	Manganese Compounds	
Styrene	100425	Mercury Compounds	
Styrene oxide	96093	Nickel Compounds	
Tetrachlorodibenzo-p-dioxin (2,3,7,8-)	1746016	Polycyclic Organic Matter ⁴	
Tetrachloroethane (1,1,2,2-)	79345	Radionuclides (including radon) ⁵	
Tetrachloroethylene (Perchloroethylene)	127184	Selenium Compounds	
Titanium tetrachloride	7550450		
Toluene	108883		
Toluene 2,4-diisocyanate	584849		
Toluene diamine (2,4-)	95807		
Toluidine (o-)	95534		

NOTE: For all listings above which contain the word "compounds" and for glycol ethers, the following applies:

Unless otherwise specified, these listings are defined as including any unique chemical substance that contains the named chemical (i.e., antimony, arsenic, etc.) as part of that chemical's infrstructure.

¹X'CN where X=H' or any other group where a formal dissociation may occur. For example, KCN or Ca(CN)₂

²includes mono- and di- ethers of ethylene glycol, diethylene glycol, and triethylene glycol, R-(OCH₂CH₂)OR where n=1,2, or 3

R=alkyl or aryl groups

R'=R,H, or groups which, when removed, yield glycol ethers with the strucutre: R-(OCH₂CH₂)-OH.

Polymers are excluded from the glycol category.

³includes mineral fiber emissions from facilities manufacturing or processing glass, rock, or slag fibers

(or other mineral derived fibers) of average diameter 1 micrometer or less.

⁴includes organic compounds with more than one benzene ring, and which have a boiling point greater than or equal to 100° C.

⁵a type of atom which spontaneously undergoes radioactive decay.

Delisted HAPs

Caprolactum - 1996

Ethylene Glycol Monobutyl Ether - 2004

Methyl Ethyl Ketone - 2005

3. Clean Air Act Guide

CLEAN AIR ACT: 42 U.S.C. S/S 7401 ET SEQ. (1970)

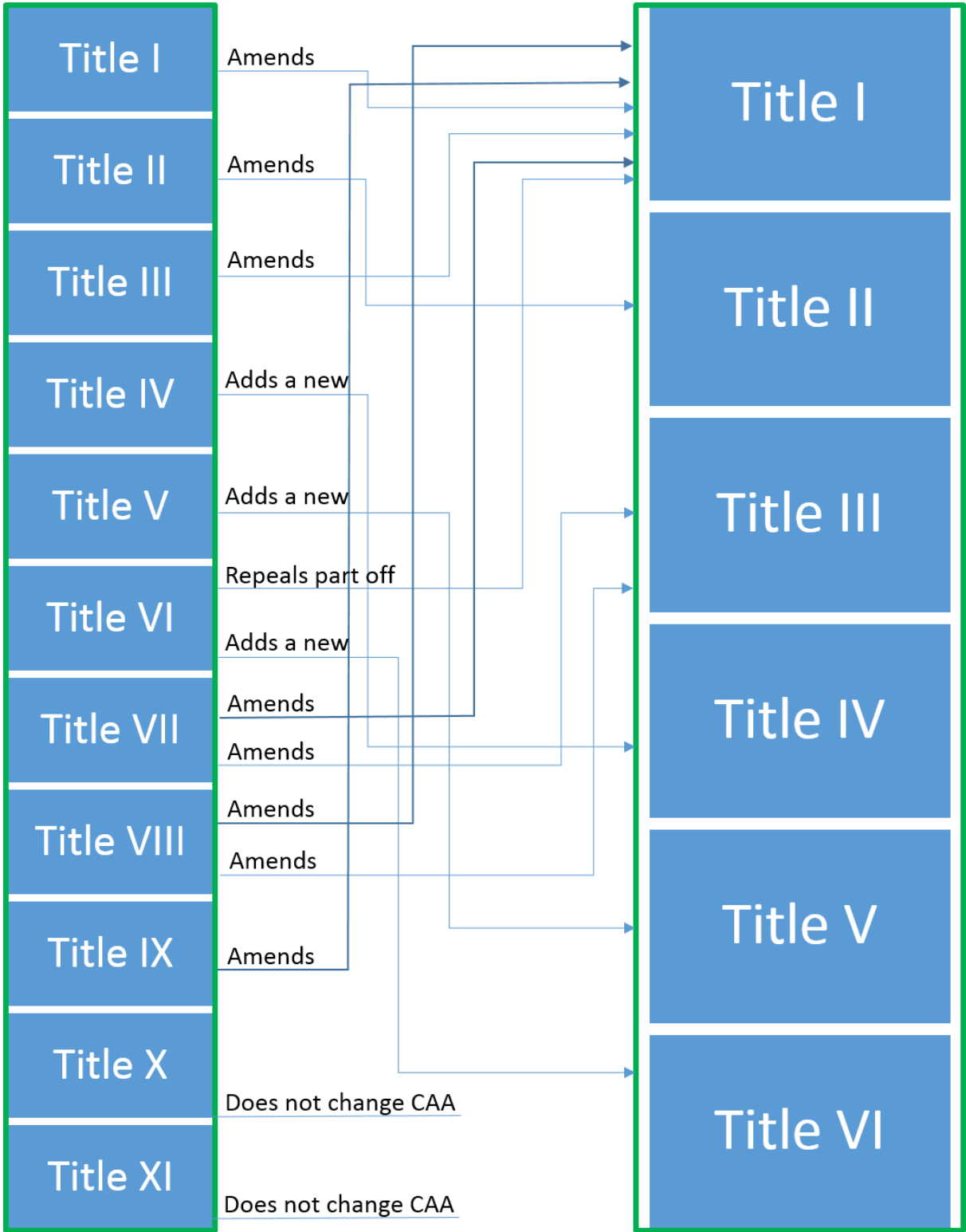
The Clean Air Act is the comprehensive Federal law that regulates air emissions from area, stationary, and mobile sources. This law authorizes the U.S. Environmental Protection Agency to establish National Ambient Air Quality Standards (NAAQS) to protect public health and the environment.

The goal of the Act was to set and achieve NAAQS in every state by 1975. The setting of maximum pollutant standards was coupled with directing the states to develop state implementation plans (SIP's) applicable to appropriate industrial sources in the state. The Act was amended in 1977 primarily to set new goals (dates) for achieving attainment of NAAQS since many areas of the country had failed to meet the deadlines. The 1990 amendments to the Clean Air Act in large part were intended to meet unaddressed or insufficiently addressed problems such as acid rain, ground-level ozone, stratospheric ozone depletion, and air toxics.

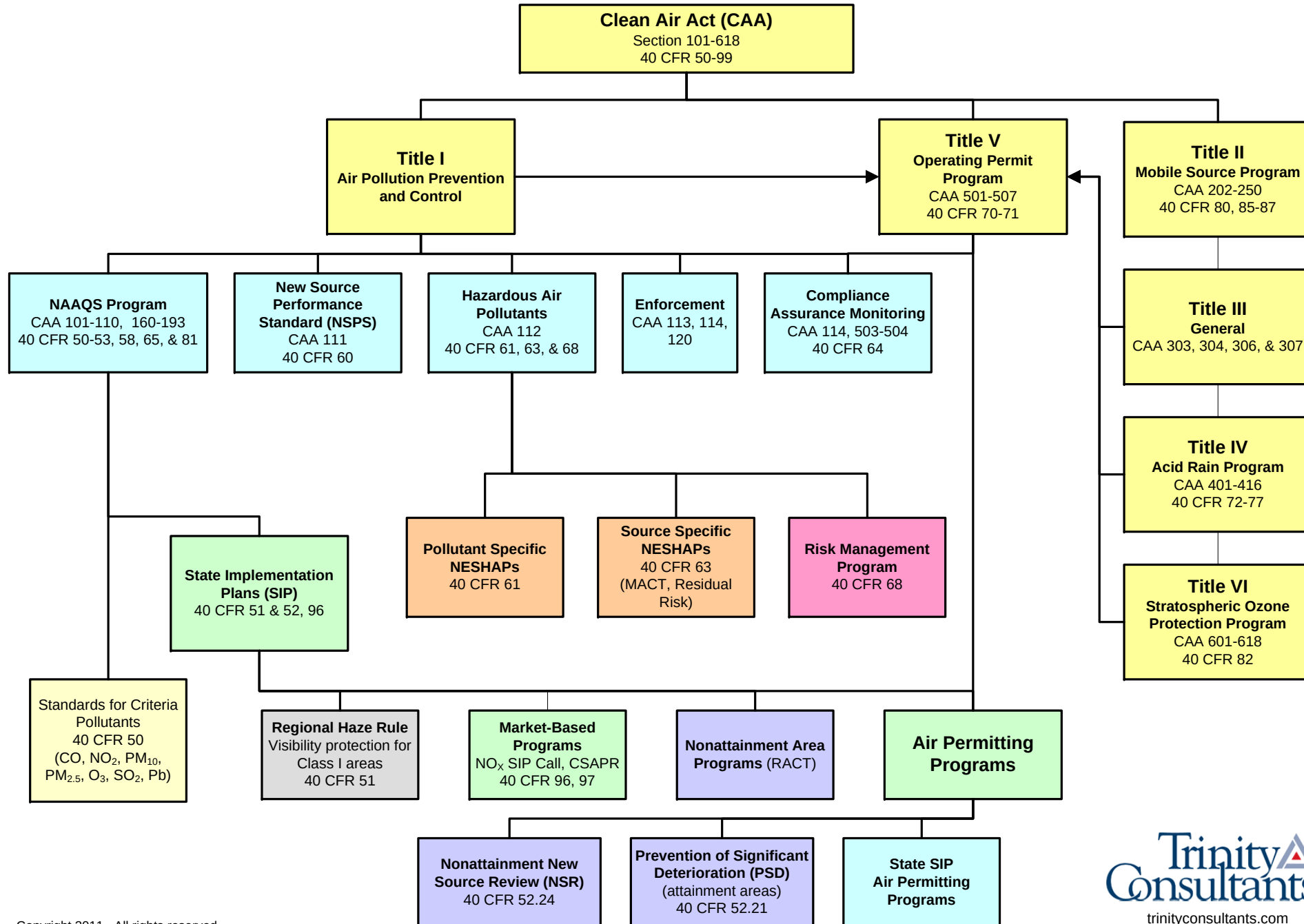
Relationship of the 1990 CAAA to the CAA

1990 CAAA

CAA



Clean Air Act Programs Guide Sheet



4. Code of Federal Regulations(CFR)

Title 40 Summary

Code of Federal Regulations

The Code of Federal Regulations is a codification of the general and permanent rules published in the Federal Register by the Executive departments and agencies of the Federal Government. The Code is divided into 50 Titles, which represent broad areas of national interest subject to Federal regulation.

Title 40, “Protection of Environment,” broadly covers environmental issues. All key air regulations are located in individual Parts of Title 40. There are five Chapters that make up Title 40. Chapter I, which is subdivided into 15 Subchapters as shown below, covers regulations promulgated by the Environmental Protection Agency. **Subchapter C of Chapter I is where all the air program regulations are located.** Additionally, specifications for air emissions from mobile and stationary engines are covered in Subchapter U.

Although Title 40 is categorized by Chapter and Subchapter, most citations to Title 40 refer to a particular “Part” of the Title (e.g., 40 CFR 60, which refers to Part 60 of Title 40 of the Code of Federal Regulations). The following pages show all of the individual Parts of Title 40, Subchapter C, which encompasses Parts 50 through 99. The key Parts of Subchapter C relevant to stationary source air permitting include Parts 50, 52, 60, 61, 63, 64, 68, 70, 81, 82, 96 and 98.

TITLE 40 – PROTECTION OF THE ENVIRONMENT

CHAPTER I – Environmental Protection Agency

- ▲ Subchapter A General (Parts 1-29)
- ▲ Subchapter B Grants and Other Federal Assistance (Parts 30-49)
- ▲ **Subchapter C Air Programs (Parts 50-99)**
- ▲ Subchapter D Water Programs (Parts 100-149)
- ▲ Subchapter E Pesticide Programs (Parts 150-189)
- ▲ Subchapter F Radiation Protection Programs (Parts 190-197)
- ▲ Subchapter G Noise Abatement Programs (Parts 201-211)
- ▲ Subchapter H Ocean Dumping (Parts 220-238)
- ▲ Subchapter I Solid Wastes (Parts 239-282)
- ▲ Subchapter J Superfund, Emergency Planning, and Community Right-To-Know Programs (Parts 300-399)
- ▲ Subchapter N Effluent Guidelines and Standards (Parts 400-471)
- ▲ Subchapter O Sewage Sludge (Parts 501-503)
- ▲ Subchapter Q Energy Policy (Parts 600-699)
- ▲ Subchapter R Toxic Substances Control Act (Parts 700-799)
- ▲ Subchapter U Air Pollution Controls (Parts 1027-1074)

CHAPTER IV – Environmental Protection Agency and Department of Justice (Part 1400)

CHAPTER V – Council on Environmental Quality (Parts 1500-1518)

CHAPTER VI – Chemical Safety and Hazard Investigation Board (Parts 1600-1699)

CHAPTER VII – Environmental Protection Agency and Department of Defense; Uniform National Discharge Standards for Vessels of the Armed Forces (Part 1700)

Code of Federal Regulations

TITLE 40 – PROTECTION OF THE ENVIRONMENT

CHAPTER I – Subchapter C (Air Programs)

- ⇒ Part 50 **National primary and secondary ambient air quality standards**
- Part 51 Requirements for preparation, adoption, and submittal of implementation plans
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- Part 85 Control of air pollution from mobile sources
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- Part 89 Control of emissions from new and in-use non-road compression-ignition engines
- Part 90 Control of emissions from non-road spark-ignition engines at or below 19 kW
- Part 91 Control of emissions from marine spark-ignition engines
- Part 92 Control of air pollution from locomotives and locomotive engines
- Part 93 Determining conformity of Federal actions to State or Federal implementation plans
- Part 94 Control of air pollution from marine compression-ignition engines
- Part 95 Mandatory patent licenses
- Part 96 NO_x Budget Trading Program and CAIR NO_x and SO₂ Trading Programs for SIPs
- Part 97 Federal NO_x Budget Trading Program and CAIR NO_x and SO₂ Trading Programs
- ⇒ Part 98 **Mandatory Greenhouse Gas Reporting**
- Part 99 [Reserved]

Title 40, Code of Federal Regulations Key Parts Relevant to Air Permitting

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40 CFR Part 50

National primary and secondary ambient air quality standards

Statutory Basis: *Clean Air Act Title I, Section 109*

Key Terms: *NAAQS, Ambient Air Reference Test Methods*

- ▲ Part 50 contains a listing of all the National Ambient Air Quality Standards (NAAQS) including details on their form and averaging periods.
- ▲ There are several important Appendices to Part 50. These contain either the reference test methods used to measure ambient concentrations of the criteria pollutants or detailed information on how the NAAQS are to be interpreted.

40 CFR Part 51

Requirements for preparation, adoption, and submittal of implementation plans

Statutory Basis: *Clean Air Act Title I, Section 110*

Key Terms: *SIP requirements, Nonattainment, Guideline on Air Quality Models, BART*

- ▲ Part 51 presents the requirements for states to follow in developing their state implementation plans (SIPs).
- ▲ Appendix S outlines U.S. EPA's interpretation of preconstruction new source review requirements for sources located in nonattainment areas.
- ▲ Appendix W contains the Guideline on Air Quality Models.
- ▲ Appendix Y contains Guidelines for BART Determinations Under the Regional Haze Rule

40 CFR Part 52

Approval and promulgation of implementation plans

Statutory Basis: *Clean Air Act Title I, Section 160-169*

Key Terms: *PSD Program, PSD Increments, Modeling Significance Levels, Visibility, BACT, Nonattainment, SIP Approval*

- ▲ Part 52 contains the U.S. EPA approval and disapproval status of each state's implementation plan. If U.S. EPA believes that some part of a state implementation plan does not meet the requirements of Section 110 of the Clean Air Act or the provisions of 40 CFR Part 51 then those portions are designated.
- ▲ Section 52.21 (located in Subpart A of Part 52) contains the provisions of the federal PSD program. These provisions apply in states with a disapproved PSD program. The provisions are superseded by the air regulations of states with approved PSD programs. Section 52.21 is often used as a reference for procedural matters relating to the PSD program and some states incorporate entire sections of 52.21 by reference.
- ▲ Section 52.24 (located in Subpart A of Part 52) contains the provisions of the federal nonattainment program.

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Key Parts Relevant to Air Permitting

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40 CFR Part 60

Standards of Performance for New Stationary Sources

Statutory Basis: *Clean Air Act Title I, Section 111*

Key Terms: *NSPS, Reference Test Methods, Emission Guidelines, CAMR*

- ▲ Part 60 contains all the New Source Performance Standards (NSPS). The NSPS are technology and emission standards for new or modified sources, either identified by type of unit or by industry category.
- ▲ Emission Guidelines are similar to NSPS, but typically apply to pre-NSPS sources and are a model for states to develop similar rules as part of their SIPS.
- ▲ Subpart A contains general provisions that are applicable to any source subject to an NSPS.
- ▲ Important appendices include Appendix A, which contains the common reference methods for testing stationary source emissions, and Appendix B, which contains performance specifications for continuous emission monitors (CEMS).

40 CFR Part 61

National Emission Standards for Hazardous Air Pollutants

Statutory Basis: *Clean Air Act Title I, Section 112*

Key Terms: *Part 61 NESHAPs, Arsenic, Asbestos, Benzene, Beryllium, Coke Oven Emissions, Mercury, Radon, Radionuclides, Vinyl Chloride*

- ▲ Part 61 contains the NESHAPs promulgated pursuant to the 1970 Clean Air Act Amendments. The standards are established for specific pollutants or individual processes involving those specific pollutants. The standards are also referred to as the “Part 61 NESHAPs” to distinguish them from the NESHAPs promulgated under Part 63, which are also referred to as MACT standards.
- ▲ Important appendices include Appendix B, which contains the reference test methods for hazardous air pollutants covered under Part 61.

40 CFR Part 63

National Emission Standards for Hazardous Air Pollutants for source categories

Statutory Basis: *Clean Air Act Title I, Section 112*

Key Terms: *HAPs, MACT, GACT, Residual Risk, 112(g), 112(j), MACT Hammer*

- ▲ Part 63 contains the NESHAPs established pursuant to Section 112 of the Clean Air Act as amended in 1990. These standards regulate specific categories of stationary sources that emit one or more hazardous air pollutants. For major sources these standards are also referred to as MACT standards since they employ the Maximum Achievable Control Technology available.
- ▲ Subpart A contains general provisions applicable to any source subject to a MACT standard.
- ▲ Subpart B outlines the requirements of the 112(g) program, which applies to new or reconstructed major sources of HAPs for which a MACT standard has not yet been established. Subpart B also contains the implementing regulations of Section 112(j) of the Clean Air Act, which prescribes procedures to be followed if U.S. EPA fails to promulgate MACT standards prior to prescribed deadlines. Section 112(j) is also referred to as the MACT Hammer provisions.
- ▲ Subpart C contains a list of de-listed HAPs.

Title 40, Code of Federal Regulations Key Parts Relevant to Air Permitting

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40 CFR Part 64

Compliance Assurance Monitoring

Statutory Basis: *Clean Air Act Title I-Section 114, Title V-Section 503, 504*

Key Terms: *CAM, Credible Evidence, Quality Improvement Plans*

- ▲ Part 64 contains the regulations governing the submittal of Compliance Assurance Monitoring (CAM) plans as part of the Title V permit application process. Part 64 came into effect on November 21, 1997 following publication of the final CAM rule in the Federal Register on October 22, 1997 (62 FR 54900).

40 CFR Part 68

Chemical Accident Prevention Provisions

Statutory Basis: *Clean Air Act Title I, Section 112*

Key Terms: *112(r), Risk Management Program, Risk Management Plans, Hazard Assessment, Emergency Response*

- ▲ Part 68 contains the regulations governing the Risk Management Program mandated by Section 112(r) of the Clean Air Act.
- ▲ Subpart F contains the listing of substances regulated under the 112(r) program and their threshold quantities.
- ▲ Appendix A of Part 68 includes the table of Toxic End-Points established by U.S. EPA for use in performing hazard assessments.

40 CFR Part 70

State Operating Permit Programs

Statutory Basis: *Clean Air Act Title V, Sections 501-507*

Key Terms: *Title V, Part 70 Permits, Operating Permits, CAM*

- ▲ Part 70 contains the regulations mandated by Title V of the Clean Air Act, which set forth the requirements for states to implement operating permit programs.
- ▲ Appendix A of Part 70 includes a summary of the approval status of each state and locally implemented operating permit program.

40 CFR Part 71

Federal Operating Permit Programs

Statutory Basis: *Clean Air Act Title V, Sections 501-507*

Key Terms: *Title V, SIPs, CAM*

- ▲ Part 71 contains the regulations that U.S. EPA will follow in developing a federal operating permit program in those states failing to implement operating permit programs under Part 70. Currently, this Part does not apply to any state for non-greenhouse gas pollutants since all states' Part 70 programs have been approved.

Title 40, Code of Federal Regulations

Key Parts Relevant to Air Permitting

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40 CFR Parts 72-78

(Acid Rain Provisions)

Statutory Basis: *Clean Air Act Title IV, Sections 401-416*

Key Terms: *Acid Rain, Title IV, SO₂ Allowances, Emissions Trading, CEMS*

- ▲ Parts 72-78 encompass the regulatory requirements for sources subject to the Acid Rain Provisions of the Clean Air Act. These regulations primarily apply to utilities and large co-generation plants that sell electrical power.
- ▲ Part 75 contains regulations for CEMS that are also applicable to Part 96 (NO_x SIP Call, CAIR).

40 CFR Part 81

Designation of Areas for Air Quality Planning Purposes

Statutory Basis: *Clean Air Act Title I, Section 101(b)(1), 107, 110, 169A(a)(2), and 301*

Key Terms: *AQCR, Attainment Designations, Nonattainment, Class I Areas*

- ▲ Subpart B of Part 81 contains a listing of all Air Quality Control Regions (AQCR) in the country. The counties comprising each AQCR are listed.
- ▲ Subpart C contains a listing of the attainment designations for each AQCR, sorted by state.
- ▲ Subpart D contains a listing of all federally mandated Class I areas.

40 CFR Part 82

Protection of Stratospheric Ozone

Statutory Basis: *Clean Air Act Title VI, Section 601-618*

Key Terms: *Stratospheric Ozone, CFC, Title VI, Refrigerants*

- ▲ Part 82 contains the regulations mandated by Title VI of the 1990 Clean Air Act Amendments. The regulations implement the provisions of the Montreal Protocol on Substances that Deplete the Ozone Layer.
- ▲ An important Subpart for general manufacturing industries is Subpart F, which contains provisions for recycling refrigerants and maintenance activities on air conditioners and other cooling equipment.

Title 40, Code of Federal Regulations

Key Parts Relevant to Air Permitting

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40 CFR Parts 96-97

(NO_x SIP Call and other Market-Based Regulations)

Statutory Basis: *Clean Air Act Title I, Section 110(a)(2)(D), 126, 176A, 184*

Key Terms: *NO_x SIP Call, Regional Transport of Ozone, NO_x Emissions Trading Program, Section 126 Petitions, CAIR*

- ▲ Parts 96 through 97 implemented the “NO_x SIP Call” regulations requiring that most Eastern states develop SIP revisions to reduce NO_x emissions from large electric generating units (EGU) and affected non-EGU sources to minimize regional transport of ozone and ozone precursors across state and regional boundaries.
- ▲ The Clean Air Interstate Rule (CAIR), a market-based program is replacing the NO_x SIP Call and (effectively) the Acid Rain Program for utilities Eastern half of the U.S. CAIR includes an ozone-season cap for NO_x and adds annual caps for both NO_x and ozone.
- ▲ These parts include provisions for a Federal Implementation Plan to achieve budgeted reductions if states fail to develop adequate SIP revisions.

40 CFR Parts 98

(Mandatory Greenhouse Gas Reporting)

Statutory Basis: *Clean Air Act Title I, Part A*

Key Terms: *Greenhouse Gases, CO₂e, CO₂, CH₄, N₂O*

- ▲ Part 98, established through rulemaking concluded in October 2009, requires annual reporting to EPA of emissions of carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), sulfur hexafluoride (SF₆), hydrofluorocarbons (HFCs), perfluorochemicals (PFCs), and other fluorinated gases (e.g., nitrogen trifluoride, hydrofluorinated ethers [HFEs]).
- ▲ The GHG emissions reporting requirements, and related monitoring, recordkeeping, and verification requirements, apply to owners and/or operators of any facility that meets any one of four criteria specified in 40 CFR §98.2(a)(1), (2), (3), and (4). This generally includes facilities emitting over 25,000 metric tons per year of CO₂e or that belong to certain designated source categories.
- ▲ The annual emission inventory reports required under Part 98 for affected facilities are due by March 31st of each year.

5. Kushner Letter



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JUL 22 2009

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Re: Vacatur of Startup, Shutdown, and Malfunction (SSM) Exemption (40 C.F.R. §§ 63.6(f)(1) and 63.6(h)(1))

Dear Counsel:

In *Sierra Club v. EPA*, 551 F.3d 1019 (D.C. Cir. 2008), the United States Court of Appeals for the District of Columbia Circuit vacated two provisions in EPA's Section 112 regulations governing the emissions of hazardous air pollutants during periods of startup, shutdown, and malfunction ("SSM"). Specifically, the Court vacated 40 C.F.R. §§ 63.6(f)(1) and 63.6(h)(1), that are part of a regulation, commonly referred to as the "General Provisions Rule," that EPA promulgated under Section 112 of the Clean Air Act. When incorporated into Clean Air Act Section 112(d) regulations for specific source categories, these two provisions exempt sources from the requirement to comply with the otherwise applicable Section 112(d)

emission standard during periods of SSM. Representatives of various industries subject to Section 112(d) rules have raised concerns to EPA about the impact of the *Sierra Club* decision and the potential enforcement exposure a source faces if it fails to comply with a Section 112(d) emission standard during an SSM event. The purpose of this letter is to address those concerns.

Until the Court issues the mandate in *Sierra Club v. EPA*, 40 C.F.R. §§ 63.6(f)(1) and (h)(1) remain in effect. Once the mandate issues, 40 C.F.R. §§ 63.6(f)(1) and (h)(1) will become null and void. The vacatur will immediately and directly affect only the subset of Section 112(d) rules that incorporate 40 C.F.R. §§ 63.6(f)(1) and (h)(1) by reference, and that contain no other regulatory text exempting or excusing compliance during SSM events. Table 1, attached, contains a list of the source category rules that EPA believes will be immediately affected once the mandate issues in *Sierra Club*, as these rules do nothing more than incorporate 40 C.F.R. §§ 63.6(f)(1) and (h)(1) by reference and contain no other regulatory text exempting or excusing compliance during SSM events. EPA's initial analysis of the Section 112(d) source category rules indicates that the majority of the rules include specific regulatory text that exempts or excuses compliance during SSM events, and such regulatory text is in addition to, or in lieu of, a cross-reference to 40 C.F.R. §§ 63.6(f)(1) and (h)(1).¹ See Table 2 (attached) (identifies the source category rules that EPA believes will not be impacted when the mandate issues in *Sierra Club*). The vacatur does not have a direct impact on such source category-specific SSM provisions because those provisions were not challenged and were not before the court in *Sierra*

¹ There is a great deal of variation in the specific regulatory text used in such rules to exempt or otherwise excuse a source from compliance with the applicable Section 112(d) standard during periods of SSM. The following examples are illustrative of the different formulations that EPA has identified in its Section 112(d) source category rules, but are by no means exclusive. See, e.g., 40 C.F.R. § 63.762(a) ("The provisions set forth in this subpart shall apply at all times except during startups or shutdowns, during malfunctions. . . ."); 40 C.F.R. § 63.654(g)(6) ("periods of excess emissions shall be identified in the Periodic Reports and shall be used to determine compliance with the emission standards. . . . (iii) Periods of startup and shutdown that meet the definition of § 63.641, and malfunction that meet the definition in § 63.2 and periods of performance testing and monitoring system calibration shall not be considered periods of excess emissions. . . ."); 40 C.F.R. § 63.1570 (a), (b) and (g) (contains a cross-reference to 63.6(f)(1) and (h)(1) in 63.1570(a) and (b), respectively, but also has regulatory text in 63.1570(g) excusing deviations that occur during SSM. Section 63.1570(g) provides "Consistent with §§ 63.6(e) and 63.7(e)(1), deviations that occur during a period of startup, shutdown, or malfunction are not violations if you demonstrate to the Administrator's satisfaction that you were operating in accordance with § 63.6(e)(1)."); 40 C.F.R. § 63.695(e)(6)(i) ("An excursion is not a violation nor does it count toward the number of excused excursions allowed under paragraph (e)(6)(ii) of this section when the excursion occurs during any one of the following periods: (A) During a period of startup, shutdown, or malfunction when the affected facility is operated during such period in accordance with § 63.6(e)(1)").

Sierra Club. EPA recognizes, however, that the legality of such source category-specific SSM provisions may now be called into question, and EPA intends to evaluate each of them in light of the court's decision. The tables attached to this letter are based on EPA's initial analysis and are, therefore, subject to change.²

Even if a source is subject to a Section 112(d) standard that does no more than incorporate by reference 40 C.F.R. §§ 63.6(f)(1) and (h)(1) and contains no other regulatory text exempting or excusing compliance during SSM events (see Table 1), the impact of the vacatur will vary depending on the source category, and may not be immediate for sources in many categories. EPA's initial evaluation of the subset of Section 112(d) rules that do nothing more than cross-reference 40 C.F.R. §§ 63.6(f)(1) and (h)(1) indicates that most of these rules should not present compliance issues for sources during SSM events. There are various reasons for this. For example, certain Section 112(d) standards can be achieved despite SSM events because the performance of pollution control equipment is not affected by SSM events. Other Section 112(d) standards are expressed as an average over a relatively long period of time (*e.g.*, a yearly rolling average) and expected startup and shutdown events and any malfunctions over that period are not likely to result in an exceedance of the standard. Further, certain Section 112(d) standards impose only work practice requirements with which a source should be able to comply during SSM events.

Compliance with Section 112(d) standards during SSM periods should also be less problematic for those sources that are operating in compliance with 40 C.F.R. § 63.6(e)(1)(I), which requires sources to minimize emissions at all times, including periods of SSM, consistent with safety and good air pollution control practices. Sources subject to Section 112(d) standards that only cross-reference the exemption in 40 C.F.R. §§ 63.6(f)(1) and (h)(1) of the General Provisions Rule should, in many instances, be able to minimize their exposure to violations of the applicable Section 112(d) standards by adjusting their operating practices or by adding emission controls or measures to reduce or eliminate excess emissions during SSM periods.

EPA recognizes, however, that some sources subject to Section 112(d) standards that only cross-reference the exemption in 40 C.F.R. §§ 63.6(f)(1) and (h)(1) of the General Provisions Rule may be unable to comply with such standards during SSM events despite their best efforts, including adherence to 40 C.F.R. § 63.6(e)(1)(i). For a source that fails to comply with the applicable Section 112(d) standards during SSM events, EPA will determine an appropriate response based on, among other things, the good faith efforts of the source to minimize emissions during SSM periods, including preventative and corrective actions, as well as root cause analyses to ascertain and rectify excess emissions, and whether the source has developed and implemented an SSM plan to minimize such emissions. *See* 40 C.F.R. § 63.6(e)(3)(i). We intend to closely scrutinize any claim that a Section 112(d) standard cannot be

² There are some Section 112(d) source category rules that do not appear in either table because the rules do not contain any SSM exemption. The *Sierra Club* decision has no impact on such rules.

met during a malfunction to determine whether the event was in fact “sudden, infrequent, not reasonably preventable” and was not instead “caused in part by poor maintenance or careless operation.” 40 C.F.R. § 63.2 (definition of malfunction).

We encourage sources that anticipate compliance difficulties to contact EPA or the appropriate state regulatory authority. By engaging with regulators early, sources can identify their compliance concerns and engage in a meaningful dialogue with EPA or the appropriate state regulatory authority about the individual circumstances presented by a particular facility, including any information on the nature and extent of the excess emissions that occurred or are expected to occur during SSM events. In appropriate cases, EPA or the state may be able to take action to resolve a source’s compliance concerns. Such actions may include, for example, issuance of an Administrative Order on Consent that includes a schedule for the source to achieve compliance during SSM events.

EPA is currently evaluating, in light of the *Sierra Club* decision, which Section 112(d) source category standards should be revised, and of these, which should be revised on an expedited basis. As we engage in the process of evaluating and revising rules, we will evaluate any information that we have, and that we may receive from industry or other sources, on emissions during periods of SSM. *See, e.g.*, Clean Air Act Section 112(d)(3)(A) (existing source standards are based on the average emission limitation achieved by the best performing 12 percent of sources “for which the Administrator has emissions information”). EPA will endeavor to promptly address concerns raised with respect to specific Section 112(d) source category standards where the Agency determines that sources within a source category may have a limited ability to comply with those standards during periods of SSM. EPA intends to give highest priority to reviewing and revising those Section 112(d) source category standards that may be difficult for sources to meet during an SSM period given the technological limitations of the processes involved.

Sincerely,

A handwritten signature in blue ink, appearing to read "Adam M. Kushner", with a long horizontal flourish extending to the right.

Adam M. Kushner, Director
Office of Civil Enforcement

cc: William Becker, NACAA
Steve Page, OAR
Regional Air Division Directors
Regional Air Enforcement Managers

Table 1 – Section 112(d) Source Category Rules That Will Be Affected Once The Mandate Issues in *Sierra Club v. EPA*, 551 F.3d 1019 (D.C. Cir. 2008), Vacating the Startup, Shutdown, and Malfunction Exemptions in 40 C.F.R. § 63.6(f)(1) and (h)(1)⁴

Relevant Part 63 Subpart	Source Category
R	Gasoline Distribution
S	Pulp and Paper
T	Halogenated Solvent Cleaners
X	Secondary Lead Smelting
Y	Marine Loading Operations
GG	Aerospace Manufacturing
II	Shipbuilding and Ship repair
KK	Printing and Publishing
LL	Primary Aluminum
MM	Combustion Sources at Pulp Mills
CCC	Steel Pickling
III	Flexible Polyurethane Foam Production
LLL	Portland Cement
NNN	Wool Fiberglass
RRR	Secondary Aluminum
TTT	Primary Lead
VVV	Publicly Owned Treatment Works
XXX	Ferroalloy Production

⁴ This Table presents the Clean Air Act Section 112(d) source category rules that EPA currently believes will be directly affected once the mandate issues in *Sierra Club v. EPA*, 551 F.3d 1019 (D.C. Cir. 2008). The rules identified in this Table incorporate 40 C.F.R. Sections 63.6(f)(1) and (h)(1) by reference and contain no other regulatory text exempting or excusing compliance during startup, shutdown or malfunction events. The information in this Table is based on EPA's initial analysis and is, therefore, subject to change.

Table 1 (Continued) – Section 112(d) Source Category Rules That Will Be Affected Once The Mandate Issues in *Sierra Club v. EPA*, 551 F.3d 1019 (D.C. Cir. 2008), Vacating the Startup, Shutdown, and Malfunction Exemptions in 40 C.F.R. § 63.6(f)(1) and (h)(1)

Relevant Part 63 Subpart	Source Category
AAAA	Municipal Solid Waste Landfills
JJJJ	Paper and Other Web Coating
RRRR	Metal Furniture
VVVV	Boat Manufacturing
YYYYY	Electric Arc Furnaces – area sources
ZZZZZ	Iron and Steel Foundries – area sources
EEEEEE	Primary Copper – area sources
FFFFFF	Secondary Copper – area sources
GGGGGG	Primary Nonferrous metals – area sources
HHHHHH	Paint Stripping and Miscellaneous Coating – area sources
LLLLLL	Acrylic/Modacrylic fibers – area sources
NNNNNN	Chromium Compounds – area sources
OOOOOO	Flexible Polyurethane Foam Production and Fab – area sources
PPPPPP	Lead Acid Batteries – area sources
RRRRRR	Clay ceramics – area sources
TTTTTT	Secondary Nonferrous metals – area sources
YYYYYY	Ferroalloys Production – area sources

Table 2 – Section 112(d) Source Category Rules That Will Not Be Affected When the Mandate Issues in *Sierra Club v. EPA*, 551 F.3d 1019 (D.C. Cir. 2008)⁵

Relevant Part 63 Subpart	Source Category
F, G, H, I	Hazardous Organic NESHAP for Synthetic Organic Chemical Manufacturing
L	Coke Oven Batteries
N	Chromium Electroplating
O	Ethylene Oxide Sterilizers
S	Pulp and Paper (some emissions standards only)
U	Polymers and Resins I
W	Polymers and Resins II
AA	Phosphoric Acid Manufacturing
BB	Phosphate Fertilizer Production
CC	Petroleum Refineries
DD	Off-site Waste and Recovery
HH	Oil and Natural Gas Production
OO-YY	Generic MACT (8 categories)
DDD	Mineral Wool
EEE	Hazardous Waste Combustors
GGG	Pharmaceutical Manufacturing

⁵ This Table presents the Clean Air Act Section 112(d) source category rules that will not be immediately affected by the vacatur in *Sierra Club v. EPA*, 551 F.3d 1019 (D.C. Cir. 2008). These rules contain specific regulatory text that exempts or excuses compliance during SSM events, and such regulatory text is in addition to, or in lieu of, a cross-reference to 40 C.F.R. Sections 63.6(f)(1) and (h)(1). Although these provisions will remain in effect following the issuance of the mandate in *Sierra Club*, EPA recognizes that the legality of such source category-specific SSM provisions may now be called into question, and EPA intends to evaluate them in light of the court's decision.

Table 2 (Continued) – Section 112(d) Source Category Rules That Will Not Be Affected When the Mandate Issues in *Sierra Club v. EPA*, 551 F.3d 1019 (D.C. Cir. 2008)

Relevant Part 63 Subpart	Source Category
HHH	Natural Gas Transmission and Storage
JJJ	Polymers and Resins IV
MMM	Pesticide Manufacturing
OOO	Polymers and Resins III
PPP	Polyether Polyols
QQQ	Primary Copper Smelting
UUU	Petroleum Refineries II
CCCC	Nutritional Yeast
DDDD	Plywood and Composite Wood Products
EEEE	Organic Liquids Distribution
FFFF	Miscellaneous Organic NESHAP
GGGG	Vegetable Oil Extraction
HHHH	Wet-formed Fiberglass Mat
III	Auto and Light Duty Truck Coating
KKKK	Metal Can Coating
MMMM	Miscellaneous Metal Parts Coating
NNNN	Large Appliances Coating
OOOO	Fabric Printing, Coating, and Dyeing
PPPP	Plastic Parts Coating
QQQQ	Wood Building Products
RRRR	Metal Furniture Coating
SSSS	Metal Coil Coating
UUUU	Cellulose Production

Table 2 (Continued) – Section 112(d) Source Category Rules That Will Not Be Affected When the Mandate Issues in *Sierra Club v. EPA*, 551 F.3d 1019 (D.C. Cir. 2008)

Relevant Part 63 Subpart	Source Category
WWWW	Reinforced Plastics Composites Manufacturing
XXXX	Rubber Tire Manufacturing
YYYY	Gas Turbines
ZZZZ	Reciprocating Internal Combustion Engines
AAAAA	Lime Manufacturing
BBBBB	Semiconductor Manufacturing
CCCCC	Coke Ovens
DDDDD	Industrial Boilers
EEEEE	Iron and Steel Foundries
FFFFF	Integrated Iron and Steel Production
GGGGG	Site Remediation
HHHHH	Miscellaneous Coating
IIIII	Mercury Cell Chlor-alkali Plants
JJJJJ	Brick and Clay Manufacturing
KKKKK	Clay Ceramics
LLLLL	Asphalt Roofing and Processing
MMMMM	Flexible Polyurethane Foam Fabrication
NNNNN	HCl Production
PPPPP	Engine Test Cells/Stands
QQQQQ	Friction Materials Manufacturing
RRRRR	Taconite Ore Production
SSSSS	Refractory Products

Table 2 (Continued) – Section 112(d) Source Category Rules That Will Not Be Affected When the Mandate Issues in *Sierra Club v. EPA*, 551 F.3d 1019 (D.C. Cir. 2008)

Relevant Part 63 Subpart	Source Category
TTTTT	Primary Magnesium Production
BBBBBB	Gasoline Distribution – area sources
MMMMMM	Carbon Black Production – area sources
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6. Florida Administrative Code (F.A.C.)

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62-330	Environmental Resource Permitting
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7. Florida Administrative Code (F.A.C.)

Air Pollution Regulations

Relevant Florida Rules

Current Air Rules

The following Florida Administrative Code (F.A.C.) rule chapters contain the DEP's current air pollution regulations. Note: Chapter 62-4, F.A.C., includes general DEP permitting requirements applicable to all regulatory programs (air, water, and waste). For former air rules, please see the [F.A.C. website](#).

F.A.C. Chapter	Title	Effective
Chapter 62-4, F.A.C.	Permits	10/1/13
Chapter 62-204, F.A.C.	Air Pollution Control - General Provisions	1/14/15
Chapter 62-210, F.A.C.	Stationary Sources - General Requirements	8/25/14
Chapter 62-212, F.A.C.	Stationary Sources - Preconstruction Review	03/28/12
Chapter 62-213, F.A.C.	Operation Permits For Major Sources of Air Pollution	12/31/13
Chapter 62-214, F.A.C.	Requirements For Sources Subject to the Federal Acid Rain Program	03/11/10
Chapter 62-243, F.A.C.	Tampering With Motor Vehicle Air Pollution Control Equipment	02/16/12
Chapter 62-252, F.A.C.	Gasoline Vapor Control	9/24/13
Chapter 62-256, F.A.C.	Open Burning	10/06/08
Chapter 62-257, F.A.C.	Asbestos Program	02/16/12
Chapter 62-285, F.A.C.	Greenhouse Gas Emissions Reduction	02/16/12
Chapter 62-296, F.A.C.	Stationary Sources - Emission Standards	7/10/14
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Chapter 62-4, F.A.C.

Permits

CHAPTER 62-4 PERMITS

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62-4.020	Definitions
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62-4.030	General Prohibition
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62-4.050	Procedures to Obtain Permits and Other Authorizations; Applications
62-4.052	Regulatory Program and Surveillance Fees for Wastewater Facilities or Activities Discharging to Surface Waters
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62-4.060	Consultation (Repealed)
62-4.070	Standards for Issuing or Denying Permits; Issuance; Denial
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62-4.100	Suspension and Revocation
62-4.110	Financial Responsibility (Repealed)
62-4.120	Transfer of Permits
62-4.130	Plant Operation – Problems
62-4.150	Review (Repealed)
62-4.160	Permit Conditions
62-4.200	Scope of Part II
62-4.210	Construction Permits (Repealed)
62-4.220	Operation Permit for New Sources (Repealed)
62-4.240	Operation Permits for Water Pollution Sources (Repealed)
62-4.241	Whole Effluent Toxicity Limits
62-4.242	Antidegradation Permitting Requirements; Outstanding Florida Waters; Outstanding National Resource Waters; Equitable Abatement
62-4.243	Exemptions from Water Quality Criteria
62-4.244	Mixing Zones: Surface Waters
62-4.246	Sampling, Testing Methods, and Method Detection Limits for Water Pollution Sources
62-4.249	Preservation of Rights (Repealed)
62-4.250	Water Pollution Temporary Operation Permits; Conditions (Repealed)
62-4.510	Scope of Part III
62-4.520	Definition
62-4.530	Procedures
62-4.540	General Conditions for All General Permits

62-4.001 Scope of Part I.

This part sets forth procedures on how to obtain a permit from the State of Florida Department of Environmental Protection. This part also provides requirements and procedures for the issuance, denial, renewal, extension, transfer, modification, suspension, and revocation of any permit required by the Department of Environmental Protection. Except as otherwise provided in Chapter 62-330, F.A.C., or in the rules adopted by reference thereunder, this part shall not apply to activities regulated under Part IV of Chapter 373, F.S. However, this Part shall continue to apply to those activities grandfathered under Sections 373.4131(4), 373.414(11), (12)(a), (13), (14), (15), (16), and 373.4145(6), F.S. This Part shall not preclude the application of any other permit requirements or procedures for certain types of facilities as contained in other chapters of Title 62, F.A.C.

Rulemaking Authority 373.026, 373.043, 373.044, 373.109, 373.113, 373.4131, 373.4145, 373.418, 403.021, 403.031, 403.061, 403.087, 403.088 FS. Law Implemented 373.026, 373.044, 373.109, 373.409, 373.413, 373.4135, 373.414(9), (11), (12)(a), (13), (14), (15), (16), 373.4145, 373.418, 373.421, 403.021, 403.031, 403.061, 403.087, 403.088 FS. History--New 5-17-72, Formerly 17-4.01, Amended 8-31-88, Formerly 17-4.001, Amended 7-4-95, 10-1-07, 10-1-13.

62-4.020 Definitions.

When used in this chapter, unless the context clearly indicates otherwise, the following words shall mean:

(1) “Annual Average Flow” is the long-term harmonic mean flow of the receiving water, or an equivalent flow based on generally accepted scientific procedures in waters for which such a mean cannot be calculated. For waters for which flow records have been kept for at least the last three years, “long-term” shall mean the period of record. For all other waters, “long-term” shall mean three years (unless the Department finds the data from that period not representative of present flow conditions, based on evidence of land use or other changes affecting the flow) or the period of records sufficient to show a variation of flow of at least three orders of magnitude, whichever period is less. For nontidal portions of rivers and streams, the harmonic mean (Q_{hm}) shall be calculated as

$$Q_{hm} = \frac{n}{\frac{1}{Q_1} + \frac{1}{Q_2} + \frac{1}{Q_3} + \frac{1}{Q_4} + \frac{1}{Q_5} + \dots + \frac{1}{Q_n}}$$

in which each Q is an individual flow record and n is the total number of records. In lakes and reservoirs, the annual average flow shall be based on the hydraulic residence time, which shall be calculated according to generally accepted scientific procedures, using the harmonic mean flows for the inflow sources. In tidal estuaries and coastal systems or tidal portions of rivers and streams, the annual average flow shall be determined using methods described in EPA publication no. 600/6-85/002b pages 142-227, incorporated by reference in paragraph 62-4.246(9)(k), F.A.C., or by other generally accepted scientific procedures, using the harmonic mean flow for any freshwater inflow. If there are insufficient data to determine the harmonic mean then the harmonic mean shall be estimated by methods as set forth in the EPA publication *Technical Support Document for Water Quality-Based Toxics Control* (March 1991), incorporated by reference in paragraph 62-4.246(9)(d), F.A.C., or other generally accepted scientific procedures. In situations with seasonably variable effluent discharge rates, hold-and-release treatment systems, and effluent-dominated sites, annual average flow shall mean modeling techniques that calculate long-term average daily concentrations from long-term individual daily flows and concentrations in accordance with generally accepted scientific procedures.

(2) “Approved Analytical Method” shall mean any of the analytical methods approved under Chapter 62-160, F.A.C.

(3) “Commission” is the State of Florida Environmental Regulation Commission.

(4) “Construction permit” is the legal authorization granted by the Department to construct, expand, modify, or make alterations to any installation and to temporarily operate and test such new or modified installations.

(5) “Department” is the State of Florida Department of Environmental Regulation or its delegatee as provided in the Operating Agreements Concerning Management and Storage of Surface Water Regulation and Wetland Resource Regulation adopted by reference in Rule 62-101.040, F.A.C.

(6) “Environmental restoration and enhancement” means activities, other than those proposed as mitigation for a permit required under Part IV of Chapter 373, F.S., conducted by government, research, education or charitable entities that are either not-for-profit or non-profit, that have the sole objective of restoring or enhancing water resources, including water quality and the functions wetlands and other surface waters provide to fish and wildlife, through measures such as: restoring hydrology and water circulation; re-establishing native vegetation; or otherwise restoring more desirable natural conditions that existed prior to human-induced disturbances.

(7) “Installation” is any structure, equipment, facility, or appurtenances thereto, operation or activity which is or may be a source of pollution as defined in Chapter 403, F.S. Installation includes dredging and filling as these terms are defined in Section 403.911, F.S.

(8) “Method Detection Limit (MDL)” is the smallest concentration of an analyte of interest that can be measured and reported with 99% confidence that the concentration will be greater than zero. The MDLs are determined from the analysis of a given matrix containing the analyte at a specified level. Determination of MDLs shall follow procedures determined in Appendix B to part 136 of 40 CFR, 1990, incorporated here by reference, or equivalent procedures complying with Chapter 62-160, F.A.C.

(9) “Operation permit” is the legal authorization granted by the Department to operate or maintain any installation for a specified period of time.

(10) “Permit condition” is a statement or stipulation which is issued with a permit and which must be complied with.

(11) “Permit” is the legal authorization to engage in or conduct any construction, operation, modification, or expansion of any

installation, structure, equipment, facility, or appurtenances thereto, operation, or activity which will reasonably be expected to be a source of pollution.

(12) “Practical Quantification Limit (PQL)” is the lowest level that can be reliably achieved during routine laboratory operating conditions within specified limits of precision and accuracy, as reflected in the Department’s list of PQLs under subsection 62-4.246(4), F.A.C., or an alternative level established through equivalent procedures complying with Chapter 62-160, F.A.C.

(13) “Secretary” is the Secretary of the Department.

(14) “Temporary operation permit” is the legal authorization limited to a specified time granted by the Department to operate, maintain, construct, modify, expand, or make alterations to any installation in accordance with Section 403.088, F.S.

(15) “Equivalent Clean Closure” is available for interim status land disposal units that certified clean closure under 40 CFR Part 265 standards prior to March 19, 1987. These facilities must make an equivalency demonstration to meet 40 CFR Part 264 closure standards or the facility must obtain a closure permit containing post closure requirements.

Rulemaking Authority 373.026, 373.043, 373.414, 373.418, 403.061, 403.805 FS. Law Implemented 373.109, 373.413, 373.414, 373.4145, 403.021, 403.031, 403.061, 403.087, 403.088, 403.802, 403.817 FS. History–New 3-4-72, Revised 5-17-72, Amended 6-10-75; Joint Administrative Procedures Committee Objection Filed – See FAR Vol. 1, No. 28, 1-12-76; Joint Administrative Procedures Committee Objection Withdrawn – See FAR Vol. 3, No. 30, 7-29-77, Amended 3-11-81, 10-16-84, 12-10-84, Formerly 17-4.02, Amended 3-18-86, 8-31-88, 6-4-92, 11-16-92, 7-11-93, Formerly 17-4.020, Amended 4-3-03.

62-4.021 Transferability of Definitions.

Definitions in other chapters of the Department’s rules may be used to clarify the meaning of terms used in this chapter unless the terms are defined in Rule 62-4.020, F.A.C., or unless transfer of such definition would defeat the purpose or alter the intended effect of the provisions of this chapter.

Rulemaking Authority 403.061, 403.062, 403.087, 403.504, 403.704, 403.804, 403.805 FS. Law Implemented 403.021, 403.061, 403.087, 403.088, 403.141, 403.161, 403.182, 403.502, 403.702, 403.708 FS. History–New 3-1-79, Amended 8-31-88, Formerly 17-4.021.

62-4.030 General Prohibition.

Any stationary installation which will reasonably be expected to be a source of pollution shall not be operated, maintained, constructed, expanded, or modified without the appropriate and valid permits issued by the Department, unless the source is exempted by Department rule. The Department may issue a permit only after it receives reasonable assurance that the installation will not cause pollution in violation of any of the provisions of Chapter 403, F.S., or the rules promulgated thereunder. A permitted installation may only be operated, maintained, constructed, expanded or modified in a manner that is consistent with the terms of the permit.

Rulemaking Authority 403.021, 403.031, 403.061, 403.088 FS. Law Implemented 403.021, 403.031, 403.061, 403.087, 403.088 FS. History–New 3-4-70, Revised 5-17-72, Formerly 17-4.03, Amended 8-31-88, Formerly 17-4.030.

62-4.040 Exemptions.

(1) The following installations are exempted from the permit requirements of this chapter. The following exemptions do not relieve any installation from any other requirements of Chapter 403, F.S., or rules of the Department. Other installations may be exempted under other chapters of Title 62.

(a) Structural changes which will not change the quality, nature or quantity of air and water contaminant emissions or discharges or which will not cause pollution.

(b) Any existing or proposed installation which the Department shall determine does not or will not cause the issuance of air or water contaminants in sufficient quantity, with respect to its character, quality or content, and the circumstances surrounding its location, use and operation, as to contribute significantly to the pollution problems within the State, so that the regulation thereof is not reasonably justified. Such a determination is agency action and is subject to Chapter 120, F.S. Such determination shall be made in writing and filed by the Department as a public record. Such determination may be revoked if the installation is substantially modified or the basis for the exemption is determined to be materially incorrect.

(2) These exemptions do not apply to the discharge to waters of the state from any article, machine, equipment, contrivance or their exhaust system, which contains water-borne radioactive material in concentrations above the natural radioactive background

concentration in the receiving water.

Rulemaking Authority 403.061, 403.805 FS. Law Implemented 403.021, 403.031, 403.061, 403.087, 403.088, 403.802, 403.805, 403.813 FS. History–Formerly 17-4.03(2), FAC., New 3-4-72, Revised 5-17-72, Amended 8-7-73, 6-10-75; Joint Administrative Procedures Committee Objection filed – See FAR Vol. 1, No. 28, 7-18-75, Amended 10-26-75, 7-8-76; Joint Administrative Procedures Objection withdrawn – See FAR Vol. 3, No. 30, 7-29-77, Amended 7-13-78, 3-1-79, 3-11-81, 7-8-82, 3-31-83, 3-15-84, 12-10-84; Joint Administrative Procedures Committee Objection filed – See FAR Vol. 11, No. 11, 3-15-85, Amended 5-8-85; Amendments effective 6-24-85 – See Chapter 85-334, Laws of Florida; Joint Administrative Procedures Committee Objection withdrawn – See FAR Vol. 11, No. 51, 12-20-85, Formerly 17-4.04, Amended 3-17-86, 8-31-88, Formerly 17-4.040.

62-4.050 Procedures to Obtain Permits and Other Authorizations; Applications.

(1) Any person desiring to obtain a permit from the Department shall apply on forms prescribed by the Department and shall submit such additional information as the Department by law may require.

(2) All applications and supporting documents shall be filed with the Department.

(3) To ensure protection of public health, safety, and welfare, any construction, modification, or operation of an installation which may be a source of pollution, or of a public drinking water supply, shall be in accordance with sound professional engineering practices pursuant to Chapter 471, F.S.; and all final geological papers or documents involving the practice of the profession of geology shall be in accordance with sound professional geological practices pursuant to Chapter 492, F.S. All applications for a Department permit shall be certified by a professional engineer registered in the State of Florida except, when the application is for renewal of an air pollution operation permit at a non-Title V source as defined in Rule 62-210.200, F.A.C., or where professional engineering is not required by Chapter 471, F.S. Where required by Chapter 471 or 492, F.S., applicable portions of permit applications and supporting documents which are submitted to the Department for public record shall be signed and sealed by the professional(s) who prepared or approved them.

(4) Processing fees are as follows:

(a) Air Pollution Permits.

1. Construction Permit Fee for an Emissions Unit Requiring Prevention of Significant Deterioration or Nonattainment Area Preconstruction Review. The processing fee for a construction permit for an emissions unit requiring a Prevention of Significant Deterioration (PSD) or Nonattainment Area (NAA) preconstruction review pursuant to Rule 62-212.400 or 62-212.500, F.A.C., respectively, shall be \$7500.

2. Construction Permit Fee for an Emissions Unit Not Requiring Prevention of Significant Deterioration or Nonattainment Area Preconstruction Review. No processing fee shall be required for a construction permit for an emissions unit not requiring Prevention of Significant Deterioration (PSD) or Nonattainment Area (NAA) preconstruction review, if the facility containing the emissions unit holds an air operation permit issued pursuant to Chapter 62-213, F.A.C. For any such emissions unit at a facility not holding a Chapter 62-213, F.A.C., air operation permit, the processing fee shall be as follows:

a. Construction permit for an emissions unit having potential emissions of 100 or more tons per year of any single pollutant	\$5000
b. Construction permit for an emissions unit having potential emissions of 50 or more tons per year, but less than 100 tons per year, of any single pollutant	\$4500
c. Construction permit for an emissions unit having potential emissions of 25 or more tons per year, but less than 50 tons per year, of any single pollutant	\$2000
d. Construction permit for an emissions unit having potential emissions of 5 or more tons per year, but less than 25 tons per year, of any single pollutant	\$1000
e. Construction permit for an emissions unit having potential emissions of less than 5 tons per year of each pollutant	\$250
3. Operation Permit Fee for an Emissions Unit at a Non-Title V Source.	
a. Operation permit for an emissions unit required to measure actual emissions by stack sampling	\$1500

b. Operation permit for an emissions unit required to measure actual emissions by any method other than stack sampling (such as visible emissions observation or continuous emissions monitoring)	\$1000
c. Operation permit for an emissions unit not required to measure actual emissions	\$750

4. Similar Emissions Unit Fee. Where new or existing multiple emissions units located at the same facility are substantially similar in nature, the applicant may submit a single application and any required permit fee for construction or operation of the emissions units at the facility. To be considered substantially similar each of the emissions units must be substantially similar in regard to each of the following: nominal description or type of emissions unit; type of fuel burned; type of material processed, stored, or handled; type of air pollution control equipment; regulated pollutants emitted; applicable emissions standards; and applicable regulatory control criteria. For a construction permit, the single application fee shall be the fee that would apply for a single emissions unit with emissions that equal the total of the potential emissions of all of the substantially similar emissions units at the facility. The fee for an operation permit for a group of similar emissions units at the same facility, submitted under the same application and with the same emissions testing or monitoring requirements, shall be the fee that would apply to any emissions unit in the group if each emissions unit were being permitted singly.

5. Multiple Emissions Unit Fee. If the Department issues a single construction or operation permit covering multiple emissions units or groups of similar emissions units at a facility, the permit processing fee shall be the sum of the fees applicable to each emissions unit and group of similar emissions units covered by the permit.

(b) Domestic Wastewater Facility Permits.

1. Preliminary Design Report reviews for Types I, II, and III domestic wastewater facilities as defined in Rule 62-600.200, F.A.C. For new domestic wastewater facilities, the fee for review of a preliminary design report shall be in addition to the application processing fee.

	Type I	Type II	Type III
a. Treatment plant with or without reuse/disposal system	\$5000	\$3750	\$1200
b. Reuse/land application system and associated transmission/distribution facilities, when applied for separately from the treatment facility	\$5000	\$3750	\$1200
c. Residuals/septage management facility	\$7500	\$4000	\$1200
d. Limited wet weather discharge	\$1000	\$800	\$600

2. Wastewater permits for Types I, II, and III domestic wastewater facilities as defined in Rule 62-600.200, F.A.C.

	Type I	Type II	Type III
a. Treatment plant with or without reuse/disposal system	\$5000	\$3000	\$1000
b. Reuse/land application system and associated transmission/distribution facilities, when applied for separately from the treatment facility	\$5000	\$3000	\$1000
c. Residuals/septage management facility	\$7500	\$4000	\$1000
d. Limited wet weather discharge	\$1000	\$800	\$600

e. Wastewater permits for Type III facilities having a permitted capacity of less than 10,000 gallons per day shall be \$600.

3. Wastewater Permit for a surface water discharge, when applied for separately from the treatment facility.

a. Type I facility	\$2000
b. Type II facility	\$1000
c. Type III facility	\$500

4. Minor revisions, as defined in Rule 62-620.200, F.A.C., to wastewater permits for domestic wastewater facilities other than minor modifications of permits listed in paragraph 62-4.050(4)(s), F.A.C.

a. Type I facility	\$500
b. Type II facility	\$300
c. Type III facility	\$100

5. Substantial revisions, as defined in Rule 62-620.200, F.A.C., to wastewater permits for domestic wastewater facilities shall require a new wastewater permit application and applicable fee. The applicable application fee shall be:

a. For substantial revisions resulting from substantial modifications to the facility which require an antidegradation determination as specified in Rule 62-4.242, F.A.C., or which increase the permitted capacity of the treatment, reuse, or disposal system, the preliminary design report fee specified in subparagraph (4)(b)1.

b. For substantial revisions resulting from substantial modifications to the facility, but which do not require an antidegradation determination as specified in Rule 62-4.242, F.A.C., and which do not increase the permitted capacity of the treatment, reuse, or disposal system, 50 percent of the preliminary design report fee specified in subparagraph (4)(b)1.

c. For substantial revisions not associated with substantial modifications to the facility, 20 percent of the applicable application fee specified in subparagraph (4)(b)2.

6. Generic Permit for domestic wastewater treatment facilities.

a. Treatment facility with permitted capacity of 10,000 gallons per day up to 100,000 gallons per day shall be	\$1,000
b. Treatment facility with permitted capacity less than 10,000 gallons per day shall be	\$600

7. Construction Permit for domestic wastewater collection/transmission system.

a. Domestic wastewater collection/transmission system serving 10 or more Equivalent Dwelling Units (EDUs). An EDU is equal to 3.5 persons	\$500
b. Domestic wastewater collection/transmission system serving less than 10 EDUs	\$300

(c) Industrial Wastewater Facility Permits.

1. Wastewater permits for Group 1 industrial wastewater treatment facilities which discharge process wastewater, as defined in Rule 62-620.200, F.A.C., from the following industry categories: Citrus Processing; Textiles; Organic Chemicals, Plastics, and Synthetic Fibers; Inorganic Chemicals; Soaps and Detergents; Fertilizer Manufacturing; Petroleum Refining; Iron and Steel Manufacturing; Nonferrous Metals; Phosphate Manufacturing; Steam Electric Power Generating; Asbestos Manufacturing; Pulp, Paper, and Paper Board; Builders Paper and Board Mills; Coal Mining; Phosphate Mining and Beneficiation; Ore Mining and Dressing; Paint Formulating; Ink Formulating; Gum and Wood Chemicals Manufacturing; Pesticides Chemicals Manufacturing; Explosives Manufacturing; Battery Manufacturing; Mechanized Scallop Processing; Distilled, Rectified, and Blended Liquors; Sugar Cane Processing.

a. Surface water discharges	\$7500
b. Non-surface water discharges only	\$6000

2. Wastewater permits for Group 2 industrial wastewater treatment facilities which discharge process wastewater, as defined in Rule 62-620.200, F.A.C., from the following industry categories: Cement Manufacturing; Leather Tanning and Finishing; Glass Manufacturing; Rubber Processing; Carbon Black Manufacturing; Metal Molding and Casting; Coil Coating; Porcelain Enameling; Aluminum Forming; Copper Forming; Electrical and Electronic Components; Nonferrous Metals Forming and Metal Powders.

a. Surface water discharges	\$5000
b. Non-surface water discharges only	\$4000

3. Wastewater permits for Group 3 industrial wastewater treatment facilities which discharge process wastewater, as defined in Rule 62-620.200, F.A.C., from the following industry categories: Bulk Oil Terminals, Drawdown and Loading Rack Discharges; Dairy Products; Canned and Preserved Fruits and Vegetables; Canned and Preserved Seafood; Concrete Batch Plants; Timber Products; Mineral Mining and Processing; Peat Mining; Plastic Molding and Forming; Aquaculture Facilities.

a. Surface water discharges	\$2500
b. Non-surface water discharges only	\$2000
4. Wastewater permits for Group 4 industrial wastewater treatment facilities which discharge industrial wastewater from the following: Animal Feeding Operations, Feedlots, Egg Production Facilities.	
a. Feedlots with greater than the number of animals listed in subsection 62-670.200(3) or Rule 62-620.435, F.A.C.	\$2500
b. Feedlots, Other	\$1500
c. Egg Production Facility, Major	\$2500
d. Egg Production Facility, Other	\$1500
5. Wastewater permits for Group 5 industrial wastewater treatment facilities which discharge concentrate and regenerant from Reverse Osmosis, Membrane Softening, Ultrafiltration, Ion Exchange Units, and similar processes at Drinking Water Treatment Facilities.	
a. Design daily discharge flow of greater than 500,000 gpd	
b. Design daily discharge flow of greater than 100,000 gpd up to 500,000 gpd	\$4000
c. Design daily discharge flow of greater than 10,000 gpd up to 100,000 gpd	\$2000
d. Design daily discharge flow of 10,000 gpd or less	\$750
6. Wastewater permits for Group 6 industrial wastewater treatment facilities which discharge once-through non-contact cooling water.	
a. Greater than 100 million BTU/hour heat loss	\$6000
b. Greater than 20 million BTU/hour, up to 100 million BTU/hour	\$3000
c. Greater than 1 million BTU/hour, up to 20 million BTU/hour heat loss	\$1500
d. 1 million BTU/hour, or less, heat loss	\$500
7. Wastewater permits for industrial wastewater treatment facilities in industry categories not specified in Groups 1 through 3 which discharge process wastewater to surface waters, or industrial wastewater treatment facilities which discharge non-process wastewater, as defined in Rule 62-620.200, F.A.C., but excluding once-through non-contact cooling water, to surface waters.	
a. Design daily flow of greater than 500,000 gpd	\$5000
b. Design daily flow of greater than 100,000 gpd up to 500,000 gpd	\$3000
c. Design daily flow of greater than 50,000 gpd up to 100,000 gpd	\$2000
d. Design daily flow of 50,000 gpd or less	\$1000
8. Wastewater permits for industrial wastewater treatment facilities in industry categories not specified in Groups 1 through 3 which discharge process wastewater to other than surface waters, or industrial wastewater treatment facilities which discharge non-process wastewater, as defined in Rule 62-620.200, F.A.C., but excluding once-through non-contact cooling water, to other than surface waters.	
a. Design daily flow of greater than 500,000 gpd	\$4000
b. Design daily flow of greater than 100,000 gpd up to 500,000 gpd	\$2500
c. Design daily flow of greater than 50,000 gpd up to 100,000 gpd	\$1500
d. Design daily flow of 50,000 gpd or less	\$750
9. Wastewater permits for industrial wastewater treatment facilities which recycle the wastewater and have no discharge to surface or ground waters, and are not otherwise exempt from permitting.	

a. Facilities recycling greater than 10,000 gpd	\$500
b. Facilities recycling 10,000 gpd or less	\$100
10. Minor revisions, as defined in subsection 62-620.200(24), F.A.C., to wastewater permits for industrial wastewater facilities other than minor modifications of permits listed in paragraph 62-4.050(4)(q), F.A.C.	
a. Facilities which have no discharge to surface or ground waters	\$100
b. All others	\$250
11. Substantial revisions, as defined in subsection 62-620.200(45), F.A.C., to wastewater permits for existing industrial wastewater facilities shall require a new wastewater permit application and applicable fee. The applicable fee shall be:	
a. For substantial revisions resulting from substantial modifications to the facility which require an antidegradation determination as specified in Rule 62-4.242, F.A.C., or which increase the permitted capacity of the treatment or disposal system, the full applicable application fee.	
b. For substantial revisions resulting from substantial modifications to the facility, but which do not require an antidegradation determination as specified in Rule 62-4.242, F.A.C., and which do not increase the permitted capacity of the treatment or disposal system, 50 percent of the applicable application fee.	
c. For substantial revisions not associated with substantial modifications to the facility, 20 percent of the applicable application fee or \$250, whichever is greater.	
12. The fee for review of engineering reports for new industrial facilities shall be in the same amount as the applicable application processing fee for the facility and shall be in addition to the application processing fee.	
13. Industrial wastewater general and generic permits.	
a. General and generic permits requiring Professional Engineer or Professional Geologist certification	\$500
b. General and generic permits not requiring Professional Engineer or Professional Geologist certification	\$100
14. Collection systems for industrial wastewater treatment facilities.	
15. A permitted facility which falls in more than one of the fee categories in subparagraphs (4)(c)1. through 8. shall not be subject to multiple fees, but shall pay the larger of the fees.	
(d) Stormwater facilities or activities regulated under Section 403.0885, F.S.	
1. Generic Permit for Stormwater Discharge from Large and Small Construction Activities.	
a. Activities disturbing 5 or more acres (large)	\$400
b. Activities disturbing 1 acre of land or greater and less than 5 acres (small)	\$250
2. Multi-Sector Generic Permit for Stormwater Discharge Associated with Industrial Activity	
	\$500
3. No Exposure Certification for Exclusion from NPDES Stormwater Permitting	
	\$200
4. Stormwater discharge associated with industrial activity permitted under Chapter 62-620, F.A.C.	
	\$1,000
5. Generic Permit for Discharge of Stormwater from Phase II Municipal Separate Storm Sewer Systems (MS4s):	
a. Phase II MS4s in jurisdiction with a population of 50,000 or greater as determined by the 2000 Decennial Census by the U.S. Bureau of Census	\$11,700
b. Phase II MS4s in a jurisdiction with a population of greater than 10,000 but less than 50,000 as determined by the 2000 Decennial Census by the U.S. Bureau of Census	\$7,988
c. Phase II MS4s in a jurisdiction with a population of 10,000 or less as determined by the 2000 Decennial Census by the U.S. Bureau of Census; Florida Department of Transportation facilities	\$5,625
(e) Wetland Resource Management (Dredge and Fill) Permits. This paragraph pertains to projects that have been grandfathered according to Sections 373.414(11) (1994 Supp.), (12)(a) (1994 Supp.), (13), (14), (15) or (16), F.S., and projects, or portions thereof, located in the Northwest Florida Water Management District.	

1. Dredge and fill construction projects up to and including 5 years:	
a. Standard form projects including dredge and fill activities that affect 10 or more acres of jurisdictional area pursuant to subsection 62-312.070(2), F.A.C.	\$4,000
b. Standard form construction projects that involve the construction of new docking facilities pursuant to Rule 62-312.070, F.A.C., that provide:	
(I) 50 or more new boat slips	\$4,000
(II) 25 to 49 new boat slips	\$4,000
(III) 10 to 24 new boat slips	\$2,480
(IV) 3 to 9 new boat slips	\$830
(V) 0 to 2 new boat slips	\$500
c. Short form construction projects involving dredging or filling of 9.99 acres or less of jurisdictional area, pursuant to subsection 62-312.070(2), F.A.C.	\$830
d. Short form construction projects involving the construction of new docking or boardwalk facilities, pursuant to Rule 62-312.070, F.A.C., that provide:	
(I) 0 to 2 new boat slips	\$500
(II) 3 to 9 new boat slips	\$830
(III) The addition of 3 to 20 docking slips to existing functional docking facilities where the total facility will not exceed 50 slips and the existing and proposed slips are not associated with commercial facilities or facilities which provide supplies or services required for boating activities.	\$760
e. Short form and standard form projects solely for environmental restoration or enhancement activities, provided such activities are not associated with a mitigation bank and are not being implemented as mitigation for other activities that require a permit under Part IV of Chapter 373, F.S.	\$250
2. Dredge and fill construction permits in excess of 5 years:	
a. Short form permits from 6 years up to and including 10 years	\$4,950
b. Standard form permits for 6 years	\$10,650
c. Standard form permits for 7 years	\$12,430
d. Standard form permits for 8 years	\$14,200
e. Standard form permits for 9 years	\$15,980
f. Standard form permits for 10 years	\$17,750
g. Standard form permits for 11 years	\$19,530
h. Standard form permits for 12 years	\$21,300
i. Standard form permits for 13 years	\$23,080
j. Standard form permits for 14 years	\$24,850
k. Standard form permits for 15 years	\$25,000
l. Standard form permits for 16 years	\$25,000
m. Standard form permits for 17 years	\$25,000

n. Standard form permits for 18 years	\$25,000
o. Standard form permits for 19 years	\$25,000
p. Standard form permits for 20 years	\$25,000
q. Standard form permits for 21 years	\$25,000
r. Standard form permits for 22 years	\$25,000
s. Standard form permits for 23 years	\$25,000
t. Standard form permits for 24 years	\$25,000
u. Standard form permits for 25 years	\$25,000
v. 6 to 10-year permits for beach restoration projects approved pursuant to Chapter 161, F.S., and to maintenance dredge navigation channels, port harbors, turning basins and harbor berths located within deepwater ports, pursuant to Section 403.816, F.S.	\$5,000
w. Permits for phosphate and attapulgite mines with a duration of greater than 25 years pursuant to the provisions of Section 373.414(15), F.S.	\$25,000
x. Modifications involving permits issued pursuant to Section 403.816, F.S., or Chapter 62-45, F.A.C.	\$1,000
y. 6 to 25-year permits pursuant to Chapter 62-45, F.A.C., and all permits under Section 403.816, F.S.	\$5,000
z. Short form and standard form projects solely for environmental restoration or enhancement activities, provided such activities are not associated with a mitigation bank and are not being implemented as mitigation for other activities that require a permit under Part IV of Chapter 373, F.S.	\$250
3. Mitigation Banks	
a. Mitigation Bank Permit, other than Conceptual Approval Permit	\$6,050
b. Credit Release (credit available for sale)	\$330
c. Credit Withdrawal (actual use of credit)	\$0
d. Mitigation Bank Conceptual Approval Permit	\$6,050
e. Major modifications involving changes to one or more of the following components: service area; credit assessment; success or release criteria; hydrologic structures or alterations; construction or mitigation design that does not increase the project area; elimination of lands; or monitoring or management plans:	
(I) Affecting one of the above components	\$1,340
(II) Affecting two of the above components	\$2,680
(III) Affecting three of the above components	\$4,020
4. Modifications:	
a. Major modifications of Standard Form and Short Form Permits, as determined by Rule 62-312.100, F.A.C., and mitigation banks under Chapter 62-342, F.A.C., that increase the project area or involve four or more of the components listed in sub-subparagraph 62-4.050(4)(e)3.e., F.A.C., other than for Class I solid waste disposal facilities or as otherwise specified above	Same fee as for a new application for the activity
b. Minor modifications of Standard Form and Short Form Permits, including mitigation banks, where the modification will not require substantial technical evaluation by the Department, will not lead to substantially different environmental impacts or will lessen the impacts of the original permit, and as further determined by	

Rule 62-312.100, F.A.C., other than for Class I solid waste disposal facilities or as otherwise specified above:

(I) To correct minor errors or typographical mistakes and that do not involve technical review	\$0
(II) To incorporate changes requested by the Department or required through permits issued by other regulatory agencies, and to change due dates for reporting or performance deadlines when such changes in the due date do not involve any new work, any new work locations, or any new activities, and will not alter, replace, or otherwise eliminate the requirements for otherwise performing the work required by the permit	\$0
(III) That consist of transfers of permits or time extensions	\$80
(IV) That consist of minor technical changes which involve new work, new work locations, new activities, or any other change which alters, replaces, or otherwise eliminates the work authorized by the permit when the original permit fee of the issued permit is less than \$300, except for modifications to permits issued pursuant to Section 403.816, F.S.	\$250
(V) That consist of minor technical changes which involve new work, new work locations, new activities, or any other change which alters, replaces, or otherwise eliminates the work authorized by the permit when the original permit fee of the issued permit is more than or equal to \$300, except for permits issued pursuant to Section 403.816, F.S.	\$420
(VI) For minor modifications for Class I solid waste disposal facilities	\$2,110
5. For the purposes of determining the fee for wetlands resource management permits, the term of duration for the permit shall be reduced by the period of time (in yearly increments) during which no dredging or filling activity occurs or no reclamation, restoration, or mitigation occurs and only minor monitoring and maintenance activities are required. The fee for the full term shall be submitted with the application. After the Department determines the period of time that the term of the permit can be reduced, the excess fee shall be returned.	
6. For permit applications which involve a combination of the project fee categories listed above, the highest fee that applies to the appropriate standard form or short form project, pursuant to Rule 62-312.070, F.A.C., shall be charged.	
7. Variances from permitting standards, permit conditions, or water quality standards associated with a wetland resource or mangrove alteration permit application:	
a. Under Section 403.812, F.S.	
(I) From the prohibition of subsection 62-312.080(7), F.A.C.	\$170
(II) Other variances	\$830
b. Under Section 120.542, F.S.	\$0
8. Verification of qualification to use a general permit, except:	\$250
a. Paving of existing municipally owned roads under Rule 62-312.824, F.A.C.	\$0
b. Environmental enhancement and restoration activities conducted by the U.S. Army Corps of Engineers under Rule 62-312.825, F.A.C.	\$0
9. Verification that an activity is exempt from regulation under Section 403.813, F.S., or Part IV of Chapter 373, F.S.	\$100
(f) Mangrove Alteration and Trimming	
1. Alteration of less than 20 mangroves under Section 403.9328, F.S.	\$420
2. Alteration of 20 or more mangroves under Section 403.9328, F.S.	\$830
3. General Permit under Section 403.9327, F.S.	\$250

4. Verification of an exemption for trimming or alteration	\$0
5. Minor modification, other than transfer & time extensions	\$250
6. Transfer of ownership or permit	\$90
7. Time extension	\$90
8. Variance under Section 403.9333, F.S.	\$170

(g) Stormwater Permits under Chapter 62-25, F.A.C.

1. Notice to use stormwater general permit per paragraphs 62-25.801(1)(a) through (d), F.A.C.	\$420
2. Conversion of construction permit to operation	\$100

(h) Environmental Resource Permits. Processing fees required by the Department and the Northwest Florida Water Management District (NFWFMD) for activities regulated under Chapter 62-330, F.A.C., are listed below. For purposes of determining the applicable processing fee, the terms "activity," "project," "project area," and "works" are as defined in Section 2.0 of the Applicant's Handbook Volume I incorporated by reference in paragraph 62-330.010(4)(a), F.A.C.

1. Activities qualifying for an Agency's electronic self-certification:	
a. Self-certification in accordance with the general permit under Section 403.814(12), F.S.	\$0
b. Self-certification for activities other than those under Section 403.814(12), F.S.	\$0
2. Determination of qualification for an activity exemption	
a. Under Rules 62-330.050 and 62-330.051, F.A.C.	\$100
b. Under Rule 62-330.0511, F.A.C.	\$0
3. Determination of qualification to use a general permit	\$250
4. Individual or conceptual approval permit, excluding permits for a mitigation bank:	
a. New application – the processing fee for a new permit application shall be as determined from the categories below:	
(I) Total project area of less than 10 acres and less than 1 acre of works in, on, or over wetlands and other surface waters, and less than 10 new boat slips	\$420
(II) Project exceeds any of the thresholds in 4.a.(I), above, but involves a total project area of less than 40 acres, less than 3 acres of works in, on, or over wetlands and other surface waters, and less than 30 new boat slips	\$1,500
(III) Project exceeds any of the thresholds in 4.a.(II), above, but involves a total project area of less than 100 acres, less than 10 acres of works in, on, or over wetlands and other surface waters, and less than 50 new boat slips	\$5,000
(IV) Project exceeds any of the thresholds in 4.a.(III), above, but involves a total project area of less than 640 acres, and less than 50 acres of works in, on, or over wetlands and other surface waters	\$9,000
(V) Project exceeds any of the thresholds in 4.a.(IV), above	\$14,000
(VI) Project exclusively for agricultural or silvicultural purposes; the fee for projects that are solely for agricultural or silvicultural purposes shall be the same as that required by the Water Management District in which the majority of the project area is located, in accordance with Rule 40A-44.201, F.A.C., (7-1-98) incorporated by reference herein (http://www.flrules.org/Gateway/reference.asp?No=Ref-02680); and Rules 40B-1.706, 40C-1.603, in which the	The fee shall be the same as that required by the Water Management District in which the

40D-1.607, or 40E-1.607, F.A.C., as applicable, as incorporated by reference in Rule 62-330.071, F.A.C.

majority of the project area is located.

(VII) Individual or conceptual approval permit solely for environmental restoration or enhancement, provided such activities are not associated with a mitigation bank and are not being implemented as mitigation for other activities that require a permit under Part IV of Chapter 373, F.S. For purposes of this provision, the term “environmental restoration or enhancement” means an action or actions designed and implemented solely to convert degraded or altered uplands, wetlands, or other surface waters to intact communities typical of those historically present, or to improve the quality and condition of currently degraded wetlands or other surface waters to a more healthy, functional, and sustaining condition for fish, wildlife, and listed species

\$250

(VIII) Individual or conceptual approval permit solely to retrofit an existing stormwater management system or to add treatment to and reduce stormwater pollutant loadings from an existing stormwater management system

\$250

(IX) Individual permit to construct, alter, maintain or operate a project that is consistent with a valid conceptual approval permit

50% of the fee otherwise required for an individual permit under 4.a.(I) through (VIII), above, but not below the minimum required processing fee of \$250

b. Major modification exceeding any of the thresholds in subsection 62-330.315(3), F.A.C.

Same fee as for new permit for the same activity under 4.a.(I) through (IX), above

5. Individual or conceptual approval permit for a mitigation bank:

a. New application

\$6,050

b. Major modification exceeding any of the thresholds in subsection 62-330.315(3), F.A.C.:

(I) Major modification affecting one of the following: the service area, credit assessment, success or release criteria, hydrologic structures or alterations, elimination of lands, monitoring or management plans, or construction or mitigation design that does not increase the project area

\$1,340

(II) Affecting two of the components in 5.b.(I), above

\$2,680

(III) Affecting three of the components in 5.b.(I), above

\$4,020

(IV) All other major modifications

\$6,050

c. Mitigation bank credit release

\$330

d. Mitigation bank credit withdrawal

\$0

6. Minor modification of an individual or conceptual approval permit, including a permit for a mitigation bank, that does not exceed any of the thresholds in subsection 62-330.315(3), F.A.C.:

a. Extension of permit duration, where not exempt from payment of fees under Florida Statutes

\$80

b. To correct minor errors that do not involve technical review

\$0

c. To transfer ownership of a permit or to transfer the permit to an operation and maintenance

entity

\$0

d. All other minor modifications

\$250

7. Variance or waiver:

a. Under Section 120.542, F.S.

\$0

b. Under Section 373.414(17), F.S.

\$170

8. Fee reductions:

a. Applications for an individual or conceptual approval permit or modification thereof submitted using the Agency’s electronic application system where the processing fee in subparagraph (h)4. or 5., above exceeds \$250

Fee shall be reduced by \$100, but not below the minimum required processing fee of \$250

b. Applications for any activity by an entity qualifying under Section 218.075, F.S. when the fee under paragraph (h) exceeds \$100

\$100

c. Applications for any activity when submitted by the U.S. Department of Defense

\$0

(i) Determinations of the Landward Extent of Wetlands and Other Surface Waters:

1. Informal determination – fees shall be based on the acreage of the entire property for which the request applies, as follows:

a. Total area to be included in the determination is up to 1 acre

\$100

b. Additional fee per acre (or portion thereof) beyond the first acre; total fee not to exceed \$500

\$50

2. Petitions for formal determination – fees shall be based on the acreage of the entire property for which the petition is filed, as follows:

a. Total area to be included in the determination is less than 10 acres

\$780

b. Total area to be included in the determination is at least 10, but less than 40 acres

\$1,060

c. Total area to be included in the determination is at least 40, but no more than 100 acres

\$2,110

d. Additional fee per 100 acres (or portion thereof) beyond the first 100 acres

\$290

3. Reissuance of a formal determination, in accordance with section 7.2.4 of Applicant’s Handbook Volume I.

\$350

(j) Solid Waste Permits.

1. Construction permit for a Class I facility.

\$10,000

2. Construction permit for a Class II facility.

\$10,000

3. Construction permit for a Class III facility.

\$6000

4. Construction permit for a waste-to-energy facility not covered by the Electric Power Plant Siting Act.

\$10,000

5. Construction permit for other resource recovery facilities.

\$2000

6. Construction permit for an incinerator.

\$3000

7. Construction permit for a yard trash composting facility.

\$2000

8. Construction permit for a manure composting facility.

\$2000

9. Construction permit for a solid waste composting facility.	\$5000
10. Construction/operation permit for a waste tire processing facility.	\$1250
11. Construction permit for all other solid waste facilities.	\$1000
12. Construction permit for an offsite Biohazardous Waste Treatment Facility other than a biohazardous waste incinerator.	\$2000

13. Construction permit and/or an operation permit for a facility which has multiple solid waste management components which normally would require individual solid waste permits. A single application may be submitted and the permit fee will be the sum of each individual permit; however, the total permit fees for the facility shall not exceed \$25,000, exclusive of modifications and renewals.

14. Operation permit for a Class I facility.	\$10,000
15. Operation permit for a Class II facility.	\$10,000
16. Operation permit for a Class III facility.	\$4000
17. Operation permit for a waste-to-energy facility not covered by the Electric Power Plant Siting Act.	\$10,000
18. Operation permit for other resource recovery facilities.	\$1000
19. Operation permit for an incinerator.	\$1000
20. Operation permit for a yard trash composting facility.	\$1000
21. Operation permit for a manure composting facility.	\$1000
22. Operation permit for a solid waste composting facility.	\$3000
23. Operation permit for an offsite Biohazardous Waste Treatment Facility other than a biohazardous waste incinerator.	\$1000
24. Operation permit for all other solid waste facilities.	\$500
25. Request for an Alternate Procedure.	
a. Landfill	\$2000
b. Other	\$500
26. Research, Development and Demonstration permits (one year permit).	\$1000
27. Closure permit for a Class I facility.	\$7500
28. Closure permit for a Class II facility.	\$7500
29. Closure permit for a Class III facility.	\$4000
30. Closure permit for all other solid waste facilities.	\$1000
31. Renewal of Closure permit for landfills which address only long term care.	\$1000
32. Construction or Operation permits for Materials Recovery Facility.	\$2000
33. Ground Water Monitoring Plan Approvals for solid waste landfills with no other Department permit.	\$500
(k) Petroleum Cleanup General Permits.	

1. Soil thermal treatment – mobile.	\$500
2. Soil thermal treatment – stationary.	\$500

(l) Hazardous Waste Permits.

1. Construction of container and/or tank hazardous waste storage facilities.	\$15,000
2. Construction of container and/or tank hazardous waste storage and treatment facilities.	\$20,000
3. Construction of landfill, surface impoundment, waste pile, land treatment, and miscellaneous unit facilities.	\$25,000
4. Construction of hazardous waste storage, treatment and/or disposal facilities with an incinerator, boiler or industrial furnace for treatment of hazardous wastes generated on-site.	\$25,000
5. Construction of commercial treatment, storage, and/or disposal facility with a commercial incinerator, boiler or industrial furnace managing hazardous wastes generated off-site.	\$32,500
6. Operation of container and/or tank hazardous waste storage facilities.	\$10,000
7. Operation of container and/or tank hazardous waste storage and treatment facilities.	\$10,000
8. Operation of landfill, surface impoundment, waste pile, land treatment, and miscellaneous unit facilities.	\$15,000
9. Operation of hazardous waste storage, treatment and/or disposal facilities with an incinerator, boiler or industrial furnace for treatment of hazardous wastes generated on-site.	\$15,000
10. Operation of commercial treatment, storage, and/or disposal facilities with a commercial incinerator, boiler or industrial furnace managing hazardous wastes generated off-site.	\$32,500
11. Closure of container and/or tank hazardous waste storage facilities.	\$10,000
12. Closure of container and/or tank hazardous waste storage and treatment facilities.	\$10,000
13. Closure of landfill, surface impoundment, waste pile, land treatment, previously closed units required to demonstrate equivalent clean closure, and miscellaneous unit facilities.	\$20,000
14. Closure of hazardous waste storage, treatment and/or disposal facilities with an incinerator, boiler or industrial furnace for treatment of hazardous wastes generated on-site.	\$15,000
15. Closure of commercial treatment, storage, and/or disposal facilities with a commercial incinerator, boiler or industrial furnace managing hazardous wastes generated off-site.	\$32,500
16. Hazardous waste research, development and demonstration facilities.	\$4000

17. Fees for modifications to hazardous waste permits proposed by the permittee or required by Department rules shall be determined as stated below. All modifications listed below require public notice. Contact the appropriate District Office for guidance on how to determine which fee applies before submitting the required information.

a. Substantial modifications that require significant changes to the existing permit and require an extensive evaluation by the Department. These shall require the same fee as a new application. Examples in this category include alteration of the existing facility, change in the facility plan, ground water monitoring program assessment or remediation/engineering design or other general facility standard. The fee schedule for new permit applications is listed above.

b. Substantial modifications that require a moderate technical evaluation by the Department. Examples in this category include alterations of the existing facility or its

operation which will require additional site-specific evaluation.	\$10,000
c. Moderate modifications that require moderate technical evaluation by the Department. These require a new site inspection, lead to different environmental impacts, or lessen the impacts of the original permit.	\$5,000
d. Minor modifications, as defined in this subsection, that are not otherwise specified, including common or frequently occurring changes needed to maintain a facility's capacity to manage wastes safely, minor changes in ground water monitoring plans, or modifications to conform to new requirements.	\$1,000
18. Department variance from federal regulations under 40 CFR 260.30.	\$32,500
19. All other hazardous waste facility permits or authorizations for which a specific fee is not specified.	\$32,500
(m) Underground Injection Control Permits.	
1. Construction permit for each Class I test/injection well.	\$12,500
2. Construction permit for each Class I exploratory well.	\$5,000
3. Construction permit for each monitoring well associated with a Class I injection facility when not permitted under a Class I exploratory well or Class I test/injection well permit.	\$1,000 per well not to exceed \$10,000 for the facility
4. Permit to convert each well from a Class I to a Class V well.	\$10,000
5. Operation permit for each Class I well.	\$10,000
6. Permit to convert a Class I injection well or exploratory well to a monitoring well when not proposed under a construction permit.	\$500
7. Abandonment permit for each Class I well.	\$100
8. Construction permit for each Class III well.	\$1,000
9. Operation permit for each Class III well.	\$1,000
10. Abandonment permit for each Class III well.	\$100
11. Construction permit for each Class V well.	\$750
12. Operation permit for each Class V well.	\$750
13. Abandonment permit for each Class V well.	\$25
14. General permit for each Class V well.	
a. General permits requiring Professional Engineer or Professional Geologist certification	\$250
b. General permits not requiring Professional Engineer or Professional Geologist certification	\$25
15. Major modifications are modifications to an injection facility requiring substantial technical evaluation by the Department, and which will not lead to substantially different environmental impacts (unless those impacts will lessen the impacts of the original permit).	
a. Major modification to a Class I injection facility.	\$1,000
b. Major modification to a Class III injection facility.	\$500
c. Major modification to a Class V injection facility.	\$250

16. Minor modifications are modifications to an injection facility that do not require a substantial technical evaluation by the Department, will not result in increased capacity of the injection system, do not require a new site inspection by the Department, and will not lead to substantially different environmental impacts or will lessen the impacts of the original permit.	
a. Minor modification to a Class I or Class III injection facility.	\$250
b. Minor modification to a Class V injection facility.	\$100
17. Rerating of the permitted capacity of a Class I injection well to the maximum injection velocity allowed under paragraph 62-28.230(1)(e), F.A.C.	\$250
(n) Drinking Water (Public Water Supply) Permits.	
1. Construction permit for each Category I through III treatment plant, as defined in Rule 62-699.310, F.A.C.	
a. Treatment plant – 5 MGD and above	\$12,500
b. Treatment plant – 1 MGD up to 5 MGD	\$10,000
c. Treatment plant – 0.25 MGD up to 1 MGD	\$7,000
d. Treatment plant – 0.1 MGD up to 0.25 MGD	\$4,000
e. Treatment plant – up to 0.1 MGD	\$2,000
2. Construction permit for each Category IV treatment plant, as defined in Rule 62-699.310, F.A.C.	
a. Treatment plant – 5 MGD and above	\$12,500
b. Treatment plant – 1 MGD up to 5 MGD	\$10,000
c. Treatment plant – 0.25 MGD up to 1 MGD	\$7,000
d. Treatment plant – 0.1 MGD up to 0.25 MGD	\$4,000
e. Treatment plant – .01 MGD up to 0.1 MGD	\$2,000
f. Treatment plant – up to 0.01 MGD	\$800
3. Construction permit for each Category V treatment plant, as defined in Rule 62-699.310, F.A.C.	
a. Treatment plant – 5 MGD and above	\$10,000
b. Treatment plant – 1 MGD up to 5 MGD	\$6,000
c. Treatment plant – 0.25 MGD up to 1 MGD	\$2,000
d. Treatment plant – up to 0.25 MGD	\$1,000
e. Treatment plant – up to 0.1 MGD	\$600
4. Distribution and transmission systems, including raw water lines into the plant, except those under general permit.	
a. Serving a community public water system	\$900
b. Serving a non-transient non-community public water system	\$700
c. Serving a non-community public water system	\$500
5. Construction permit for each public water supply well.	
a. Well located in a delineated area pursuant to Chapter 62-524, F.A.C.	\$1,000
b. Any other public water supply well.	\$500
6. Major modifications to systems that alter the existing treatment without expanding the capacity of the system and are not	

considered substantial changes pursuant to subsection 62-4.050(7), F.A.C., below.

a. 1 MGD and above	\$4,000
b. 0.1 MGD up to 1 MGD	\$2,000
c. 0.01 MGD up to 0.1 MGD	\$1,000
d. Up to 0.01 MGD	\$500
7. Minor modifications to systems that result in no change in the treatment or capacity.	
a. 0.1 MGD and above	\$1,000
b. Up to 0.1 MGD	\$500
8. General Permit fee for any General Permit not specifically in subparagraphs 1. through 7. above:	
a. General permits requiring Professional Engineer or Professional Geologist certification.	\$650
b. General permits not requiring Professional Engineer or Professional Geologist certification.	\$500
(o) Temporary operation permits shall be 20 percent over the fee for the operation permit for the activity to be permitted.	
(p) General Permit fee for any General Permit not specifically listed in paragraphs (a) through (l).	
1. General permits requiring Professional Engineer or Professional Geologist certification	\$250
2. General permits not requiring Professional Engineer or Professional Geologist certification.	\$100
(q) Unless otherwise specified in this rule, the fee for applications for relief mechanisms shall be as follows:	
1. Site specific alternative criteria for each water quality criteria	\$15,000
2. Variance or exemption for each water quality criteria	\$6000
3. Variance or exemption for public water system from maximum contaminant level/treatment techniques	\$1000
4. Variance from other permitting standards or conditions	\$2000
5. Aquifer exemption – major	\$15,000
6. Aquifer exemption – minor	\$7500
(r) Permits to construct or operate any other type of facility or stationary installation not specifically listed in paragraphs (a) through (n).	\$100
(s) Minor modifications of permits that do not require substantial technical evaluation by the Department, do not require a new site inspection by the Department, and will not lead to substantially different environmental impacts or will lessen the impacts of the original permit:	
1. To correct minor errors or typographical mistakes and that do not involve technical review	\$0
2. To incorporate changes requested by the Department or required through permits issued by other regulatory agencies, and to change due dates for reporting or performance deadlines when such changes in the due date do not involve any new work, any new work locations, or any new activities, and will not alter, replace, or otherwise eliminate the requirements for	

otherwise performing the work required by the permit	\$0
3. That consist of transfers of permits or time extensions	\$50
4. That consist of minor technical changes which involve new work, new work locations, new activities, or any other change which alters, replaces, or otherwise eliminates the work authorized by the permit when the original permit fee of the issued permit is less than \$300, except for modifications to permits issued pursuant to Section 403.816, F.S.	\$50
5. That consist of minor technical changes which involve new work, new work locations, new activities, or any other change which alters, replaces, or otherwise eliminates the work authorized by the permit when the original permit fee of the issued permit is more than or equal to \$300, except for Domestic Wastewater Facility Permits, Industrial Wastewater Facility Permits, Drinking Water (Public Water Supply) Permits, Underground Injection Control Permits and permits issued pursuant to Section 403.816, F.S.	\$250

(t) For purposes of requiring a permit application and fee for the following facility types, each non-contiguous project shall be considered a stationary installation and shall require a separate application and fee.

1. Domestic wastewater collection system.
2. Drinking water distribution system.

(u) All fees shall be deposited in the Florida Permit Fee Trust Fund created pursuant to Section 403.087(5), F.S.

(v) If the department requires by rule or permit condition that any specific permit be renewed more frequently than once every five years, the permit fee shall be prorated based upon the permit fee schedule in effect at the time of permit renewal. Upon issuance of such a permit, a prorated refund of the fee shall be returned to the applicant. This provision does not apply to permits issued for less than five years which could be extended to five years without the filing of an application for renewal. However, applications for permits to continue operation of a facility where an existing permit has or is about to expire in accordance with Section 403.087(1), F.S., shall be accompanied by the appropriate processing fee.

(w) This fee schedule does not apply to applications for certification pursuant to Sections 288.501-.518, F.S., Florida Industrial Siting Act; Sections 341.321-386, F.S., the High Speed Rail Transportation Commission, except that fees may be assessed for the permitting of Ancillary Facilities under the Act for which a master plan approval was granted under the Act; to Sections 403.501-.519, F.S., Florida Electrical Power Plant Siting Act; or to Sections 403.52-.539, F.S., the Transmission Line Siting Act.

(x) This fee schedule will supersede all other references to fees in Department rules or forms, where in conflict except as noted in paragraph 62-4.050(4)(n), F.A.C.

(y) In the jurisdiction of an approved local program which in accordance with an interagency agreement assists the Department in the processing of permits the fee paid to the Department shall be reduced by the amount specified in the agreement. That amount shall be commensurate with the savings to the Department resulting from the assistance of the local program.

(z) The fees in paragraphs (e) through (i), and (n) shall be increased March 1, 2013, and at subsequent 5-year intervals, to adjust the fees for inflation using the percentage change in the Consumer Price Index for the “CPI-U, U.S. City Average, All Items” established by the Bureau of Labor Statistics (BLS) (www.bls.gov/cpi/), computed as provided in the BLS publication “Handbook of Methods,” Chapter 17 (www.bls.gov/opub/hom/pdf/homch17.pdf). The Department shall use the percentage change in the Consumer Price Index from March 2008 to December 2012 for the 2013 fee calculations and the percentage change in the rates from March to December for subsequent five-year periods. The Department shall round any increased fees to the next highest whole ten dollar increment. In the event of deflation during the 5-year interval, the Department shall consult with the Executive Office of the Governor and the Legislature to determine whether downward fee adjustments are appropriate based on the current budget and appropriation considerations.

(5)(a) To be considered by the Department, each application must be accompanied by the proper processing fee. The fee shall be paid by check, payable to the Department of Environmental Protection. The fee is non-refundable except as provided in Section 120.60, F.S., and in this section.

(b) When an application is received without the required fee, the Department shall acknowledge receipt of the application and shall immediately notify the applicant by certified mail that the required fee was not received and advise the applicant of the correct fee. The Department shall take no further action until the correct fee is received. If a fee was received by the Department which is less than the amount required, the Department shall return the fee along with the written notification.

(c) Upon receipt of the proper application fee, the permit processing time requirements of Sections 120.60(1) and 403.0876, F.S., shall begin.

(d) If the applicant does not submit the required fee within ten days of receipt of written notification, the Department shall either return the unprocessed application or arrange with the applicant for the pick up of the application.

(e) If an applicant submits an application fee in excess of the required fee, the permit processing time requirements of Sections 120.60(1) and 403.0876, F.S., shall begin upon receipt, and the Department shall refund to the applicant the amount received in excess of the required fee.

(6) Any substantial modification to a complete application shall require an additional processing fee determined pursuant to the schedule set forth in Rule 62-4.050, F.A.C., and shall restart the time requirements of Sections 120.60 and 403.0876, F.S. For purposes of this subsection, the term “substantial modification” shall mean a modification which is reasonably expected to lead to substantially different environmental impacts which require a detailed review.

(7) Modifications to existing permits proposed by the permittee which require substantial changes in the existing permit or require substantial evaluation by the Department of potential impacts of the proposed modifications shall require the same fee as a new application for the same time duration except for modification under Chapter 62-45, F.A.C.

(8) The difference between the processing fee for applications for individual permits and the processing fee for general permits shall be refunded only for those applications that qualify for a general permit solely as a result of a change in Department rules while the application is being processed. Processing fees for applications for individual permits shall not be refunded in whole or in part where an applicant modifies a project to qualify for a general permit when the project did not qualify for a general permit when processing commenced.

Rulemaking Authority 373.026, 373.043, 373.109, 373.4131, 373.414, 373.418, 373.421, 403.061, 403.087, 403.704(30), 403.805 FS. Law Implemented 373.109, 373.309, 373.409, 373.413, 373.4135, 373.414(9), (11), (12)(a), (13), (14), (15), (16), 373.4145, 373.418, 373.421, 403.061, 403.087, 403.0877, 403.088, 403.0885, 403.722, 403.861(7) FS. History—New 5-17-72, Amended 6-19-74, 7-8-82, Formerly 17-4-05, Amended 11-15-87, 8-31-88, 10-3-88, 4-4-89, 3-19-90, 6-11-90, 3-7-91, 3-18-91, 5-30-91, 10-30-91, 11-16-92, 12-21-92, 7-11-93, 2-2-94, Formerly 17-4.050, Amended 11-23-94, 4-30-95, 7-4-95, 12-15-98, 10-22-00, 6-1-01, 1-30-03, 2-19-03, 4-3-03, 5-1-03, 2-7-06, 10-31-07, 4-21-09, 5-9-13, 10-1-13.

62-4.052 Regulatory Program and Surveillance Fees for Wastewater Facilities or Activities Discharging to Surface Waters.

(1) Scope and Intent. As authorized in Section 403.087(6), F.S., this rule implements annual regulatory program and surveillance fees (annual fees) for wastewater and stormwater permits. These fees are in addition to the application fees described in Rule 62-4.050, F.A.C., and effect the legislative intent that the Department’s costs for administering the National Pollutant Discharge Elimination System (NPDES) be borne by regulated parties. As such, the annual fees are applicable only to facilities and activities subject to regulation under Chapters 62-620, 62-621 and 62-624, F.A.C., pursuant to Section 403.0885, F.S., and the NPDES program.

(2) Annual fees for the regulatory program and surveillance of wastewater and stormwater facilities are not refundable and shall be due and payable as follows:

(a) In the initial year the Department administers a new component of the NPDES program, annual fees shall be required for all facilities which have an NPDES permit for which the Department is granted administrative authority. The amount due shall be the applicable annual fee described in subsection (5), (6), (8), (9), (10), (11) or (13) of this section, pro-rated to the portion of the calendar year from October 22, 2000 to the end of the calendar year, and are due and payable no later than 60 days after October 22, 2000.

(b) In all subsequent years, the entire annual fee shall be due and payable no later than January 15 each year for all facilities that are subject to regulation under Section 403.0885, F.S., on that date.

(c) When a new wastewater facility or activity is issued a permit under either Chapter 62-620, 62-621, or 62-624, F.A.C., pursuant to Section 403.0885, F.S., the first annual fee shall be due no later than 60 days after permit issuance. The amount due shall be the applicable annual fee described in subsection (5), (6), (8), (9), (10), (11), or (13) of this section, pro-rated to the remaining portion of the calendar year in which the permit is issued. Thereafter, the fee shall be due and payable pursuant to paragraph (b) above.

(d) When a new wastewater facility or activity is provided notice of coverage by the Department under a generic permit, the first annual fee shall be due no later than 60 days after notice of coverage is received by the permittee. The amount due shall be the

applicable annual fee under this section, pro-rated to the remaining portion of the calendar year in which generic permit coverage is obtained. Thereafter, the fee shall be due and payable pursuant to paragraph (b) above.

(3) Non-payment or late payment of an annual fee shall be grounds for enforcement action pursuant to Sections 403.121, 403.141 and 403.161, F.S. Non-payment of an annual fee shall be grounds for revocation of the wastewater or stormwater permit or denial of an application for renewal of the wastewater or stormwater permit.

(4) When a permit is revised in a manner which places the facility in a different annual fee category, the fee shall be changed as appropriate and the new fee shall be due no later than the January 15 following permit revision.

(5) The annual fees for domestic wastewater facilities authorized to discharge to surface waters shall be based on the permitted capacity of the discharge to surface waters except for discharges to surface waters which serve as backup discharges for permitted reuse systems. The annual fees for permits to discharge to surface waters which serve as backup discharges for permitted reuse systems, including limited wet weather discharges, shall be based on an adjusted surface water discharge permitted capacity. This adjusted capacity shall be used only for the purpose of establishing the annual fee under this section. The adjusted surface water discharge permitted capacity shall be equal to the actual permitted capacity of the discharge to surface waters minus 70 percent of that portion of the discharge to surface waters which serves as a backup:

(a) 20 mgd and above	\$7,000
(b) 10 mgd up to, but less than, 20 mgd	\$6,750
(c) 5 mgd up to, but less than, 10 mgd	\$6,500
(d) 2 mgd up to, but less than, 5 mgd	\$6,250
(e) 1 mgd up to, but less than, 2 mgd	\$6,000
(f) 0.5 mgd up to, but less than, 1 mgd	\$5,625
(g) 0.1 mgd up to, but less than, 0.5 mgd	\$3,375
(h) 0.025 mgd up to, but less than, 0.1 mgd	\$1,125
(i) 0.010 mgd up to, but less than, 0.025 mgd	\$300
(j) Less than 0.010 mgd	\$200

(6) The annual fees for industrial wastewater facilities or activities permitted to discharge to surface waters are based, using only their discharges to surface waters, on the group classifications used in subparagraphs 62-4.050(4)(c)1. through 7., F.A.C., and the classification of Minor or Major as defined in subsection 62-620.200(22), F.A.C., and are as follows:

	Major	Minor
(a) Group 1	\$11,500	\$8,600
(b) Group 2	\$7,700	\$5,800
(c) Group 3	\$3,800	\$2,900
(d) Group 4	\$3,800	\$2,900
(e) Group 5A	\$9,200	\$6,900
(f) Group 5B	\$6,100	\$4,600
(g) Group 5C	\$3,100	\$2,300
(h) Group 5D	\$1,150	\$850
(i) Group 6A	\$9,200	\$6,900
(j) Group 6B	\$4,600	\$3,500
(k) Group 6C	\$2,300	\$1,700
(l) Group 6D	\$800	\$600
(m) Group 7A	\$7,700	\$5,800
(n) Group 7B	\$4,600	\$3,500
(o) Group 7C	\$3,100	\$2,300
(p) Group 7D	\$1,500	\$1,100

(7) The following provisions apply in specific circumstances:

(a) A permitted facility which falls in more than one of the fee categories in subsections (5) or (6) shall not be subject to multiple fees, but shall pay the larger of the fees. However, multiple wastewater permits issued pursuant to Chapter 62-620, F.A.C., authorizing discharges to surface waters through a common outfall shall be subject to individual fees; and

(b) When the discharge to surface waters consists of both stormwater and wastewater, the annual fee for categories which vary

according to the flow of the facility shall be based on the volume of the wastewater permitted to be discharged. However, facilities with stormwater-only discharges regulated in its wastewater permit pursuant to Section 62-620.445, F.A.C., shall pay an additional \$200 per outfall per year, up to the maximum amount set forth in Section 403.087(6), F.S. The additional fee for stormwater-only discharges does not apply to internal stormwater streams.

(8) The annual fee for domestic or industrial wastewater facilities or activities which fall in one of the categories below shall be as follows:

(a) Facilities which use an underground injection well for effluent disposal and are permitted to discharge to surface water only during mechanical integrity tests \$200

(b) Facilities which use evaporation/percolation ponds or holding ponds and land application as their primary means of disposal and are permitted to discharge to surface waters only after storm events or during control structure testing, as specified in the permit:

1. That do not include effluent limitations on internal waste streams established to protect surface water quality \$200

2. That include effluent limitations on internal waste streams established to protect surface water quality \$2400

(c) Facilities which are permitted to discharge to surface waters only for emergencies, as specified in the permit \$200

(d) The annual fees described in paragraphs (a) through (c) of this subsection shall be the only annual fee for such facilities, except as provided in subsections 62-4.052(10) and 62-4.052(11), F.A.C., and shall be due and payable regardless of whether a discharge actually occurs during the year.

(9) The annual fee for petroleum contaminated ground water clean up projects authorized to discharge to surface waters for more than 30 days under the generic permit for petroleum fuel contaminated ground water clean up is \$2,850 annually. There shall be no annual fee for projects authorized to discharge to surface water for less than 30 days or for discharges of uncontaminated produced ground water.

(10) The annual fee for Phase I municipal stormwater facilities, and Phase II facilities subject to an individual permit, as regulated under Chapter 62-624, F.A.C., shall be as follows:

(a) Fees for each Municipal Separate Storm Sewer System (MS4) permit shall cover the cost of surveillance and the regulatory program, including processing of annual reports, revisions, and permit applications and re-applications. Annual fees for MS4s shall be based on the total MS4 permit population. The total MS4 permit population is equal to the sum of the populations of each of the named co-permittees to a MS4 permit. Populations used for all MS4 fee determinations shall be the 2005 estimates as listed in the 2006 edition of the Florida Statistical Abstract, published by the Bureau of Economic and Business Research, University of Florida. Fees are calculated using the formulas established in paragraph 62-4.052(10)(d), F.A.C. Total permit populations and associated fees are indicated for each permit below:

Permit	Total Population	Fee
1. Bradenton	54,303	\$4,340
2. Broward	1,410,561	\$48,264
3. Escambia	303,623	\$20,591
4. Ft. Lauderdale	171,344	\$17,284
5. Hialeah	230,407	\$18,760
6. Hillsborough	783,007	\$32,575
7. Hollywood	143,025	\$16,576
8. Jacksonville	837,983	\$33,950
9. Jacksonville Beach	21,531	\$2,702
10. Lee	549,442	\$26,736
11. Leon	96,330	\$6,442
12. Manatee	247,471	\$19,187
13. Miami	386,882	\$22,672
14. Miami-Dade County	1,720,800	\$56,020

15. Orange	821,519	\$33,538
16. Orlando	217,567	\$18,439
17. Palm Beach County	1,262,520	\$44,563
18. Pasco	404,930	\$23,123
19. Pinellas	691,971	\$30,299
20. Polk	541,840	\$26,546
21. Reedy Creek District	82,300	\$5,740
22. St. Petersburg	253,902	\$19,348
23. Sarasota	367,867	\$22,197
24. Seminole	411,744	\$23,294
25. Tallahassee	174,781	\$17,370
26. Tampa	326,519	\$21,163
27. Temple Terrace	22,020	\$2,726

(b) Except as provided in paragraph 62-4.052(10)(c), F.A.C., permittees and co-permittees to each permit will be invoiced individually for their respective share of the annual fee. The individual fee shall be pro-rated based on the percentage of each co-permittee's population as compared to the total permit population listed above. Additional fees apply as follows:

1. Invoices under this subsection shall be a minimum of \$100 to cover processing costs.

2. For co-permittees that do not have associated populations, such as Florida Department of Transportation Districts and Drainage Districts, other than existing state water management districts, the fee shall be \$1,875.

(c) For convenience, co-permittees of any one permit may choose to receive only one invoice to cover the entire annual fee. In order to receive one invoice, co-permittees to any one permit shall:

1. Mutually agree to share the cost of the annual fee and be party to an executed interlocal agreement for cost sharing among all co-permittees.

2. Designate a specific co-permittee to act as representative for all co-permittees regarding the annual fee. The fee designee shall notify the Department in writing, not less than 120 days prior to the end of a calendar year, that only one invoice will be required for the annual fee for the forthcoming calendar year.

3. The above notification shall identify the co-permittee responsible for the fee transaction and shall specify the name and address of the contact person for invoicing. The identified co-permittee is responsible for paying the entire annual fee to the Department.

4. After the initial annual fee billing cycle, one invoice shall continue to be sent to the fee designee established by the above process until a change is requested in accordance with subparagraph 62-4.052(10)(c)5., F.A.C., below.

5. To effect a change regarding the fee designee, the Department must be notified in writing, not less than 120 days prior to the end of a calendar year, that the co-permittee responsible for the fee transaction has changed, or that fees should be invoiced individually in accordance with paragraph 62-4.052(10)(b), F.A.C. Notification of such changes shall be in accordance with the requirements of this subsection.

(d) Annual fees for Phase 1 MS4s and Phase 11 MS4s permitted individually and not under a generic permit, that have an initial permit issuance occurring after October 1, 2000, shall be based on the following formulas:

1. For MS4 permits with total populations less than 19,999: \$800 plus \$0.05 times the total permitted population.

2. For MS4 permits with total populations greater than 20,000 but less than 99,999: \$1,625 plus \$0.05 times the total permitted population.

3. For MS4 permits with total populations greater than 100,000: \$13,000 plus \$0.025 times the total permitted population.

(11) Stormwater discharge associated with industrial activity permitted under Chapter 62-620, F.A.C., shall pay an additional \$200 per outfall per year, up to the maximum amount set forth in Section 403.087(6), F.S., unless the activity is already subject to the fee provisions of paragraph 62-4.052(7)(b), F.A.C.

(12) There shall be no annual fee for use of the general permits in Chapter 62-660, F.A.C.

(13) In addition to any annual fees described in subsections (5) and (8) of this section, a municipality which has an approved pretreatment program shall pay an additional \$500 annually.

Rulemaking Authority 403.061, 403.087(6) FS. Law Implemented 403.087(6), 403.0885 FS. History--New 4-30-95, Amended 10-22-00, 7-8-02, 10-31-07.

62-4.053 Annual Operating License Fees for Public Water Systems.

(1) Scope and Intent. As authorized in Section 403.087(6), F.S., this rule implements annual regulatory program and surveillance fees (operating license fees) for public drinking water systems. These fees effect the legislative intent that the Department's costs for administering the Florida Safe Drinking Water Act be borne by regulated parties. As such, the annual operating license fees are applicable only to public water systems subject to regulation under Chapters 62-550, 62-555 and 62-560, F.A.C.

(2) The license fees described in paragraphs (a) through (c) of this subsection shall be the annual operating license fees for such facilities.

(a) Annual operating license fees shall be based on the type of public water system, or the population served, or the sum of permitted capacities of the treatment provided under their unique PWS ID Number, as set forth in subsections (3) through (6) below.

(b) Annual operating license fees are applicable for the period from July 1 to June 30 of the following year.

(c) Annual operating license fees for drinking water systems are not refundable and shall be due and payable as follows:

1. The annual operating license fees set forth in this section shall be required for all public water systems for which the Department is granted administrative authority. The amount due shall be the applicable annual operating license fee described in subsections (3), (4), (5), or (6) of this section, and is due and payable no later than 45 days after receipt of an operating license fee invoice from the Department for public water systems that are subject to regulation under Section 403.861, F.S., on that date.

2. When a new public water system is issued a permit and is cleared for operation to be put in service under Chapter 62-555, F.A.C., pursuant to Section 403.861, F.S., the first annual operating license fee shall be due no later than 45 days after receipt of an operating license fee invoice from the Department. The amount due shall be the applicable annual operating license fee described in subsections (3), (4), (5), or (6) of this section. The operating license fee shall be due and payable pursuant to paragraph 62-4.053(2)(b), F.A.C., above.

3. Non-payment or late payment of an annual operating license fee shall be grounds for enforcement action pursuant to Sections 403.121, 403.141, and 403.161, F.S. Non-payment of an annual operating license fee shall be grounds for revocation or denial of an application for a drinking water construction permit.

4. When a public water system changes in a manner which places the facility in a different annual operating license fee category:

a. The operating license fee shall be changed as appropriate and be in effect for the next operating year (July 1-June 30),

b. The new operating license fee shall be due no later than 45 days after receipt of an operating license fee invoice from the Department following the change, and

c. No operating license fee is due for an inactive system.

(3) The annual operating license fees for community public water systems are based on the system's permitted design capacity, and are as follows:

Design Capacity	Fee
(a) 10 MGD and above	\$6,000
(b) 5 MGD up to 10 MGD	\$4,000
(c) 1 MGD up to 5 MGD	\$2,000
(d) .33 MGD up to 1 MGD	\$1,000
(e) .05 MGD up to 0.33 MGD	\$500
(f) Less than 0.05 MGD	\$100

(4) The annual operating license fee for consecutive community public water systems shall be based on their population served as reported by the system during their most recent Sanitary Survey as follows:

Population Served	Fee
(a) 25-500	\$50
(b) 501-3,300	\$100
(c) 3,301-10,000	\$500
(d) 10,001-50,000	\$1,000
(e) 50,001-100,000	\$2,000
(f) >100,000	\$4,000

(5) The annual operating license fee for non-transient, non-community public water systems shall be \$100.

(6) The annual operating license fee for transient, non-community public water systems shall be \$50.

(7) Public water systems will be invoiced individually for the annual operating license fee.

(8) The annual operating license fee in this Section shall be adjusted for inflation using the methodology in paragraph 62-4.050(4)(z), F.A.C.

Rulemaking Authority 403.061, 403.861(7), 403.861(8) FS. Law Implemented 403.087(6) FS. History--New 4-21-09.

62-4.055 Permit Processing.

(1) Within thirty days after receipt of an application for a permit and the correct processing fee the Department shall review the application and shall request submittal of additional information the Department is authorized by law to request. The applicant shall have ninety days after the Department mails a timely request for additional information to submit that information to the Department. If an applicant requires more than ninety days in which to respond to a request for additional information, the applicant may notify the Department in writing of the circumstances, at which time the application shall be held in active status for one additional period of up to ninety days. Additional extensions shall be granted for good cause shown by the applicant. A showing that the applicant is making a diligent effort to obtain the requested additional information shall constitute good cause. Failure of an applicant to provide the timely requested information by the applicable deadline shall result in denial of the application.

(2) If the applicant believes any Department request for additional information is not authorized by law or rule, the applicant may request a hearing pursuant to Section 120.57, F.S.

(3) Within 30 days after receipt of such additional information, the Department shall review it and may request only that information needed to clarify such additional information or to answer new questions raised by or directly related to such additional information.

(4) If the applicant believes the request of the Department for such additional information is not authorized by law or rule, the Department, at the applicant's request, shall begin to process the permit application. Such a request by the applicant shall be in writing and shall be clearly labelled as a request for the Department to process the application. The applicant's request shall state the reasons why the applicant believes the Department's request for additional information is not authorized by law or rule. The applicant shall clearly state that the applicant requests the Department to process the application without that information. The applicant's request shall be submitted to the Department office which made the request.

(5) Permits shall be approved or denied within 90 days after receipt of the original application, the last item of timely requested additional material, or the applicant's written request to begin processing the permit application, whichever occurs last.

(6) The procedures in this section do not apply to hazardous waste facility permitting under Rule Chapter 62-730, F.A.C., or to other permitting for which there are other specific procedures.

Rulemaking Authority 120.54(5), 403.061, 403.087 FS. Law Implemented 403.021, 403.061, 403.062, 403.087, 403.0876 FS. History--New 12-3-84, Amended 8-31-88, 7-11-93, Formerly 17-4.055, Amended 8-16-98.

62-4.060 Consultation.

Rulemaking Authority 403.021, 403.031, 403.061, 403.088 FS. Law Implemented 403.021, 403.031, 403.061, 403.087, 403.088 FS. History--New 5-17-72, Formerly 17-4.06, Amended 8-31-88, Formerly 17-4.060, Repealed 2-16-12.

62-4.070 Standards for Issuing or Denying Permits; Issuance; Denial.

(1) A permit shall be issued to the applicant upon such conditions as the Department may direct, only if the applicant affirmatively provides the Department with reasonable assurance based on plans, test results, installation of pollution control equipment, or other information, that the construction, expansion, modification, operation, or activity of the installation will not discharge, emit, or cause pollution in contravention of Department standards or rules. However, for discharges of wastes to water, the Department may issue temporary operation permits under the criteria set forth in Section 403.088(3), F.S.

(2) If, after review of the application and all the information, the Department determines that the applicant has not provided reasonable assurance that the construction, modification, expansion, or operation of the installation will be in accord with applicable laws or rules, including rules of approved local programs, the Department shall deny the permit.

(3) The Department may issue any permit with specific conditions necessary to provide reasonable assurance that Department rules can be met.

(4) No Department permits shall be issued for a term of more than five (5) years unless otherwise specified by statute, rule, or order of the Department. However, construction permits for air pollution sources may be issued for a period of time as necessary.

(5) The Department shall take into consideration a permit applicant's violation of any Department rules at any installation when determining whether the applicant has provided reasonable assurances that Department standards will be met.

(6) The applicant shall be promptly notified if the Department intends to deny the application, and shall be informed of the reasons for the intended denial, and of the right to request an administrative hearing.

(7) The issuance of a permit does not relieve any person from complying with the requirements of Chapter 403, F.S., or Department rules.

Rulemaking Authority 403.021, 403.031, 403.061, 403.087, 403.088 FS. Law Implemented 403.021, 403.031, 403.061, 403.087, 403.088 FS. History-- New 5-17-72, Amended 7-8-82, 2-1-83, 12-3-84, Formerly 17-4.07, Amended 8-31-88, 3-28-91, Formerly 17-4.070.

62-4.080 Modification of Permit Conditions.

(1) For good cause and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions and on application of the permittee the Department may grant additional time.

For the purpose of this section, good cause shall include, but not be limited to, any of the following:

(a) A showing that an improvement in effluent or emission quality or quantity can be accomplished because of technological advances without unreasonable hardship.

(b) A showing that a higher degree of treatment is necessary to effect the intent and purpose of Chapter 403, F.S.

(c) A showing of any change in the environment or surrounding conditions that requires a modification to conform to applicable air or water quality standards.

(d) For discharges into State waters, a showing that new or changed classification of the water requires a modification of the discharge.

(e) Adoption or revision of Florida Statutes, rules, or standards which require the modification of a permit condition for compliance.

(2) A permittee may request a modification of a permit by applying to the Department.

(3) A permittee may request that a permit be extended as a modification of the permit. Such a request must be submitted to the Department in writing before the expiration of the permit. Upon timely submittal of a request for extension, unless the permit automatically expires by statute or rule, the permit will remain in effect until final agency action is taken on the request. For construction permits, an extension shall be granted if the applicant can demonstrate reasonable assurances that, upon completion, the extended permit will comply with the standards and conditions required by applicable regulation. For all other permits, an extension shall be granted if the applicant can demonstrate reasonable assurances that the extended permit will comply with the standards and conditions applicable to the original permit. A permit for which the permit application fee was prorated in accordance with paragraph 62-4.050(4)(l), F.A.C., shall not be extended. In no event shall a permit be extended or remain in effect longer than the time limits established by statute or rule.

Rulemaking Authority 403.021, 403.031, 403.061, 403.088 FS. Law Implemented 403.021, 403.031, 403.061, 403.087, 403.088 FS. History--New 5-17-72, Formerly 17-4.08, Amended 8-31-88, 3-19-90, Formerly 17-4.080.

62-4.090 Renewals.

Renewals. Prior to 135 days before the expiration of a hazardous waste operation permit, 180 days before the expiration of a hazardous waste closure permit, or sixty days before the expiration of any other Department operation permit except a permit issued pursuant to Chapter 62-213, F.A.C., the permittee shall apply for a renewal of a permit using forms incorporated by reference in the specific rule chapter for that kind of permit. Renewals of permits issued pursuant to Chapter 62-213, F.A.C., shall be processed in accordance with the chapter and not with this rule. A renewal application shall be timely and sufficient. If the application is submitted prior to the days specified above before expiration of the permit, it will be considered timely and sufficient. If the renewal application is submitted at a later date, it will not be considered timely and sufficient unless it is submitted and made complete prior to the expiration of the operation permit. When the application for renewal is timely and sufficient, the existing permit shall remain in effect until the renewal application has been finally acted upon by the Department or, if there is court review of the Department's final agency action, until a later date is required by Section 120.60, F.S.

Rulemaking Authority 120.60, 403.021, 403.031, 403.061, 403.088 FS. Law Implemented 120.60, 403.021, 403.031, 403.061, 403.087, 403.088 FS. History--New 5-17-72, Formerly 17-4.09, Amended 8-31-88, 3-19-90, 7-11-93, Formerly 17-4.090, Amended 4-18-95, 3-16-08.

62-4.100 Suspension and Revocation.

(1) Permits shall be effective until suspended, revoked, surrendered, or expired and shall be subject to the provisions of Chapter 403, F.S., and rules of the Department.

(2) Failure to comply with pollution control laws and rules shall be grounds for suspension or revocation.

(3) A permit issued pursuant to this chapter shall not become a vested property right in the permittee. The Department may revoke any permit issued by it if it finds that the permit holder or his agent:

(a) Submitted false or inaccurate information in his application or operational reports.

(b) Has violated law, Department orders, rules or permit conditions.

(c) Has failed to submit operational reports or other information required by Department rules.

(d) Has refused lawful inspection under Section 403.091, F.S.

(4) No revocation shall become effective except after notice is served by personal service, certified mail, or newspaper notice pursuant to Section 120.60(5), F.S., upon the person or persons named therein and a hearing held if requested within the time specified in the notice. The notice shall specify the provision of the law, or rule alleged to be violated, or the permit condition or Department order alleged to be violated, and the facts alleged to constitute a violation thereof.

Rulemaking Authority 120.60, 403.061(7) FS. Law Implemented 120.60, 403.021, 403.031, 403.061, 403.087, 403.088 FS. History--Formerly 17-4.07, FAC, New 3-4-70, Revised 5-17-72, Amended 8-7-73, Formerly 17-4.10, Amended 8-31-88, Formerly 17-4.100.

62-4.110 Financial Responsibility.

Rulemaking Authority 403.061(7) FS. Law Implemented 403.021, 403.031, 403.061, 403.087, 403.088 FS. History--New 5-17-72, Amended 8-7-73, Formerly 17-4.11, Amended 8-31-88, Formerly 17-4.110, Repealed 2-16-12.

62-4.120 Transfer of Permits.

(1) Within 30 days after the sale or legal transfer of a permitted facility, an "Application for Transfer of Permit" (DEP Form 62-1.201(1)) must be submitted to the Department. This form must be completed with the notarized signatures of both the permittee and the proposed new permittee. For air permits, an "Application for Transfer of Air Permit" (DEP Form 62-210.900(7)) shall be submitted.

(2) The Department shall approve the transfer of a permit unless it determines that the proposed new permittee cannot provide reasonable assurances that conditions of the permit will be met. The determination shall be limited solely to the ability of the new permittee to comply with the conditions of the existing permit, and it shall not concern the adequacy of these permit conditions. If the Department proposes to deny the transfer, it shall provide both the permittee and the proposed new permittee a written objection to such transfer together with notice of a right to request a Chapter 120, F.S., proceeding on such determination.

(3) Within 30 days of receiving a properly completed Application for Transfer of Permit form, the Department shall issue a final determination. The Department may toll the time for making a determination on the transfer by notifying both the permittee and the proposed new permittee that additional information is required to adequately review the transfer request. Such notification shall be

served within 30 days of receipt of an Application for Transfer of Permit form, completed pursuant to subsection (1). If the Department fails to take action to approve or deny the transfer within 30 days of receipt of the completed Application for Transfer of Permit form, or within 30 days of receipt of the last item of timely requested additional information, the transfer shall be deemed approved.

(4) The permittee is encouraged to apply for a permit transfer prior to the sale or legal transfer of a permitted facility. However, the transfer shall not be effective prior to the sale or legal transfer.

(5) Until this transfer is approved by the Department, the permittee and any other person constructing, operating, or maintaining the permitted facility shall be liable for compliance with the terms of the permit. The permittee transferring the permit shall remain liable for corrective actions that may be required as a result of any violations occurring prior to the sale or legal transfer of the facility.

Rulemaking Authority 403.021, 403.031, 403.061, 403.088 FS. Law Implemented 403.021, 403.031, 403.061, 403.087, 403.088 FS. History—New 3-4-70, Revised 5-17-72, Formerly 17-4.12, Amended 3-19-90, Formerly 17-4.120, Amended 4-16-01.

62-4.130 Plant Operation - Problems.

If the permittee is temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by hazard of fire, wind or by other cause, the permittee shall immediately notify the Department. Notification shall include pertinent information as to the cause of the problem, and what steps are being taken to correct the problem and to prevent its recurrence, and where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with Department rules.

Rulemaking Authority 403.021, 403.031, 403.061, 403.088 FS. Law Implemented 403.021, 403.031, 403.061, 403.087, 403.088 FS. History—New 3-4-70, Revised 5-17-72, Formerly 17-4.13, Amended 8-31-88, Formerly 17-4.130.

62-4.150 Review.

Rulemaking Authority 403.021, 403.031, 403.061, 403.088 FS. Law Implemented 403.021, 403.031, 403.061, 403.087, 403.088 FS. History—New 5-17-72, Formerly 17-4.15, Amended 8-31-88, Formerly 17-4.150, Repealed 2-16-12.

62-4.160 Permit Conditions.

All permits issued by the Department shall include the following general conditions:

(1) The terms, conditions, requirements, limitations and restrictions set forth in this permit, are "permit conditions" and are binding and enforceable pursuant to Sections 403.141, 403.727, or 403.859 through 403.861, F.S. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

(2) This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

(3) As provided in subsections 403.987(6) and 403.722(5), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations. This permit is not a waiver of or approval of any other department permit that may be required for other aspects of the total project which are not addressed in this permit.

(4) This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.

(5) This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

(6) The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to

achieve compliance with the conditions of the permit and when required by Department rules.

(7) The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at reasonable times, access to the premises where the permitted activity is located or conducted to:

(a) Have access to and copy any records that must be kept under conditions of the permit;

(b) Inspect the facility, equipment, practices, or operations regulated or required under this permit; and

(c) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

(8) If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

(a) A description of and cause of noncompliance; and

(b) The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance. The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

(9) In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.111 and 403.73, F.S. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

(10) The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance; provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules. A reasonable time for compliance with a new or amended surface water quality standard, other than those standards addressed in Rule 62-302.500, F.A.C., shall include a reasonable time to obtain or be denied a mixing zone for the new or amended standard.

(11) This permit is transferable only upon Department approval in accordance with Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

(12) This permit or a copy thereof shall be kept at the work site of the permitted activity.

(13) This permit also constitutes:

(a) Determination of Best Available Control Technology (BACT)

(b) Determination of Prevention of Significant Deterioration (PSD)

(c) Certification of compliance with State Water Quality Standards (Section 401, PL 92-500)

(d) Compliance with New Source Performance Standards

(14) The permittee shall comply with the following:

(a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

(b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

(c) Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements;

2. The person responsible for performing the sampling or measurements;

3. The dates analyses were performed;

4. The person responsible for performing the analyses;

5. The analytical techniques or methods used;

6. The results of such analyses.

(15) When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware the relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

(16) In the case of an underground injection control permit, the following permit conditions also shall apply:

(a) All reports or information required by the Department shall be certified as being true, accurate and complete.

(b) Reports of compliance or noncompliance with, or any progress reports on, requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

(c) Notification of any noncompliance which may endanger health or the environment shall be reported verbally to the Department within 24 hours and again within 72 hours, and a final written report provided within two weeks.

1. The verbal reports shall contain any monitoring or other information which indicate that any contaminant may endanger an underground source of drinking water and any noncompliance with a permit condition or malfunction of the injection system which may cause fluid migration into or between underground sources of drinking water.

2. The written submission shall contain a description of and a discussion of the cause of the noncompliance and, if it has not been corrected, the anticipated time the noncompliance is expected to continue, the steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance, and all information required by paragraph 62-528.415(4)(b), F.A.C.

(d) The Department shall be notified at least 180 days before conversion or abandonment of an injection well, unless abandonment within a lesser period of time is necessary to protect waters of the State.

(17) The following conditions also shall apply to a hazardous waste facility permit.

(a) The following reports shall be submitted to the Department:

1. Manifest discrepancy report. If a significant discrepancy in a manifest is discovered, the permittee shall attempt to rectify the discrepancy. If not resolved within 15 days after the waste is received, the permittee shall immediately submit a letter report, including a copy of the manifest, to the Department.

2. Unmanifested waste report. The permittee shall submit an unmanifested waste report to the Department within 15 days of receipt of unmanifested waste.

3. Biennial report. A biennial report covering facility activities during the previous calendar year shall be submitted by March 1 of each even numbered year pursuant to Chapter 62-730, F.A.C.

(b) Notification of any noncompliance which may endanger health or the environment, including the release of any hazardous waste that may endanger public drinking water supplies or the occurrence of a fire or explosion from the facility which could threaten the environment or human health outside the facility, shall be reported verbally to the Department within 24 hours, and a written report shall be provided within 5 days. The verbal report shall include the name, address, I.D. number, and telephone number of the facility, its owner or operator, the name and quantity of materials involved, the extent of any injuries, an assessment of actual or potential hazards, and the estimated quantity and disposition of recovered material. The written submission shall contain:

1. A description and cause of the noncompliance.

2. If not corrected, the expected time of correction, and the steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance.

(c) Reports of compliance or noncompliance with, or any progress reports on, requirements in any compliance schedule shall be submitted no later than 14 days after each schedule date.

(d) All reports or information required by the department by a hazardous waste permittee shall be signed by a person authorized to sign a permit application.

Rulemaking Authority 403.061, 403.087, 403.088 FS. Law Implemented 403.061, 403.087, 403.088 FS. History--New 8-31-88, Amended 10-4-89, 7-11-93, Formerly 17-4.160.

62-4.200 Scope of Part II.

This Part sets forth additional requirements for certain Department permits, exemptions from permitting, requirements for mixing zones and zones of discharge, and related requirements. Except as otherwise provided in Chapter 62-330, F.A.C., or in the rules adopted by reference thereunder, this Part shall not apply to activities regulated under Part IV of Chapter 373, F.S. However, this Part shall continue to apply to those activities grandfathered under Sections 373.4131(4), 373.414(11), (12)(a), (13), (14), (15), (16) and 373.4145(6), F.S.

Rulemaking Authority 373.026, 373.043, 373.044, 373.109, 373.113, 373.4131, 373.4145, 373.418, 403.021, 403.031, 403.061, 403.088 FS. Law

Implemented 373.026, 373.044, 373.109, 373.409, 373.413, 373.4135, 373.414(9), (11), (12)(a), (13), (14), (15), (16), 373.4145, 373.418, 403.021, 403.031, 403.061, 403.087, 403.088 FS. History--New 5-17-72, Formerly 17-4.20, Amended 8-31-88, Formerly 17-4.200, Amended 7-4-95, 10-1-07, 10-1-13.

62-4.210 Construction Permits.

Rulemaking Authority 403.021, 403.031, 403.061, 403.088 FS. Law Implemented 403.021, 403.031, 403.061, 403.087, 403.088 FS. History--New 5-17-72, Formerly 17-4.21, Amended 8-31-88, Formerly 17-4.210, Repealed 2-16-12.

62-4.220 Operation Permit for New Sources.

Rulemaking Authority 403.021, 403.031, 403.061, 403.088 FS. Law Implemented 403.021, 403.031, 403.061, 403.087, 403.088 FS. History--Formerly 17-4.05, New 3-4-70, Revised 5-17-72, Formerly 17-4.22, Amended 8-31-88, Formerly 17-4.220, Repealed 2-16-12.

62-4.240 Operation Permits for Water Pollution Sources.

Rulemaking Authority 403.061, 403.088 FS. Law Implemented 403.021, 403.031, 403.061, 403.087, 403.088, 403.101 FS. History--New 5-17-72, Formerly 17-4.23, Amended 8-31-88, 10-4-89, Formerly 17-4.240, Repealed 2-16-12.

62-4.241 Whole Effluent Toxicity Limits.

(1) Facilities subject to whole effluent toxicity testing as identified in subsection 62-620.620(3), F.A.C., shall meet the following whole effluent toxicity limitations unless a mixing zone as specified in paragraphs 62-4.244(3)(a) through (d), F.A.C., or a variance has been approved by the Department.

(a) For acute whole effluent toxicity, the LC50, as defined in subsection 62-302.200(1), F.A.C., shall not be less than 100% effluent; and

(b) For chronic whole effluent toxicity, the IC25, as defined in subsection 62-302.200(14), F.A.C., shall not be less than 100% effluent.

(2) Facilities granted a chronic toxicity mixing zone in accordance with paragraph 62-4.244(3)(a), F.A.C., shall meet the following whole effluent toxicity limitations.

(a) For acute whole effluent toxicity, the LC50, as defined in subsection 62-302.200(1), F.A.C., shall not be less than 100% effluent; and

(b) For chronic whole effluent toxicity, the IC25, as defined in subsection 62-302.200(14), F.A.C., shall not be less than the effluent concentration allowed by the mixing zone.

(3) Facilities with high rate dilution permitted under paragraph 62-4.244(3)(b), F.A.C., shall meet the following whole effluent toxicity limitations.

(a) For acute whole effluent toxicity, the LC50, as defined in subsection 62-302.200(1), F.A.C., shall not be less than 30% effluent; and

(b) For chronic whole effluent toxicity, the IC25, as defined in subsection 62-302.200(14), F.A.C., shall not be less than 10% effluent.

(4) Facilities permitted as open ocean discharges under paragraph 62-4.244(3)(c), F.A.C., shall meet the following whole effluent toxicity limitations.

(a) For acute whole effluent toxicity, the LC50, as defined in subsection 62-302.200(1), F.A.C., shall not be less than 30% effluent; and

(b) For chronic whole effluent toxicity, the IC25, as defined in subsection 62-302.200(14), F.A.C., shall not be less than 10% effluent.

(5) Water Treatment facilities granted a mixing zone for demineralization concentrate in accordance with paragraph 62-4.244(3)(d), F.A.C., shall meet the following whole effluent toxicity limitations.

(a) For small water utility businesses, as defined in Section 403.0882(2)(b), F.S., the acute whole effluent toxicity LC50, as defined in subsection 62-302.200(1), F.A.C., shall not be less than 20% effluent. For demineralization concentrate discharges other than small water utility businesses, the LC50 shall not be less than the effluent concentration allowed by the mixing zone and shall not be less than 20% effluent; and

(b) For small water utility businesses, the chronic whole effluent toxicity IC25, as defined in subsection 62-302.200(14), F.A.C., shall not be less than 20% effluent. For demineralization concentrate discharges other than small water utility businesses, the IC25 shall not be less than the effluent concentration allowed by the mixing zone.

Rulemaking Authority 403.061, 403.087, 403.804, 403.805 FS. Law Implemented 403.021, 403.061, 403.087, 403.088, 403.121, 403.131, 403.141, 403.161 FS. History—New 4-2-08.

62-4.242 Antidegradation Permitting Requirements; Outstanding Florida Waters; Outstanding National Resource Waters; Equitable Abatement.

(1) Antidegradation Permitting Requirements.

(a) Permits shall be issued when consistent with the antidegradation policy set forth in Rule 62-302.300, F.A.C., and, if applicable, Rule 62-302.700, F.A.C.

(b) In determining whether a proposed discharge which results in water quality degradation is necessary or desirable under federal standards and under circumstances which are clearly in the public interest, the department shall consider and balance the following factors:

1. Whether the proposed project is important to and is beneficial to the public health, safety, or welfare (taking into account the policies set forth in Rule 62-302.300, F.A.C., and, if applicable, Rule 62-302.700, F.A.C.); and

2. Whether the proposed discharge will adversely affect conservation of fish and wildlife, including endangered or threatened species, or their habitats; and

3. Whether the proposed discharge will adversely affect the fishing or water-based recreational values or marine productivity in the vicinity of the proposed discharge; and

4. Whether the proposed discharge is consistent with any applicable Surface Water Improvement and Management Plan that has been adopted by a Water Management District and approved by the Department.

(c) For domestic wastewater facilities, in addition to paragraph (b) above, in order for a proposed discharge to be necessary or desirable under federal standards and under circumstances which are clearly in the public interest, the permit applicant must demonstrate that none of the following is economically and technologically reasonable:

1. Implementation of water conservation measures to reduce the flow of domestic wastewater. The engineering report shall include an assessment of the feasibility of implementation of water conservation programs within the area served by the collection system. This paragraph shall apply only to utilities, municipalities, or other entities that have responsibility for both wastewater and water supply;

2. Implementation of infiltration/inflow reduction measures for expansions of domestic wastewater facilities. The engineering report shall include an assessment of an infiltration/inflow reduction program within the area served by the collection system;

3. Reuse of reclaimed water; and

4. Use of other discharge locations, which would reduce adverse impacts on water quality.

(d) For industrial wastewater facilities proposing new or expanded surface water discharges, in addition to paragraph (b) above, in order for the new or expanded industrial wastewater discharge to be necessary or desirable under federal standards and under circumstances which are clearly in the public interest, the permit applicant:

1. Must demonstrate that use of other discharge locations, land application, or recycling at offsite locations that would avoid the degradation of water quality is not economically and technologically reasonable; and

2. Shall submit a signed statement under penalty of law that a waste minimization and source reduction analysis was completed consistent with best management practices appropriate for the type of facility or discharge proposed, as identified in paragraph 62-620.100(3)(m), F.A.C., 40 CFR 122.44(k), and Guidance Manual for Developing Best Management Practices (BMP), U.S. Environmental Protection Agency, Office of Water, Washington, DC, EPA 833-B-93-004, October, 1993.

(2) Standards Applying to Outstanding Florida Waters.

(a) No Department permit or water quality certification shall be issued for any proposed activity or discharge within an Outstanding Florida Waters, or which significantly degrades, either alone or in combination with other stationary installations, any Outstanding Florida Waters, unless the applicant affirmatively demonstrates that:

1. With respect to blowdown from a recirculated cooling water system of a steam electrical generating plant, that the discharge:

a. Meets the applicable limitations of subsection 62-302.520(4), F.A.C., at the point of discharge; or

b. Has a mixing zone established pursuant to paragraph 62-302.520(6)(b), F.A.C., which assures the protection and propagation

of a balanced indigenous population of shellfish, fish and wildlife in and on the Outstanding Florida Water, and which is established taking into account the recreational or ecological significance of such water; and

c. Meets the temperature limits of subsection 62-302.520(4), F.A.C., at the boundary of the mixing zone established pursuant to paragraph 62-302.520(6)(b), F.A.C.; or

2. The proposed activity of discharge is clearly in the public interest, and either

a. A Department permit for the activity has been issued or an application for such permit was complete on the effective date of the Outstanding Florida Water designation; or

b. The existing ambient water quality within Outstanding Florida Waters will not be lowered as a result of the proposed activity or discharge, except on a temporary basis during construction for a period not to exceed thirty days; lowered water quality would occur only within a restricted mixing zone approved by the Department; and, water quality criteria would not be violated outside the restricted mixing zone. The Department may allow an extension of the thirty-day time limit on a construction-caused degradation for a period demonstrated by the applicant to be unavoidable and where suitable management practices and technology approved by the Department are employed to minimize any degradation of water quality.

(b) The Department recognizes that it may be necessary to permit limited activities or discharges in Outstanding Florida Waters to allow for or enhance public use or to maintain facilities that existed prior to the effective date of the Outstanding Florida Water designation, or facilities permitted after adoption of the Outstanding Florida Water designation. However, such activities or discharges will only be permitted if:

1. The discharge or activity is in compliance with the provisions specified in subparagraph (2)(a)2. of this section; or

2. For dredging beach-quality sand from inlets and related channels, or restoration/nourishment of beaches and the use of offshore borrow areas, the applicant demonstrates that:

a. Turbidity has been minimized for both magnitude and duration to the maximum extent practicable;

b. Turbidity at the edge of the approved mixing zone does not exceed natural background levels by more than the range in natural background turbidity levels measured throughout a normal tidal cycle for the applicable sand dredging or beach restoration/nourishment site; and in no case shall it exceed 29 NTUs above natural background; and

c. Turbidity levels, both inside and outside of the mixing zone, are not expected to have an adverse impact on marine resources, recreational value or public safety; or

3. Management practices and suitable technology approved by the Department are implemented for all stationary installations including those created for drainage, flood control, or by dredging or filling; and there is no alternative to the proposed activity, including the alternative of not undertaking any change, except at an unreasonably higher cost.

(c) For the purpose of this section the term “existing ambient water quality” shall mean (based on the best scientific information available) the better water quality of either (1) that which could reasonably be expected to have existed for the baseline year of an Outstanding Florida Water designation or (2) that which existed during the year prior to the date of a permit application. It shall include daily, seasonal, and other cyclic fluctuations, taking into consideration the effects of allowable discharges for which Department permits were issued or applications for such permits were filed and complete on the effective date of designation.

(d) Subsection 62-4.242(2), F.A.C., shall not apply to any dredge or fill activity or any discharge to an Outstanding Florida Water permitted by the Department on, or for which a complete permit application was filed on, the effective date of an Outstanding Florida Water designation; nor shall it apply to any renewal of a Department permit where there is no modification in the dredge or fill activity or discharge which would necessitate a permit review.

(e) Any activity that is exempted from permit programs administered by the Department is not subject to the requirements of Rule 62-4.242, F.A.C.

(f) For the Apalachicola River north of Gulf County, this section shall not apply in the federally-authorized nine-foot navigation project, as follows:

1. Maintenance dredging and disposal and snag removal by the Army Corps of Engineers as presently performed pursuant to existing permits and its continuation under renewals thereof; or

2. Class A and B emergencies as defined in subsection 62-312.150(5), F.A.C.; or

3. Exemptions to permitting specified in Section 403.813, F.S., and Department rules; or

4. Any other permittable project of the Army Corps of Engineers deemed necessary by the Department pursuant to the considerations referenced in paragraph 62-302.100(10)(c), F.A.C.

(3) Standards Applying to Outstanding National Resource Waters:

(a) All discharges or activities that may cause degradation of water quality in Outstanding National Resource Waters are prohibited, other than:

1. Discharges or activities that are exempted by statute from Department permitting or regulation;
2. Those discharges or activities described in sub-subparagraphs 62-4.242(2)(a)1.b., 62-4.242(2)(a)1.c., 62-4.242(2)(a)2.b., and 62-4.242(2)(b)2., F.A.C.

(b) Discharges or activities that would have the result of clearly enhancing the water quality of Outstanding National Resource Waters are not prohibited.

(c) In addition, the following restrictions apply on Outstanding National Resource Waters. Each is listed below, followed by a reference to DEP rules or Florida Statutes:

1. Water quality reclassification to a class with less stringent criteria is not allowed (Rule 62-302.400, F.A.C.).
2. New or expanded mixing zones cannot be issued other than those for thermal discharges as allowed in subparagraph 62-4.242(1)(a)1., F.A.C.
3. Temporary Operation Permits cannot be renewed (Rule 62-4.250, F.A.C.).
4. General Permits cannot be used.
5. Exemptions from water quality criteria cannot be issued (Rule 62-4.243; subsections 62-6.020(5), (6), and (7); 62-25.030(3); and Rule 62-528.300, F.A.C.).
6. Variances shall not be issued (Sections 403.201 and 403.938, F.S.).
7. Any special restrictions for water quality protection in Outstanding Florida Waters, whether in Department rules or Florida Statutes, also apply in Outstanding National Resource Waters.

(d) This subsection shall not apply to any existing activity permitted, exempted, or for which a completed application for permit was filed, on or before the effective date of the Outstanding National Resource Water designation; nor shall it apply to any renewal of a Department permit where there is no modification of the activity which would necessitate a permit review.

(e) Paragraph 62-4.242(3)(d), F.A.C., shall not apply to any activity which contributes to the degradation of water quality in an Outstanding National Resource Water beyond those levels established for the baseline year.

(4) Equitable Abatement.

(a) It shall be Department policy to further protect and enhance the quality of those surface waters whose quality has been artificially lowered below the quality necessary to support their designated uses. For such waters, no new activity or discharge shall be issued a Department license to construct unless the applicant affirmatively demonstrates that:

1. Water quality standards once achieved would not be violated as a result of the proposed activity or discharge;
2. The proposed activity or discharge is necessary or desirable under federal standards; and
3. The proposed activity or discharge is clearly in the public interest.

(b) To allocate equitably the relative levels of responsibility for abatement among persons directly discharging significant amounts of pollutants into waters which fail to meet one or more of the water quality criteria applicable to those waters, it is necessary to determine the amounts of those pollutants contributed by each of those persons and to consider all factors relevant to the equitable allocation of that responsibility. The following provisions of this section prescribe the means by which the Department, upon the petition of a license applicant, will equitably allocate among such persons the relative levels of abatement responsibility of each for abatement of those pollutants and by which it will establish for each of those persons, if necessary, an abatement program and schedule to accomplish any abatement determined necessary under the provisions of this section.

(c)1. For a surface water body, or portion thereof, which is determined by the Department to fail to meet one or more of the water quality criteria applicable to that water body, an applicant for a license to construct or operate a stationary installation to discharge wastes which contributes, or will contribute, to that failure may petition the Department in writing for an equitable allocation of the relative levels of responsibility for abatement among the stationary installations which discharge significant amounts of one or more of the pollutants which contribute to the failure of those waters to meet the water quality criterion (a) specified in the petition.

2. The applicant shall identify in the petition the location of each of the existing stationary installations which it wishes the Department to consider and the legal name and mailing address of the owners of each of those stationary installations.

3. The county government within which each stationary installation identified under subparagraphs 1. and 2. of this paragraph is located shall be given notice of the proceeding, as shall the municipality, if the stationary installation is located within a municipality.

4. The Department may identify any other owners of existing stationary installations which it deems necessary to allocate equitably the relative levels of responsibility for abatement of pollutants which contribute to the failure of those waters to meet any criterion specified in the petition.

5. Those owners identified by the petitioner and the Department shall be joined as parties in the licensing proceeding. Nothing shall preclude any party from requiring the joinder, as a party to the proceeding, of the owner of any other existing stationary installation upon written motion and an affirmative demonstration that such stationary installation is discharging significant amounts of one or more pollutants which contribute to the failure of the subject water body to meet any criterion specified in the petition. A motion for joinder shall be filed within 20 days of receipt by the movant of notice that it has been joined in the proceeding.

(d) License applications filed by the petitioner, or any other party, for waste discharges which are identified pursuant to paragraph (2)(c) above in the equitable allocation process under this section shall be deemed incomplete or the subject of a dispute of material fact for purposes of Chapter 120, F.S. However, if an application for renewal of an existing license has been timely filed with the Department, the existing license shall remain in full force and effect until such time as a new or modified license has been issued pursuant to paragraph (2)(k).

(e) Prior to determining the most equitable allocation of responsibility for abatement under paragraph (f), the Department shall determine the percentage and quantification of the total contribution and the contribution by each of the stationary installations identified under paragraph (c) of the pollutants identified under paragraph (c) which contributes to the failure of the subject waters to meet the water quality criterion specified in the petition. Provided, however, that the Department, upon petition by an affected party pursuant to Rule 62-3.031, F.A.C., may establish more appropriate less stringent criteria upon which to base quantification calculations. For the purpose of performing quantification calculations, the Department shall assume waste discharges entering the water body from an adjacent state as a separate point source of pollution.

(f) The following factors shall be considered by the Department in determining the most equitable allocation among the parties identified pursuant to paragraph (c) of the relative levels of responsibility of each for abatement of the pollutants with which the petition is concerned:

1. The percentage and quantification of the abatement achieved by abatement techniques previously undertaken, if any, by each of those stationary installations and the costs previously incurred, if any, with respect to each, along with any economic or production benefits gained from said abatement techniques.

2. The identification and estimated cost of alternative abatement techniques available for each stationary installation. Identified techniques shall include:

a. Those techniques which would abate the level of pollutants to the degree required by the quantities of contributed pollutants determined under paragraph (e), or the maximum degree possible, if the degree required is not presently attainable.

b. Those techniques which would abate additional quantities of pollutants beyond the quantities determined under paragraph (e) and the approximate percentage of additional abatement which could be provided.

3. The economic and production impacts of additional abatement on each party, if any.

4. Other environmental impacts of available abatement techniques.

(g) In determining the percentages and quantities under paragraph (e), the Department shall use the best scientific and technical information, methods, and data in the possession of the Department.

(h) Each party to the licensing proceeding shall provide the Department, and each other party except as provided by Section 403.111, F.S., with any information which is requested by the Department and necessary for the determination under paragraphs (e) and (f). With regard to the determination under sub-subparagraph (f)2.ii., however, parties shall only be required to provide that information within their possession at the time of the Department's request. The Department shall make available to a party any information in its possession, and shall provide reasonable assistance to any party in identifying that information which would assist the party in complying with the Department's request.

(i) Each party shall undertake a program approved by the Department to abate the quantity of contributed pollutants for which it is determined responsible under paragraph (e). Such abatement program shall include but not be limited to, a quantified effluent limitation, best management practices or specific techniques for abatement, and a schedule for commencement and completion of the required abatement. In establishing an abatement schedule, the Department shall consider the previous abatement efforts and their costs, the reasonable remaining usable life of the discharge facility, and any commitments for phasing out the discharge from the facility.

(j) An abatement program required under paragraph (i) may include the agreement of one owner to undertake additional

abatement on behalf of another owner. When such an agreement has been executed fully and filed in writing with the Department within a reasonable period of time set by the Department, the agreement shall be recognized in the licenses of the signatory parties to the extent that it satisfies the levels of abatement, determined for those parties under paragraph (e).

(k) Each party shall be issued an appropriate license or modified license, which shall include any abatement program required of the party and approved under paragraph (i), as well as any other conditions authorized by Chapter 403, F.S.

Rulemaking Authority 373.016, 373.171, 403.061, 403.062, 403.087, 403.088, 403.504, 403.704, 403.804, 403.805 FS. Law Implemented 373.016, 373.171, 403.021, 403.061, 403.087, 403.088, 403.101, 403.111, 403.121, 403.141, 403.161, 403.182, 403.502, 403.702 FS. History--New 3-1-79, Amended 5-14-81, 9-30-82, 3-31-83, 4-9-84, 11-29-84, 12-11-84, 5-8-85, 7-22-85, 8-31-88, 9-13-89, 10-4-89, Formerly 17-4.242, Amended 1-23-95, 5-15-02, 8-1-13.

62-4.243 Exemptions from Water Quality Criteria.

(1) Exemptions for Artificial Water Bodies Classified for Agricultural Water Supplies.

(a) The Secretary shall upon the petition of an affected person or permit applicant, and after public notice in the Florida Administrative Weekly and in a newspaper of general circulation in the area of the waters affected, and after opportunity for public hearing pursuant to Chapter 120, F.S., issue an Order for the duration of the permit specifically exempting a source of pollution from the Class IV water quality criteria contained in Rule 62-3.131, F.A.C., for wholly artificial bodies of water upon affirmative demonstration by the Petitioner of the following:

1. Granting the exemption is in the public interest; and
2. The public has limited access to the waters under consideration; and
3. The waters are not used for recreation; and
4. Compliance with presently specified criteria is unnecessary for the protection of potable water supplies and animals, plants, or aquatic life using the waters; and
5. Granting the exemption will not interfere with existing uses or the designated use of the waters or contiguous waters; and
6. The economic, environmental and social costs of compliance with the existing criteria outweigh the social, environmental, economic and social benefits of compliance; and additionally,
7. The presently specified water quality criteria cannot be met with currently available technology; or
8. The costs of compliance with the presently specified criteria involved are so high that they must be spread over a considerable period of time; or
9. Some other type of hardship will occur.

(b) The Petitioner shall affirmatively demonstrate those criteria which the petitioner believes more appropriately apply to the waters for which the exemption is sought.

(c) The Secretary shall specify, by Order, only those criteria which the Secretary determines to have been demonstrated by the preponderance of competent substantial evidence to be more appropriate.

(d) The Department shall modify the Petitioner's permit consistent with the Secretary's Order.

(2) Exemptions for Water Bodies Classified for Navigation, Utility and Industrial Use.

(a) The Secretary shall, upon the petition of an affected person or permit applicant, and after public notice in the Florida Administrative Register and in a newspaper of general circulation in the area of the waters affected, and after opportunity for public hearing pursuant to Chapter 120, F.S., issue an Order for the duration of the permit specifically exempting sources of pollution from the Class V water quality criteria contained in Rule 62-3.141, F.A.C., upon affirmative demonstration by the petitioner of the following:

1. Granting the exemption is in the public interest; and
2. Compliance with presently specified criteria is unnecessary for the protection of potable water supplies and animals, plants, or aquatic life utilizing the waters; and
3. Granting the exemption will not interfere with existing uses or the designated use of the waters, or of contiguous waters; and
4. The economic, environmental and social costs of compliance with the existing criteria outweigh the social, environmental and economic benefits of compliance; and additionally,
5. The present specific water quality criteria cannot be met with currently available technology; or
6. The costs of compliance with the presently specified criteria involved are so high that they must be spread over a considerable period of time; or

7. Some other type of hardship will occur.

(b) The Petitioner shall affirmatively demonstrate those criteria which the Petitioner believes more appropriately apply to the waters for which the exemption is sought.

(c) The Secretary shall specify, by Order, only those criteria which the Secretary determines to have been demonstrated by the preponderance of competent substantial evidence to be more appropriate.

(d) The Department shall modify the Petitioner's permit consistent with the Secretary's Order.

Rulemaking Authority 403.061, 403.062, 403.087, 403.504, 403.704, 403.804, 403.805 FS. Law Implemented 403.021, 403.061, 403.087, 403.088, 403.101, 403.121, 403.141, 403.161, 403.182, 403.201, 403.502, 403.702, 403.708 FS. History--New 3-1-79, Amended 1-1-83, 2-1-83, 8-31-88, Formerly 17-4.243.

62-4.244 Mixing Zones: Surface Waters.

(1) Zones of mixing for non-thermal components of discharges.

(a) The Department may allow the water quality adjacent to a point of discharge to be degraded to the extent that only the minimum conditions described in subsection 62-302.500(1), F.A.C., apply within a limited, defined region known as the mixing zone. Under the circumstances defined elsewhere in this section, a mixing zone may be allowed to provide an opportunity for mixing and thus to reduce the costs of treatment. However, no mixing zone or combination of mixing zones shall be allowed to significantly impair any of the designated uses of the receiving body of water.

(b) A zone of mixing shall be determined based on the following:

1. The condition of the receiving body of water including present and future flow conditions and present and future sources of pollutants.
2. The nature, volume and frequency of the proposed discharge including any possible synergistic effects with other pollutants or substances which may be present in the receiving body of water.
3. The cumulative effect of the proposed mixing zone and other mixing zones in the vicinity.
- (c) Except for the thermal components of discharges and nitrogen and phosphorus acting as nutrients, mixing zones which do not adhere to all of provisions paragraphs (1)(d) through (j) shall be presumed to constitute a significant impairment of the designated uses of surface waters of Classes I, II and III. An applicant for a mixing zone may obtain an exemption from these limitations as follows:

1. The applicant shall provide public notice, which shall be prepared or approved by the Department, in a newspaper of general circulation in the area in which the mixing zone is proposed. The notice shall identify the specific exemption it is seeking and notice the time, date and place of a public meeting at which, if the meeting is requested, the Department will consider comments to the requested exemption. The notice shall allow a person to request such a public meeting by contacting the Department within 14 days of the publication of the notice. If there is no such request, a public meeting is not required.

2. The applicant shall arrange for a public meeting which will be held if requested at which the Department will consider public comments on the exemption that is being sought. The Department shall also provide for public notice of the meeting in the Florida Administrative Register.

3. The applicant shall affirmatively demonstrate to the Department that the mixing zone exemption will not produce a significant adverse effect on the established community of organisms in the receiving body of water or otherwise significantly impair any of the designated uses of the receiving body of water.

4. The applicant shall affirmatively demonstrate to the Department that the requirements of paragraph (5)(c) of this section will be met.

- (d) A mixing zone shall not include an existing drinking water supply intake or any other existing water supply intake if the constituents of such mixing zone would significantly impair the purposes for which the supply is used.

- (e) A mixing zone shall not include a nursery area of indigenous aquatic life or any area approved by the Department of Environmental Protection for shellfish harvesting.

- (f) In canals, rivers, streams, and other similar water bodies, the maximum length of a mixing zone shall be no more than 800 meters. In no case shall a mixing zone be larger than is necessary for the discharge to completely mix with the receiving water to meet water quality standards, and in no case shall a mixing zone significantly impair the designated use of the water body other than within the boundaries of the mixing zone.

- (g) In lakes, estuaries, bays, lagoons, bayous, sounds, and coastal waters, the area of mixing zone shall be 125,600 square

meters unless a lesser area is necessary to prevent significant impairment of a designated use. In no case shall a mixing zone be larger than is necessary to meet water quality standards.

(h) In open ocean waters, the area of a mixing zone shall be 502,655 square meters unless a lesser area is necessary to prevent significant impairment of a designated use. In no case shall a mixing zone be larger than is necessary to meet water quality standards.

(i) The mixing zones in a given water body shall not cumulatively exceed the limits described below:

1. In rivers, canals, and streams, and tributaries thereto and other similar water bodies: 10% of the total length;

2. In lakes, estuaries, bays, lagoons, bayous and sounds: 10% of the total area.

(j) Within mixing zones in Class I, Class II, and Class III waters, the turbidity shall not average greater than 41 Nephelometric Turbidity Units above natural background.

(k) Mixing zones in Class IV and V waters are subject only to the provisions of paragraph (d) above and of Rule 62-302.500, F.A.C., and shall not significantly impair the designated uses of the receiving body of water.

(2) There shall be no mixing zone for any component of any discharge unless a Department permit containing a description of its boundaries has been issued for that component of the discharge.

(3)(a) Waters within mixing zones shall not be degraded below the minimum standards prescribed for all waters at all times in Rule 62-302.500, F.A.C. In determining compliance with the provisions of subsection 62-302.500(1), F.A.C., the average concentration of wastes in the mixing zone shall be measured or computed using generally accepted scientific techniques; provided that, the maximum concentration of wastes in the mixing zone shall not exceed the amount lethal to 50% of the test organisms in 96 hours (96 hr. LC₅₀) for a species significant to the indigenous aquatic community, except as provided in paragraph (b), (c) or (d) below. The dissolved oxygen value within any mixing zone shall not be less than 1.5 milligrams per liter at any time or place, except for an open ocean discharge, which must be above 1.5 milligrams per liter within 20 feet of the outfall structure.

(b) Except for open ocean discharges described in paragraph (c) and ionic imbalanced demineralization concentrate discharges, described in paragraph (d) below, the maximum concentration of wastes in the mixing zone may exceed the 96 hr. LC₅₀ only when all of the following conditions are satisfied.

1. Dilution ratio of the effluent exceeds 100:1 under critical conditions. That is, flow in the receiving waters exceeds 100 units for every unit of effluent flow under critical conditions. Critical conditions are defined as those under which least dilution of the effluent is expected, e.g., maximum effluent flow and minimum receiving stream flow.

2. High rate diffusers or other similar means are used to induce rapid initial mixing of the effluent with the receiving waters such that exposure of organisms to lethal concentrations is minimized.

3. Toxicity must be less than acute [as defined in subsection 62-3.021(1), F.A.C.] no more than a distance of 50 times the discharge length scale in any spatial direction. The discharge length scale is defined as the square root of the cross-sectional area of any discharge outlet. In the case of a multiport diffuser, this requirement must be met for each port, using the appropriate discharge length scale for that port. This restriction will ensure a dilution factor of at least 10 within this distance under all possible circumstances, including situations of severe bottom interaction, surface interaction, or lateral merging.

4. The effluent when diluted to 30% of full strength, shall not cause more than 50% mortality in 96 hours (96 hr. LC₅₀) in a species significant to the indigenous aquatic community.

5. If the following pollutants are present in the effluent, their concentrations (in the effluent) shall not exceed the values listed:

Acrylonitrile 65 ug/l

Aldrin 7.5 ng/l

Dieldrin 7.5 ng/l

Benzene 4 mg/l

Benzidine 53 ng/l

Beryllium 6.4 ug/l

Cadmium 100 ug/l

Carbon Tetrachloride 694 ug/l

Chlordane 48 ng/l

Chlorinated ethanes:

1,2-dichloroethane 24.3 mg/l

1,1,2-trichloroethane 4.2 mg/l

1,1,2,2-tetrachloroethane 1 mg/l

Hexachloroethane 874 ug/l

Chloroalkyl Ethers:

bis(chloromethyl) ether 184 ng/l

bis(2-chloroethyl) ether 136 ug/l

Chloroform 1.57 mg/l

Chromium (hexavalent) 0.5 mg/l

DDT 2.4 ug/l

Dichlorobenzidine 2 ug/l

1,1-Dichloroethylene 185 ug/l

Dinitrotoluene 11 ug/l

Diphenylhydrazine 56 ug/l

Ethylbenzene 33 mg/l

Fluoranthene 540 ug/l

Halomethanes 1.6 mg/l

Heptachlor 29 ng/l

Hexachlorobenzene 74 ng/l

Hexachlorocyclohexane

αHexachlorocyclohexane 310 ng/l

βHexachlorocyclohexane 547 ng/l

γHexachlorocyclohexane 625 ng/l

Lead 0.5 mg/l

Mercury 1.5 ug/l

Nickel 1 mg/l

Nitrosamines 124 ug/l

Polynuclear aromatic hydrocarbons 3 ug/l

Polychlorinated biphenyls (PCBs) 8 ng/l

Selenium 100 ug/l

Tetrachloroethylene 885 ug/l

Thallium 480 ug/l

Toxaphene 73 ng/l

Trichloroethylene 8 mg/l

Vinyl Chloride 52 mg/l

(c) For open ocean discharges:

1. The effluent, when diluted to 30% full strength with water having a salinity representative of the average receiving-water's salinity, shall not cause more than 50% mortality in 96 hours (96 hr. LC₅₀) in a species significant to the indigenous aquatic community.

2. Rapid dilution shall be ensured by the use of multiport diffusers, or a single port outfall designed (by a professional engineer registered in Florida) to achieve a minimum of 20:1 dilution of the effluent prior to reaching the surface. This dilution shall be determined using the appropriate plume model described in the EPA document, "Initial Mixing Characteristics of Municipal Ocean Discharges: Volume 1. Procedures and Applications," using the "Single plume, stagnant ambient" procedures or current speeds as established by field measurements. Miami-Dade Central District, Miami-Dade North District, City of Hollywood, and Broward County may use 12.3 cm/sec as a default value for ambient current speed at the present location of their respective outfalls. Alternatively, dilution studies for facilities not using the "Single plume, stagnant ambient" procedures or the 12.3 cm/sec default ambient current speed (as appropriate) shall be conducted in accordance with a site-specific Department approved Plan of Study. The Plan of Study shall be approved upon a demonstration by the applicant that the plan will produce data to characterize the daily, seasonal, and annual fluctuations in current speed and direction. The discharge shall otherwise comply with federal law.

3. For open ocean dischargers that comply with the requirements of subparagraphs 62-4.244(3)(c)1. and 2., F.A.C., compliance with applicable water quality criteria specified in Rule 62-302.530, F.A.C. (criteria), must be achieved by the point the discharge

attains 20:1 dilution rather than at the point of discharge. Mixing zones shall not be necessary for any parameter that requires 20:1 dilution or less to attain criteria. However, effluent limitations will be set by permit, and dilutions will be granted up to 20:1 in these limitations, for parameters that exceed criteria at the end-of-pipe.

a. The demonstration of required dilution shall be determined by the ratio of the worst case effluent concentration (WCEC) minus the worst case background concentration to the criterion minus the worst case background concentration, i.e.:
(Worst case effluent concentration – Worst case background concentration)

(Criterion – Worst case background concentration)

b. The WCEC for parameters that exceed criteria in the effluent shall be the 95th percentile effluent concentration (of DMR or other data collected in accordance with the sampling requirements of the permit measured for the most recent 3-year monitoring period, at the time of permit renewal) for each such parameter and not based on the maximum amount of dilution available. The WCEC used to demonstrate the required dilution for a parameter shall also be used as a facility performance check for each such parameter. Any exceedance of the WCEC shall provide sufficient cause for the Department to re-evaluate the applicability of this section and revise the permit. Additionally, any measured value(s) of sufficient concentration to require greater than 20:1 dilution to attain criteria shall be considered as a violation of the permit.

4. Subparagraph 62-4.244(3)(c)3., F.A.C., does not apply to bacterial criteria or silver in marine waters.

(d) Discharges of demineralization concentrate, as defined in Section 403.0882(2)(a), F.S., for which ionic imbalance is demonstrated, may exceed the 96 hr. LC₅₀ in a mixing zone no greater than the area defined in sub-subparagraphs 62-4.244(3)(d)1.b. and 2.a., F.A.C. Ionic imbalance is defined as the failure of whole effluent toxicity tests caused predominantly by the presence of major ionic constituents naturally occurring in the source water (limited to calcium, potassium, sodium, magnesium, chloride, bromide, and other constituents designated by the Department). Ionic imbalance is shown using the protocols contained in “Technical Guidance Document for Conducting the Florida Department of Environmental Protection’s Protocols for Determining Major-Seawater-Ion Imbalance Toxicity (MSIIT) in Membrane-Technology Water-Treatment Concentrate” (FDEP, Bureau of Laboratories, May 4, 2004), which is adopted and incorporated by reference herein. Mixing zones for toxicity caused by ionic imbalance, as described in this paragraph, are allowed under the following conditions:

1. For all demineralization concentrate discharges defined in Section 403.0882(2)(a), F.S., except for small water utility businesses defined in Section 403.0882(2)(b), F.S.:

a. The effluent, when diluted to 20% full strength with laboratory pure water having a salinity representative of the receiving water’s salinity, shall not cause more than 50% mortality in 96 hours (96 hr. LC₅₀) in a species significant to the indigenous aquatic community; and

b. Under all ambient receiving water flow conditions, the effluent, mixed with receiving waters, must meet water quality standards within a distance not in excess of two times the natural water depth at the point of discharge. The natural water depth is defined as either the depth at Mean Lower Low Water (MLLW) Level in tidally affected waters or the depth at the seven-day, ten-year low flow (7Q10) conditions for non-tidal rivers, streams, canals, or ship channels. In no case shall the depth be artificially changed from its existing depth for the purpose of extending the area for complying with water quality standards and the acute toxicity requirements of paragraph 62-4.244(3)(d), F.A.C.

2. For small water utility businesses, as defined in Section 403.0882(2)(b), F.S.;

a. The discharge must achieve a minimum of 4-to-1 dilution within a distance not in excess of two times the natural water depth, as described in subparagraph 62-4.244(3)(d)1.b., F.A.C., at the point of discharge; and

b. The effluent, when diluted to 20% full strength with laboratory pure water having a salinity representative of the receiving water’s salinity, shall not cause more than 50% mortality in 96 hours (96 hr. LC₅₀) in a species significant to the indigenous aquatic community.

(4) Except for the minimum conditions of waters as specified in Rule 62-302.500, F.A.C., and the provisions of Rule 62-4.244, F.A.C., no other water quality criteria apply within a mixing zone.

(5) Mixing zones for dredge and fill permits shall not be subject to the provisions in paragraphs (1)(c) through (j), subsection (2), (3), or (4) of this section, provided that applicable water quality standards are met at the boundary and outside the mixing zone.

(a) The dimensions of dredge and fill mixing zones shall be proposed by the applicant and approved, modified or denied by the Department.

(b) Criteria for departmental evaluation of a proposed mixing zone shall include site-specific biological and hydrographic or

hydrological considerations.

(c) In no case shall the boundary of a Joint Coastal Permit mixing zone be more than 1000 meters from the point of discharge into the waterbody or the boundary of a dredge and fill mixing zone be more than 150 meters downstream in flowing streams or 150 meters in radius in other bodies of water, where these distances are measured from the cutterhead, return flow, discharge, or other points of generation of turbidity or other pollutants.

(d) When determining the appropriate size of a turbidity mixing zone for a Joint Coastal Permit, the Department shall also use the following criteria:

1. Measures will be implemented to minimize the magnitude and duration of turbidity to the maximum extent practicable;
2. Mixing zones shall be kept to the minimum size necessary to meet the turbidity standard; and
3. Mixing zones shall not encompass hardbottom communities, coral resources, or submerged aquatic vegetation beds outside of the authorized impact sites unless those areas are also evaluated as impact sites.

(6) Where a receiving body of water fails to meet a water quality standard for pollutants set forth in department rules, a steam electric generating plant discharge of pollutants that existed or was licensed on July 1, 1984, may be granted a mixing zone, provided that:

- (a) The standard would not be met in the water body in the absence of the discharge; and
- (b) The discharge is in compliance with all applicable technology-based effluent limitations; and
- (c) The discharge does not cause a measurable increase in the degree of noncompliance with the standard at the boundary of the mixing zone; and

(d) The discharge otherwise complies with the mixing zone provisions specified in this section.

(7) Additional relief from mixing zone restrictions necessary to prevent significant impairment of a designated use is through:

- (a) Reclassification of the water body pursuant to Rule 62-302.400, F.A.C.;
- (b) Variance granted pursuant to Section 403.201, F.S., and Rule 62-103.100, F.A.C.
- (c) Modification of the requirements of this section for specific criteria by the Secretary upon compliance with the notice and hearing requirements for mixing zones set forth in paragraph (1)(c) above and upon affirmative demonstration by an applicant that the applicant’s discharge from a source existing on the effective date of this rule complies with best technology economically achievable, best management practices, or other requirements set forth in Chapter 62-6, F.A.C., and the economic, environmental and social costs of compliance with the existing criteria outweigh the social, environmental, and economic benefits of compliance with more stringent discharge limitations necessary to comply with mixing zone requirements of subsection 62-4.244(1), F.A.C., and the provisions relating to dissolved oxygen in Rule 62-4.244, F.A.C.

1. No discharger may be issued more than one permit or permit modification or renewal which allows a modification pursuant to this subsection unless the applicant affirmatively demonstrates that it has undertaken a continuing program, approved by the Department, designed to consider water quality conditions and review or develop any reasonable means of achieving compliance with the water quality criteria from which relief has been granted pursuant to this subsection.

2. With respect to paragraphs 62-4.244(1)(c) and 62-4.244(7)(c), F.A.C., the applicant must affirmatively demonstrate the minimum area of the water body necessary to achieve compliance with either subsection. Within a minimum area determined by the Secretary to be necessary to achieve compliance, the discharger shall be exempt from the criterion for which a demonstration has been made.

(d) Whenever site specific alternative criteria are established pursuant to Rule 62-302.800 or paragraph 62-302.510(2)(g), F.A.C., a mixing zone may be issued for dissolved oxygen if all provisions of Rule 62-4.244, F.A.C., are met with the exception of subparagraph 62-4.244(1)(j)1., F.A.C.

Rulemaking Authority 403.051, 403.061, 403.062, 403.087, 403.0882, 403.804, 403.805 FS. Law Implemented 403.021, 403.051, 403.061, 403.087, 403.088, 403.0882, 403.101, 403.121, 403.141, 403.161, 403.182, 403.201, 403.502, 403.702, 403.708 FS. History—Formerly part of 17-3.05, Revised and Renumbered 3-1-79, Amended 10-2-80, 1-1-83, 2-1-83, 2-19-84, 4-26-87, 8-31-88, 10-17-90, Formerly 17-4.244, Amended 3-26-00, 12-13-05, 8-1-13.

62-4.246 Sampling, Testing Methods, and Method Detection Limits for Water Pollution Sources.

(1) The Department shall require monitoring and sampling for pollutants reasonably expected to be contained in the discharge and to violate the water quality criteria in Chapter 62-302, F.A.C.

(2) Field testing, sample collection and preservation, laboratory testing, including quality control procedures, and all record

keeping shall comply with Chapter 62-160, F.A.C.

(3) Subsections (4)-(11) of this rule apply only to permit applications, permits, monitoring reports, and other sources of data relating to discharges to surface waters.

(4) Using generally accepted scientific procedures, the Department shall establish and publish a method detection limit (MDL) and practical quantification limit (PQL) for each approved analytical method for a parameter (including any pollutant). On request, the Department shall make available a list of all current established MDLs and PQLs. The permittee may request and the Department shall consider approval for alternative methods or for alternative MDLs and PQLs for any approved analytical method, in accordance with the criteria of Rules 62-160.520 (New Methods, Validation Requirements) and 62-160.530 (Approval of Alternate Test Procedures), F.A.C. Permit applications, permits, and monitoring reports shall specify the applicable MDL and PQL established by the Department for each pertinent parameter.

(5) When establishing effluent limits in accordance with Rule 62-650, F.A.C., for pollutants for which MDLs are higher than the established water quality criteria, the Department shall base the limits on concentrations in the receiving waters computed in accordance with generally accepted scientific procedures and with subsections (8), (10) and (11) of this section. Permit applications and monitoring reports shall identify results below the MDL. Except as specified in subsections (8) and (10) below, such results shall demonstrate compliance for that pollutant.

(6) All results submitted to the Department for permit applications and monitoring shall be reported as follows.

(a) The approved analytical method and corresponding Department-established MDL and PQL levels shall be reported for each pollutant. The MDLs and PQLs incorporated in the permit shall constitute the minimum reporting levels for each parameter for the life of the permit. The Department shall not accept results for which the laboratory's MDLs or PQLs are greater than those incorporated in the permit. All results with laboratory MDLs and PQLs lower than those established in the permit shall be reported to the Department. Unless otherwise specified, all subsequent references to MDL and PQL pertain to the MDLs and PQLs incorporated in the permit.

(b) Results greater than or equal to the PQL shall be reported as the measured quantity.

(c) Results less than the PQL and greater than or equal to the MDL shall be reported as less than the PQL and deemed to be equal to the MDL.

(d) Results less than the MDL shall be reported as less than the MDL.

(e) The following table is intended as a guide in the use of paragraphs (6)(b)-(d) for determining compliance with permit limits.

Common abbreviations used in this table are as follows:

PQL means practical quantification limit

MDL means method detection limit

> means greater than

means less than

= means equal to.

Table 1 COMPLIANCE DETERMINATION			
PERMIT LIMIT	DATA	COMPLIANCE	NONCOMPLIANCE
(6)(b)	>		
Greater than or	Permit Limit		*
Equal to PQL	or =		
	Permit Limit	*	
(6)(c)	> or =		
Less Than PQL But	PQL	*	
Greater Than or			
Equal to MDL	PQL	*	
(6)(d)	> or =		
Less Than MDL	MDL		*

MDL

*

(7) When all the results or projected concentrations for the effluent and the receiving water are below the MDL for a particular parameter, the Department shall deem the permittee to be in compliance with the applicable criterion or permit limit, subject to the provisions of subsections (8) and (10) below, when applicable.

(8) The presence of toxicity (as established through biomonitoring), data from analysis of plant or animal tissue, contamination of sediment in the vicinity of the installation, intermittent violations of effluent limits or water quality standards, or other similar kinds of evidence reasonably related to the installation may indicate that a pollutant in the effluent may cause or contribute to violations of water quality criteria. If there is such evidence of possible water quality violations, then (unless the permittee has complied with subsection (9) below) in reviewing reports and applications to establish permit conditions and determine compliance with permits and water quality criteria, the Department shall treat any result less than the MDL of the method required in the permit or the method as required under subsection (10) below or any lower MDL reported by the permittee's laboratory as being one half the MDL (if the criterion equals or exceeds the MDL) or one half the criterion (if the criterion is less than the MDL), for any pollutant. Without the permission of the applicant, the Department shall not use any values determined under this subsection or subsection (9) below for results obtained under a MDL superseded later by a lower MDL.

(9) As an alternative to the procedure described in subsection (8) above for determining the value of any result, the permittee may select and follow any procedure if set forth in any of the sources listed in this subsection below or shown by the permittee to provide equivalent reasonable assurance of accuracy and reliability, and if applicable to the particular discharge. Such equivalency of reasonable assurance and the applicability of each such procedure shall be determined in accordance with generally accepted methods of statistical analysis for that procedure. The following sources are incorporated here by reference.

(a) Gilbert, O.R., 1987. Statistical Methods For Environmental Pollution Monitoring, Van Nostrand Reinhold Company.

(b) Hollander, M., and D.A. Wolfe, 1973. Nonparametric Statistical Methods. Wiley, New York.

(c) USEPA. 1989. Draft Technical Guidance Manual for Performing Wasteload Allocations. Book III: Estuaries. Part 1: Estuaries and WLA Models. Center for Exposure Assessment Modeling. Athens, Ga.

(d) USEPA. 1991. Technical Support Document for Water Quality-Based Toxics Control. Office of Water Regulations and Standards. Washington, DC. EPA/505/2-90-001.

(e) USEPA. 1983. Technical Guidance Manual for Performing Wasteload Allocations. Book II: Streams and Rivers. Chapter 1: Biochemical Oxygen Demand/Dissolved Oxygen. Office of Water Regulations and Standards. Washington, DC. EPA/440/4-84/020.

(f) USEPA. 1983. Technical Guidance Manual for Performing Wasteload Allocations. Book II: Streams and Rivers. Chapter 2: Nutrient/Eutrophication Impact. Office of Water Regulations and Standards. Washington, DC. EPA/440/4-84/021.

(g) USEPA. 1984. Technical Guidance Manual for Performing Wasteload Allocations. Book II: Streams and Rivers. Chapter 3: Toxic Substances. Office of Water Regulations and Standards. Washington, DC. EPA/440/4-84/022.

(h) USEPA. 1983. Technical Guidance Manual for Performing Wasteload Allocations. Book IV: Lakes and Impoundments. Chapter 2: Nutrient/Eutrophication Impacts. Office of Water Regulations and Standards. Washington, DC. EPA/440/4-84/019.

(i) USEPA. 1986. Technical Guidance Manual for Performing Wasteload Allocations. Book IV: Lakes and Impoundments. Chapter 3: Toxic Substances. Office of Water Regulations and Standards. Washington, DC. EPA/440/4-87/002.

(j) USEPA. 1986. Technical Guidance Manual for Performing Wasteload Allocations. Book VI: Stream Design Flow for Steady-State Modeling. Office of Water Regulations and Standards. Washington, DC. EPA/440/4-87/004.

(k) USEPA. 1985. Water Quality Assessment: A Screening Procedure for Toxic and Conventional Pollutants. Office of Research and Development. Athens, Ga. EPA/600/6-85/002 a and b.

(10) If there is evidence of possible water quality violations as set forth in subsection (8) above, and if the water quality criterion for the pollutant is lower than the MDL, the Department shall require the permittee to use the approved analytical method with the lowest MDL from those published by the Department or established by the permittee's laboratory for each such pollutant, for all reports and applications, to establish permit conditions and determine compliance. The Department shall not require the permittee to use an MDL lower than necessary to demonstrate compliance.

(11) If there is evidence that a pollutant in the effluent is reasonably expected to cause or contribute to water quality violations but there is no evidence of the presence of that pollutant in the ambient background receiving water, the Department shall treat the ambient background value of that pollutant in the receiving water as zero in establishing the pertinent effluent limit.

Rulemaking Authority 403.051, 403.061, 403.087, 403.504, 403.704, 403.804, 403.805 FS. Law Implemented 403.021, 403.051, 403.061, 403.087, 403.088, 403.091, 403.121, 403.141, 403.161, 403.182, 403.502, 403.702, 403.708 FS. History--Formerly 17-3.03, Amended and Renumbered 3-1-79, Amended 4-26-87, 8-31-88, 6-4-92, 6-13-93, Formerly 17-4.246.

62-4.249 Preservation of Rights.

Rulemaking Authority 403.061, 403.062, 403.087, 403.504, 403.704, 403.804, 403.805 FS. Law Implemented 403.021, 403.061, 403.087, 403.088, 403.091, 403.101, 403.121, 403.141, 403.161, 403.182, 403.502, 403.702, 402.708 FS. History--New 3-1-79, Amended 8-31-88, Formerly 17-4.249, Repealed 2-16-12.

62-4.250 Water Pollution Temporary Operation Permits; Conditions.

Rulemaking Authority 403.021, 403.031, 403.061, 403.088 FS. Law Implemented 403.021, 403.031, 403.061, 403.087, 403.088(5)(c) FS. History--New 5-17-72, Amended 3-26-74, Formerly 17-4.25, Amended 8-31-88, 9-13-89, Formerly 17-4.250, Repealed 2-16-12.

62-4.510 Scope of Part III.

This Part defines general permits and establishes the procedures for persons who may wish to use a general permit, except that the procedures for any person who may wish to use a general permit for a source of air pollutant emissions, and all conditions of such a general permit, are established at Chapters 62-210 and 62-213, F.A.C. The provisions of this Part shall not apply to activities regulated under Part IV of Chapter 373, F.S. However, this Part shall continue to apply to those activities grandfathered under Sections 373.414(11), (12)(a), (13), (14), (15), (16) and 373.4145(6), F.S.

Rulemaking Authority 373.026, 373.043, 373.044, 373.109, 373.113, 373.4145, 373.418, 403.021, 403.031, 403.061, 403.087, 403.814(1) FS. Law Implemented 373.026, 373.044, 373.109, 373.409, 373.413, 373.4135, 373.414(9), (11), (12)(a), (13), (14), (15), (16), 373.4145, 373.418, 403.021, 403.031, 403.061, 403.087, 403.088, 403.814, 403.702-.73, 403.851-.864 FS. History--New 7-8-82, Formerly 17-4.51, Amended 8-31-88, Formerly 17-4.510, Amended 4-18-95, 7-4-95, 10-16-95, 4-16-01, 10-1-07.

62-4.520 Definition.

A general permit is a permit issued by rule of the Department pursuant to Section 403.814, F.S., which authorizes persons to undertake certain activities which cause minimal adverse environmental impact when performed in accordance with specific requirements and practices set forth in the general permit. A general permit also constitutes water quality certification pursuant to Section 401, Public Law 92-500, 33 USC Section 1341, for the activity described in the general permit when the activity is performed in accordance with all applicable rules of the Department.

Rulemaking Authority 403.814 FS. Law Implemented 403.061, 403.087, 403.088, 403.814, 403.702-.73, 403.851-.864, 403.91-.938 FS. History--New 7-8-82, Formerly 17-4.52, Amended 8-31-88, 7-11-90, Formerly 17-4.520.

62-4.530 Procedures.

(1) Persons wishing to use one or more of the general permits set forth in the Department's rules shall, at least 30 days before beginning any work, notify the Department in writing or on forms adopted by the department. They shall describe the proposed project, and include supporting documents depicting the proposed project, its location, and other pertinent information as required by rule to demonstrate that they qualify for the requested general permit. Persons wishing to use a general permit shall notify the appropriate office of the Department in writing. Persons wishing to use a general permit are hereby placed on notice that projects undertaken without proof of notice to the Department shall be considered as being undertaken without a permit and shall be subject to enforcement pursuant to Section 403.161, F.S.

(2) A proposed project which may be reasonably expected to violate air quality standards, water quality standards, or drinking water standards or which will not meet the public interest requirements set forth in Chapter 403, F.S., shall not be entitled to use of a general permit.

(3) Pursuant to Section 258.397, F.S., no project which is located in the Biscayne Bay Aquatic Preserve is eligible for a general permit.

(4) Suspension or revocation of the use of a general permit shall be in accordance with Chapter 120, F.S. Good cause for the suspension or revocation shall include:

(a) Submission of false or inaccurate information in the notification for use of a general permit or in the required reports;

(b) Violation of law, Department orders, rules or permit conditions;

(c) Refusal of lawful inspection under Section 403.091, F.S.; or

(d) Any other act on the part of the permittee in the use of the general permit which results or may result in harm or injury to human health or welfare, or which causes harm or injury to animal, plant or aquatic life, or to property.

(5) Unless otherwise required as part of a specific category of general permit, persons qualifying for the use of a general permit are not required to, but may, publish in a newspaper of general circulation in the area affected by the proposed project a notice of intent to use a general permit. The notice, if published, shall follow substantially the format in Rule 62-103.150, F.A.C., and shall be published within 14 days of the date when the department receives notification pursuant to subsection 62-4.530(1), F.A.C. No person who has published notice shall begin work until after the 21 days for requesting a hearing has passed or a hearing is held and a decision is rendered.

(6) Any person complying with the requirements of a general permit may use the permit 30 days after giving notice to the Department without any agency action. When no agency action is taken, unless the Department or the applicant publishes notice of the application, the provisions of Chapter 120, F.S., granting to affected parties the right to an administrative hearing do not apply.

Rulemaking Authority 403.814(1) FS. Law Implemented 258.397, 403.061, 403.087, 403.088, 403.702-.73, 403.814, 403.851-.864 FS. History--New 7-8-82, Amended 6-16-84, Formerly 17-4.53, Amended 8-31-88, 3-19-90, Formerly 17-4.530.

62-4.540 General Conditions for All General Permits.

(1) The terms, conditions, requirements, limitations, and restrictions set forth in this Part are "general permit conditions" and are binding upon the permittee. The conditions are enforceable under Chapter 403, F.S.

(2) The general permit is valid only for the specific activity indicated. Any deviation from the specified activity and the conditions for undertaking that activity shall constitute a violation of the permit. The permittee is placed on notice that violation of the permit may result in suspension or revocation of the permittee's use of the general permit and may cause the Department to begin legal proceedings.

(3) The general permit does not convey any vested rights or any exclusive privileges. It does not authorize any injury to public or private property nor any invasion of personal rights. It does not authorize any infringement of federal, state or local laws or regulations. It does not eliminate the necessity for obtaining any other federal, state or local permits that may be required, or allow the permittee to violate any more stringent standards established by federal or local law.

(4) The general permit does not relieve the permittee from liability and penalties when the construction or operation of the permitted activity causes harm or injury to human health or welfare; causes harm or injury to animal, plant or aquatic life; or causes harm or injury to property. It does not allow the permittee to cause pollution in contravention of Florida Statutes and Department rules.

(5) The general permit conveys no title to land or water, nor does it constitute State recognition or acknowledgment of title. It does not constitute authority for reclamation of submerged lands. Only the Board of Trustees of the Internal Improvement Trust Fund may express State opinion as to title.

(6) No general permit shall authorize the use of state owned land without the prior consent of the Board of Trustees of the Internal Improvement Trust Fund pursuant to Section 253.77, F.S.

(7) The general permit may be modified, suspended or revoked in accordance with Chapter 120, F.S., if the Secretary determines that there has been a violation of any of the terms or conditions of the permit, there has been a violation of state water quality standards or state air quality standards, or the permittee has submitted false, incomplete or inaccurate data or information.

(8) The general permit shall not be transferred to a third party except pursuant to Rule 62-4.120, F.A.C.

(9) The general permit authorizes construction and, where applicable, operation of the permitted facility.

(10) The permittee agrees in using the general permit to make every reasonable effort to conduct the specific activity or construction authorized by the general permit in a manner that will minimize any adverse effects on the adjacent property or on public use of the adjacent property, where applicable, and on the environment, including fish, wildlife, natural resources of the area, water quality or air quality.

(11) The permittee agrees in using the general permit to allow a duly authorized representative of the Department access to the permitted facility or activity at reasonable times to inspect and test upon presentation of credentials or other documents as may be required by law to determine compliance with the permit and the department rules.

(12) The permittee agrees to maintain any permitted facility, or activity in good condition and in accordance with the plans submitted to the department under subsection 62-4.530(1), F.A.C.

(13) A permittee's use of a general permit is limited to five years. However, the permittee may request continued use of the general permit by notifying the department pursuant to subsection 62-4.530(1), F.A.C. However, the permittee shall give notice of continued use of a general permit thirty days before it expires.

Rulemaking Authority 403.814(1) FS. Law Implemented 253.123, 253.124, 403.061, 403.087, 403.088, 403.702-.73, 403.814, 403.851-.864 FS. History--New 7-8-82, Formerly 17-4.54, Amended 8-31-88, Formerly 17-4.540.

Chapter 62-204, F.A.C.

Air Pollution Control - General Provisions

CHAPTER 62-204
AIR POLLUTION CONTROL – GENERAL PROVISIONS

62-204.100	Purpose and Scope (Repealed)
62-204.200	Definitions (Repealed)
62-204.220	Ambient Air Quality Protection (Repealed)
62-204.240	Ambient Air Quality Standards (Repealed)
62-204.260	Prevention of Significant Deterioration Maximum Allowable Increases (PSD Increments) (Repealed)
62-204.320	Procedures for Designation and Redesignation of Areas (Repealed)
62-204.340	Designation of Attainment, Nonattainment, and Maintenance Areas
62-204.360	Designation of Prevention of Significant Deterioration Areas (Repealed)
62-204.400	Public Notice and Hearing Requirements for State Implementation Plan Revisions (Repealed)
62-204.500	Conformity
62-204.800	Federal Regulations Adopted by Reference

62-204.100 Purpose and Scope.

Rulemaking Authority 403.061, 403.8055 FS. Law Implemented 403.021, 403.031, 403.061, 403.8055 FS. History—New 11-30-94, Amended 3-13-96, Repealed 2-16-12.

62-204.200 Definitions.

Rulemaking Authority 403.061, 403.8055 FS. Law Implemented 403.031, 403.061, 403.8055 FS. History—New 11-30-94, Amended 3-13-96, 2-12-06, 10-6-08, Repealed 2-16-12.

62-204.220 Ambient Air Quality Protection.

Rulemaking Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061, 403.087 FS. History—New 3-13-96, Repealed 2-16-12.

62-204.240 Ambient Air Quality Standards.

Rulemaking Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061, 403.087 FS. History—New 3-13-96, Repealed 2-16-12.

62-204.260 Prevention of Significant Deterioration Maximum Allowable Increases (PSD Increments).

Rulemaking Authority 403.061 FS. Law Implemented 403.031, 403.061, 403.087 FS. History—New 3-13-96, Amended 2-12-06, Repealed 2-16-12.

62-204.320 Procedures for Designation and Redesignation of Areas.

Rulemaking Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061, 403.087 FS. History—New 3-13-96, Repealed 2-16-12.

62-204.340 Designation of Attainment, Nonattainment, and Maintenance Areas.

(1) Designation of Areas Meeting Ambient Air Quality Standards (Attainment Areas).

(a) All of the state except those areas designated as nonattainment under paragraph 62-204.340(2)(a), F.A.C., is designated as attainment for the air pollutant ozone.

(b) All of the state except those areas designated as nonattainment under paragraph 62-204.340(2)(b), F.A.C., or as unclassifiable under paragraph 62-204.340(3)(a), F.A.C., is designated as attainment for the air pollutant PM₁₀.

(c) All of the state except those areas designated as nonattainment under paragraph 62-204.340(2)(c), F.A.C., or as unclassifiable under paragraph 62-204.340(3)(b), F.A.C., is designated as attainment for the air pollutant sulfur dioxide.

(d) All of the state except those areas designated as nonattainment under paragraph 62-204.340(2)(d), F.A.C., is designated as attainment for the air pollutant carbon monoxide.

(e) All of the state except those areas designated as nonattainment under paragraph 62-204.340(2)(e), F.A.C., is designated as attainment for the air pollutant nitrogen dioxide.

(2) Designation of Areas Not Meeting Ambient Air Quality Standards (Nonattainment Areas).

(a) Ozone Nonattainment Areas. (Reserved).

(b) PM₁₀ Nonattainment Areas. (Reserved).

(c) Sulfur Dioxide Nonattainment Areas. (Reserved).

(d) Carbon Monoxide Nonattainment Areas. (Reserved).

(e) Nitrogen Dioxide Nonattainment Areas. (Reserved).

(f) Lead nonattainment Areas. (Reserved).

(g) As soon as practicable after notice of redesignation is published by the U. S. Environmental Protection Agency in the Federal Register, the Department shall publish notice of the effective date of redesignation in the Florida Administrative Weekly and a newspaper of general circulation in each county affected by the redesignation.

(3) Designation of Areas Which Cannot Be Classified as Attainment or Nonattainment (Unclassifiable Areas).

(a) All of the state except those areas designated as nonattainment under paragraph 62-204.340(2)(b), F.A.C., is designated as unclassifiable for the air pollutant PM₁₀.

(b) The following areas are designated as unclassifiable for the pollutant sulfur dioxide.

1. Duval County.

2. Escambia County.

3. Hillsborough County.

4. The Southwest corner of Pasco County.

(c) All of the state except those areas designated as nonattainment under Rule 62-204.340, F.A.C., is designated as unclassifiable for the air pollutant lead.

(4) Designation of Air Quality Maintenance Areas.

(a) Each of the following areas is designated as an air quality maintenance area for the air pollutant ozone:

1. Orange County.

2. Duval County.

3. The area consisting of Broward, Dade, and Palm Beach Counties.

4. The area consisting of Hillsborough and Pinellas Counties.

(b) Each of the following areas is designated as an air quality maintenance area for the air pollutant, particulate matter:

1. That portion of Hillsborough County which falls within the area of the circle having a centerpoint at the intersection of US 41 South and State Road 60 and a radius of 12 kilometers.

2. The downtown Jacksonville area in Duval County located within the following boundary lines: south and then west along the St. Johns River from its confluence with Long Branch Creek, to Main Street; north along Main Street to Eighth Street; east along Eighth Street to Evergreen Avenue; north along Evergreen Avenue to Long Branch Creek; and east along Long Branch Creek to the St. Johns River.

(c) Effective January 1, 1996, the area encompassed within a radius of five kilometers centered at UTM coordinates: 364.0 kilometers East, 3093.5 kilometers North, zone 17, in Hillsborough County, is designated as an air quality maintenance area for the air pollutant lead.

(d) As soon as practicable after notice of redesignation is published by the U. S. Environmental Protection Agency in the Federal Register, the Department shall publish notice of the effective date of redesignation in the Florida Administrative Register and a newspaper of general circulation in each county affected by the redesignation.

Rulemaking Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061, 403.087 FS. History—New 3-13-96.

62-204.360 Designation of Prevention of Significant Deterioration Areas.

Rulemaking Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061, 403.087 FS. History—New 3-13-96, Repealed 2-16-12.

62-204.400 Public Notice and Hearing Requirements for State Implementation Plan Revisions.

Rulemaking Authority 403.061, 403.8055 FS. Law Implemented 403.031, 403.061, 403.8055 FS. History—New 11-30-94, Amended 10-6-08, Repealed 2-16-12.

62-204.500 Conformity.

(1) General Conformity. The provisions of this rule apply to state review of all federal general conformity determinations submitted to the state pursuant to 40 C.F.R. Part 51, Subpart W, adopted and incorporated by reference at Rule 62-204.800, F.A.C. Pursuant to 40 C.F.R. Part 51, Subpart W, federal agencies are required to make conformity determinations to ensure that certain federal actions are consistent with the State Implementation Plan.

(a) Definitions. In addition to the definitions in Rule 62-204.200, F.A.C., the definitions used in reviewing federal general conformity determinations shall be the definitions in 40 C.F.R. 51.852.

(b) Criteria. The criteria for reviewing federal general conformity determinations shall be the criteria in 40 C.F.R. 51.858.

(c) Procedures. The procedures for reviewing federal general conformity determinations shall be the procedures in 40 C.F.R. 51.859.

(d) Mitigation of Air Quality Impacts.

1. A federal general conformity determination submitted to the Department for review must contain, at a minimum, the following before the Department can make a positive finding of conformity in its review.

a. Any measures that are intended to mitigate air quality impacts must be identified, and the process for implementation and enforcement of such measures must be described including an implementation schedule containing explicit timelines for implementation.

b. Written commitments to take any mitigation measures from all persons or agencies committing to such measures.

2. A positive finding of conformity by the Department in any review of a federal general conformity determination is expressly based, in part, on reliance that all written commitments for mitigation measures shall be fulfilled by the timelines set out in such written commitments. Failure to fulfill such mitigation measures by the explicit timelines expressed in the written commitments shall nullify a positive Department review finding of conformity as of midnight of the date of the unfulfilled expressed timeline.

(2) Transportation Conformity. Pursuant to 40 C.F.R. 93.105, adopted and incorporated by reference at Rule 62-204.800, F.A.C., the Department has certain consultation and conflict resolution responsibilities in the transportation conformity process. The Department will carry out these responsibilities for transportation conformity pursuant to the interagency memorandum of agreement as revised in 1998 and hereby adopted and incorporated by reference.

Rulemaking Authority 403.061 FS. Law Implemented 403.031, 403.061 FS. History—New 11-30-94, Amended 3-13-96, 3-23-97, 9-1-98.

62-204.800 Federal Regulations Adopted by Reference.

All federal regulations cited throughout the air pollution rules of the Department are adopted and incorporated by reference in this rule. The purpose and effect of each such federal regulation is determined by the context in which it is cited. Procedural and substantive requirements in the incorporated federal regulations are binding as a matter of state law only where the context so provides.

(1) Title 40, Code of Federal Regulations, Part 50, National Primary and Secondary Ambient Air Quality Standards.

(a) The provisions of 40 CFR Part 50, §§ 50.1 through 50.12, revised as of July 1, 2006; amended November 12, 2008, at 73 FR 66963, amended February 9, 2010, at 75 FR 6473; amended May 21, 2012, at 77 FR 30087 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-02487>); amended January 15, 2013 at 78 FR 3085 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-03487>); § 50.13, promulgated October 17, 2006, at 71 FR 61143; § 50.14, promulgated March 22, 2007, at 72 FR 13559; amended May 22, 2007, at 72 FR 28612; amended October 6, 2008, at 73 FR 58042; amended November 12, 2008, at 73 FR 66963; amended May 19, 2009, at 74 FR 23307; amended February 9, 2010, at 75 FR 6473; amended June 22, 2010 at 75 FR 35520 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-00744>); amended January 15, 2013 at 78 FR 3085 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-03487>); § 50.15 promulgated, March 27, 2008, at 73 FR 16435; § 50.16, promulgated November 12, 2008, at 73 FR 66963; § 50.17, promulgated June, 22, 2010 at 75 FR 35520 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-00744>); and § 50.18, promulgated January 15, 2013 at 78 FR 3085 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-03487>), are adopted and incorporated by reference.

(b) The following appendices of 40 C.F.R. Part 50, revised as of July 1, 2006, or later as specifically indicated, are adopted and incorporated by reference:

1. 40 C.F.R. Part 50, Appendix A-1, Reference Measurement Principle and Calibration Procedure for the Measurement of Sulfur Dioxide in the Atmosphere (Ultraviolet Fluorescence Method), promulgated June 22, 2010, at 75 FR 35520 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-00744>).

2. 40 C.F.R. Part 50, Appendix A-2, Reference Method for the Determination of Sulfur Dioxide in the Atmosphere (Pararosaniline Method); amended June 22, 2010, at 75 FR 35520 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>).

3. 40 C.F.R. Part 50, Appendix B, Reference Method for Determination of Suspended Particulate Matter in the Atmosphere (High-Volume Method).

4. 40 C.F.R. Part 50, Appendix C, Measurement Principle and Calibration Procedure for the Measurement of Carbon Monoxide in the Atmosphere (Non-Dispersive Infrared Photometry); amended August 31, 2011, at 76 FR 54293 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-02487>).

5. 40 C.F.R. Part 50, Appendix D, Measurement Principle and Calibration Procedure for the Measurement of Ozone in the Atmosphere.

6. 40 C.F.R. Part 50, Appendix E, (Reserved).

7. 40 C.F.R. Part 50, Appendix F, Measurement Principle and Calibration Procedure for the Measurement of Nitrogen Dioxide in the Atmosphere (Gas Phase Chemiluminescence).

8. 40 C.F.R. Part 50, Appendix G, Reference Method for the Determination of Lead in Suspended Particulate Matter Collected from Ambient Air; amended November 12, 2008, at 73 FR 66963; amended July 3, 2013, at 78 FR 40000 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04929>).

9. 40 C.F.R. Part 50, Appendix H, Interpretation of the 1-Hour Primary and Secondary National Ambient Air Quality Standards for Ozone; amended March 15, 2002, at 67 FR 11579.

10. 40 C.F.R. Part 50, Appendix I, Interpretation of the 8-Hour Primary and Secondary National Ambient Air Quality Standards for Ozone.

11. 40 C.F.R. Part 50, Appendix J, Reference Method for the Determination of Particulate Matter as PM₁₀ in the Atmosphere.

12. 40 C.F.R. Part 50, Appendix K, Interpretation of the National Ambient Air Quality Standards for PM₁₀; amended October 17, 2006, at 71 FR 61143.

13. 40 C.F.R. Part 50, Appendix L, Reference Method for the Determination of Fine Particulate Matter as PM_{2.5} in the Atmosphere; promulgated October 17, 2006, at 71 FR 61143.

14. 40 C.F.R. Part 50, Appendix N, Interpretation of the National Ambient Air Quality Standards for PM_{2.5}; promulgated October 17, 2006, at 71 FR 61143; amended January 9, 2008, at 73 FR 1497; amended January 15, 2013, at 78 FR 3085 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-03487>).

15. 40 C.F.R. Part 50, Appendix O, Reference Method for the Determination of Coarse Particulate Matter as PM_{10-2.5} in the Atmosphere; promulgated October 17, 2006, at 71 FR 61143.

16. 40 C.F.R. Part 50, Appendix P, Interpretation of the Primary and Secondary National Ambient Air Quality Standards for Ozone, promulgated March 27, 2008, at 73 FR 16435.

17. 40 C.F.R. Part 50, Appendix Q, Reference Method for the Determination of Lead in Particulate Matter as PM₁₀ Collected from Ambient Air, promulgated November 12, 2008, at 73 FR 66963.

18. 40 C.F.R. Part 50, Appendix R, Interpretation of the National Ambient Air Quality Standards for Lead, promulgated November 12, 2008, at 73 FR 66963.

19. 40 C.F.R. Part 50, Appendix S, Interpretation of the Primary National Ambient Air Quality Standards for Oxides of Nitrogen (Nitrogen Dioxide), promulgated February 9, 2010, at 75 FR 6473.

20. 40 C.F.R. Part 50, Appendix T, Interpretation of the Primary National Ambient Air Quality Standards for Oxides of Sulfur (Sulfur Dioxide), promulgated June 22, 2010, at 75 FR 35520 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-00744>).

(2) Title 40, Code of Federal Regulations, Part 51, Requirements for Preparation, Adoption, and Submittal of Implementation Plans.

(a) The following subparts of 40 C.F.R. Part 51, revised as of July 1, 2006, or later as specifically indicated, are adopted and incorporated by reference:

1. 40 C.F.R. Part 51, Subpart F, Procedural Requirements; amended January 18, 2007, at 72 FR 2193, amended July 16, 2007, at 72 FR 38787; amended March 24, 2008, at 73 FR 15603; amended January 21, 2009, at 74 FR 3437; amended June 23, 2009, at 74 FR 29595; amended June 22, 2012, at 77 FR 37610 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-02487>); amended February 12, 2013, at 78 FR 9823 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-03490>); amended August 28, 2013, at 78 FR 53029 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04920>); amended October 22, 2013, at 78 FR 62451 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04939>); amended March 27, 2014, at 79 FR 17037

(<https://www.flrules.org/Gateway/reference.asp?No=Ref-04931>).

2. 40 C.F.R. Part 51, Subpart I, Review of New Sources and Modifications; amended May 16, 2008, at 73 FR 28321 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-03485>); amended October 20, 2010, at 75 FR 64864 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-00745>); amended June 3, 2010, at 75 FR 31513 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-03488>); amended January 15, 2013, at 78 FR 3085 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-03487>).

3. 40 C.F.R. Part 51, Subpart P, Protection of Visibility, amended July 6, 2005, at 70 FR 39103; amended October 13, 2006, at 71 FR 60611.

4. 40 C.F.R. 51, Subpart T, Conformity to State or Federal Implementation Plans of Transportation Plans, Programs, and Projects Developed, Funded, or Approved Under Title 23 U.S.C. or the Federal Transit Laws.

5. 40 C.F.R. Part 51, Subpart W, Determining Conformity of General Federal Actions to State or Federal Implementation Plans.

(b) The following appendices of 40 C.F.R. Part 51, revised as of July 1, 2006, or later as specifically indicated, are adopted and incorporated by reference:

1. 40 C.F.R. Part 51, Appendix M, Recommended Test Methods for State Implementation Plans; amended September 21, 2006, at 71 FR 55119; amended May 29, 2008, at 73 FR 30775; amended December 21, 2010, at 75 FR 80118 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-00746>); amended September 13, 2010, at 75 FR 55636 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>); amended February 27, 2014, 79 FR 11227 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04926>).

2. 40 C.F.R. Part 51, Appendix P, Minimum Emission Monitoring Requirements.

3. 40 C.F.R. Part 51, Appendix W, Guideline on Air Quality Models; amended April 15, 2003, at 68 FR 18439; amended November 9, 2005, at 70 FR 68217.

4. 40 C.F.R. Part 51, Appendix Y, Guidelines for BART Determination Under the Regional Haze Rule, promulgated July 6, 2005, at 70 FR 39103.

(3) Title 40, Code of Federal Regulations, Part 52, Approval and Promulgation of Implementation Plans. The following subparts of 40 C.F.R. Part 52, revised as of July 1, 2003, or later as specifically indicated, are adopted and incorporated by reference:

(a) 40 C.F.R. Part 52, Subpart A, General Provisions; revised as of July 1, 2011 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-03499>), or later as specifically indicated, except for the provisions of 40 C.F.R. §52.21(b)(49)(v), are adopted and incorporated by reference; amended July 12, 2012, at 77 FR 41051 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-03489>); amended October 25, 2012, at 77 FR 65107 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-03486>); amended January 15, 2013, at 78 FR 3085 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-03487>); amended May 19, 2014, at 79 FR 28607 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04933>).

(b) 40 C.F.R. Part 52, Subpart K, Florida, amended July 22, 2003, at 68 FR 43312; amended August 11, 2003, at 68 FR 47468; amended February 13, 2004, at 69 FR 7127; amended March 29, 2004, at 69 FR 16167; amended June 17, 2004, at 69 FR 33860; amended April 28, 2006, at 71 FR 25327; amended November 28, 2006, at 71 FR 68743; amended October 12, 2007, at 72 FR 58016; amended September 16, 2008, at 73 FR 53378; amended June 1, 2009, at 74 FR 26103; amended May 27, 2010, at 75 FR 29671 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>); amended April 12, 2011, at 76 FR 20239 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>); amended June 15, 2012, at 77 FR 35862 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-02487>); amended July 30, 2012, at 77 FR 44485 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-02487>); amended September 19, 2012, at 77 FR 58027 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-02487>); amended October 11, 2012, at 77 FR 61724 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-02487>); amended November 8, 2012, at 77 FR 66927 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-02487>); amended November 27, 2012, at 77 FR 70687 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-02487>); amended November 29, 2012, at 77 FR 71111 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-02487>); amended April 3, 2013, at 78 FR 19998 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-02487>); amended June 20, 2013, at 78 FR 37132 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-04913>); amended August 29, 2013, at 78 FR 53250 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04930>); amended November 1, 2013, at 78 FR 65559 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04921>); amended November 18, 2013, at 78 FR 68997 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04935>).

(<https://www.flrules.org/Gateway/reference.asp?No=Ref-04936>); amended December 2, 2013, at 78 FR 72033 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04922>); amended January 6, 2014, at 79 FR 573 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04928>); amended May 19, 2014, at 79 FR 28607 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04933>); amended May 27, 2014, at 79 FR 30045 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04934>); amended August 25, 2014, at 79 FR 50554 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04919>); amended October 16, 2014, at 79 FR 62006 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04938>).

(4) Title 40, Code of Federal Regulations, Part 53, Ambient Air Monitoring Reference and Equivalent Methods.

The following subparts of 40 C.F.R. Part 53, revised as of July 1, 2006, or later as specifically indicated, are adopted and incorporated by reference:

(a) 40 C.F.R. Part 53, Subpart A, General Provisions; amended October 17, 2006, at 71 FR 61235; amended June 22, 2010, at 75 FR 35520 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-00744>); amended January 15, 2013, at 78 FR 3085 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-03487>).

(b) 40 C.F.R. Part 53, Subpart B, Procedures for Testing Performance Characteristics of Automated Methods for SO₂, CO, O₃, and NO₂; amended June 22, 2010, at 75 FR 35520 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-00744>); amended August 31, 2011, at 76 FR 54293 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-02487>).

(c) 40 C.F.R. Part 53, Subpart C, Procedures for Determining Comparability Between Candidate Methods and Reference Methods; amended October 17, 2006, at 71 FR 61235; amended June 12, 2007, at 72 FR 32193; amended November 12, 2008, at 73 FR 66963; amended June 22, 2010, at 75 FR 35520 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-00744>).

(d) 40 C.F.R. Part 53, Subpart D, Procedures for Testing Performance Characteristics of Methods for PM₁₀.

(e) 40 C.F.R. Part 53, Subpart E, Procedures for Testing Physical (Design) and Performance Characteristics of Reference Methods and Class I and Class II Equivalent Methods for PM_{2.5} or PM_{10-2.5}; amended October 17, 2006, at 71 FR 61235; amended June 12, 2007, at 72 FR 32193.

(f) 40 C.F.R. Part 53, Subpart F, Performance Specifications for PM_{2.5} Class II Equivalent Samplers; amended October 17, 2006, at 71 FR 61235; amended June 12, 2007, at 72 FR 32193.

(5) Title 40, Code of Federal Regulations, Part 55, Outer Continental Shelf Air Regulations.

(a) The provisions of 40 C.F.R. Part 55, Sections 55.1 through 55.15, revised as of July 1, 2001, are adopted and incorporated by reference.

(b) The following appendices of 40 C.F.R. Part 55, revised as of July 1, 2001, or later as specifically indicated, are adopted and incorporated by reference:

Appendix A, Listing of State and Local Requirements Incorporated by Reference into Part 55, by State.

(6) Title 40, Code of Federal Regulations, Part 58, Ambient Air Quality Surveillance.

(a) The following subparts of 40 C.F.R. Part 58, revised as of July 1, 2006, or later as specifically indicated, are adopted and incorporated by reference:

1. 40 C.F.R. Part 58, Subpart A, General Provisions; amended October 17, 2006, at 71 FR 61235; amended February 9, 2010, at 75 FR 6473; amended January 15, 2013, at 78 FR 3085 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-03487>).

2. 40 C.F.R. Part 58, Subpart B, Monitoring Network, amended October 17, 2006, at 71 FR 61235; amended June 12, 2007, at 72 FR 32193; amended November 12, 2008, at 73 FR 66963; amended February 9, 2010, at 75 FR 6473; amended June 22, 2010, at 75 FR 35520 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-00744>); amended December 27, 2010, at 75 FR 81126 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>); amended August 31, 2011, at 76 FR 54293 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-02487>); amended January 15, 2013, at 78 FR 3085 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-03487>); amended March 14, 2013, at 78 FR 16184 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-03491>).

3. 40 C.F.R. Part 58, Subpart C, Special Purpose Monitors; amended October 17, 2006, at 71 FR 61235; amended June 12, 2007, at 72 FR 32193.

4. 40 C.F.R. Part 58, Subpart D, Comparability of Ambient Data to NAAQS; amended October 17, 2006, at 71 FR 61235; amended November 12, 2008, at 73 FR 66963; amended January 15, 2013, at 78 FR 3085 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-03487>).

5. 40 C.F.R. Part 58, Subpart F, Air Quality Index Reporting; amended October 17, 2006, at 71 FR 61235.

6. 40 C.F.R. Part 58, Subpart G, Federal Monitoring; amended October 17, 2006, at 71 FR 61235.

(b) The following appendices of 40 C.F.R. Part 58, revised as of July 1, 2006, or later as specifically indicated, are adopted and incorporated by reference:

1. 40 C.F.R. Part 58, Appendix A, Quality Assurance Requirements for SLAMS, SPMs and PSD Air Monitoring; amended October 17, 2006, at 71 FR 61235; amended June 12, 2007, at 72 FR 32193; amended November 12, 2008, at 73 FR 66963; amended February 9, 2010, at 75 FR 6473; amended June 22, 2010, at 75 FR 35520 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-00744>); amended December 27, 2010, at 75 FR 81126 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>); amended January 15, 2013, at 78 FR 3085 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-03487>).

2. 40 C.F.R. Part 58, Appendix C, Ambient Air Quality Monitoring Methodology; amended October 17, 2006, at 71 FR 61235; amended November 12, 2008, at 73 FR 66963; amended February 9, 2010, at 75 FR 6473.

3. 40 C.F.R. 58, Appendix D, Network Design Criteria for Ambient Air Quality Monitoring; amended October 17, 2006, at 71 FR 61235; amended June 12, 2007, at 72 FR 32193; amended November 12, 2008, at 73 FR 66963; amended February 9, 2010, at 75 FR 6473; amended June 22, 2010, at 75 FR 35520 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-00744>); amended December 27, 2010, at 75 FR 81126 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>); amended January 15, 2013, at 78 FR 3085 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-03487>).

4. 40 C.F.R. 58, Appendix E, Probe and Monitoring Path Siting Criteria for Ambient Air Quality Monitoring; amended October 17, 2006, at 71 FR 61235; amended February 9, 2010, at 75 FR 6473.

5. 40 C.F.R. Part 58, Appendix G, Uniform Air Quality Index (AQI) and Daily Reporting; amended March 27, 2008, at 73 FR 16435; amended June 26, 2009, at 74 FR 30469; amended February 9, 2010, at 75 FR 6473; amended June 22, 2010, at 75 FR 35520 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-00744>).

(7) Title 40, Code of Federal Regulations, Part 59, National Volatile Organic Compound Emission Standards for Consumer and Commercial Products. Standards Adopted. The following National Volatile Organic Compound Emission Standards for Consumer and Commercial Products contained in 40 C.F.R. Part 59, revised as of July 1, 2001, or later as specifically indicated, are adopted and incorporated by reference:

(a) 40 C.F.R. Part 59, Subpart B, Automobile Refinish Coatings.

(b) 40 C.F.R. Part 59, Subpart C, Consumer Products.

(c) 40 C.F.R. Part 59, Subpart D, Architectural Coatings.

(8) Title 40, Code of Federal Regulations, Part 60, Standards of Performance for New Stationary Sources.

(a) Definitions. For the purposes of subsection 62-204.800(8), F.A.C., the definitions contained in the various provisions of 40 C.F.R. Part 60 adopted herein shall apply, except that the term "Administrator," when used in any provision of 40 C.F.R. Part 60 that is delegated to the Department by the U.S. Environmental Protection Agency, shall mean the Secretary or the Secretary's designee.

(b) Standards Adopted. The following Standards of Performance for New Stationary Sources contained in 40 C.F.R. Part 60, revised as of July 1, 2009, or later as specifically indicated, are adopted and incorporated by reference:

1. 40 C.F.R. Part 60, Subpart D, Fossil-Fuel-Fired Steam Generators for Which Construction is Commenced After August 17, 1971; amended January 20, 2011, at 76 FR 3517 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>).

2. 40 C.F.R. Part 60, Subpart Da, Electric Utility Steam Generators for Which Construction is Commenced After September 18, 1978; amended January 20, 2011, at 76 FR 3517 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>); amended April 19, 2012, at 77 FR 23399 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-02487>); amended February 16, 2012, at 77 FR 9303 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04925>); amended April 24, 2013, 78 FR 24073 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04917>); amended November 19, 2014, at 79 FR 68777 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04937>); except that the Secretary is not the Administrator for purposes of 40 C.F.R. § 60.47Da.

3. 40 C.F.R. Part 60, Subpart Db, Industrial-Commercial-Institutional Steam Generating Units; amended January 20, 2011, at 76 FR 3517 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>); amended February 16, 2012, at 77 FR 9303 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04925>); amended February 27, 2014, 79 FR 11227 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04926>); except that the Secretary is not the Administrator for purposes of authorities cited at 40 C.F.R. § 60.40(b)(g).

4. 40 C.F.R. Part 60, Subpart Dc, Small Industrial-Commercial-Institutional Steam Generating Unit; amended January 20, 2011, at 76 FR 3517 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>); amended February 16, 2012, at 77 FR 9303 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04925>); except that the Secretary is not the Administrator for purposes of authorities cited at 40 C.F.R. § 60.40(c)(b).

5. 40 C.F.R. Part 60, Subpart E, Incinerators.

6. 40 C.F.R. Part 60, Subpart Ea, Municipal Waste Combustors for Which Construction is Commenced After December 20, 1989, and on or Before September 20, 1994.

7. 40 C.F.R. Part 60, Subpart Eb, Large Municipal Waste Combustors for Which Construction is Commenced After September 20, 1994, or for Which Modification or Reconstruction is Commenced After June 19, 1996; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. § 60.50b(n). Any municipal waste combustor plant which contains a municipal waste combustor unit subject to 40 C.F.R. 60, Subpart Eb, is subject to the permitting requirements of Chapter 62-213, F.A.C. Any municipal waste combustor plant subject to the permitting requirements of Chapter 62-213, F.A.C., solely because it is subject to 40 C.F.R. 60, Subpart Eb, shall file an application for an operation permit under the requirements of Chapter 62-213, F.A.C., ninety days before expiration of the source's construction permit, but no later than 180 days after commencing operation.

8. 40 C.F.R. Part 60, Subpart Ec, Hospital/Medical/Infectious Waste Incinerators for Which Construction is Commenced After June 20, 1996; amended October 6, 2009, at 74 FR 51368; amended April 4, 2011, at 76 FR 18407 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>); amended May 13, 2013, at 78 FR 28051 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-03493>); amended February 27, 2014, 79 FR 11227 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04926>); except that the Secretary is not the Administrator for purposes of 40 C.F.R. § 60.56c(j). At 40 C.F.R. § 60.50c(m), the "applicable compliance date of the requirements of subpart Ce" shall be the later of June 1, 2012, or such date as established pursuant to the provisions of sub-subparagraph 62-204.800(9)(g)9.d., F.A.C.

9. 40 C.F.R. Part 60, Subpart F, Portland Cement Plants; amended February 12, 2013, at 78 FR 10005 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-03494>).

10. 40 C.F.R. Part 60, Subpart G, Nitric Acid Plants; amended August 14, 2012, at 77 FR 48433 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-02487>).

11. 40 C.F.R. Part 60, Subpart Ga, Nitric Acid Plants for Which Construction, Reconstruction or Modification Commenced After October 14, 2011, promulgated August 14, 2012, at 77 FR 48433 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-02487>).

12. 40 C.F.R. Part 60, Subpart H, Sulfuric Acid Plants; amended February 27, 2014, 79 FR 11227 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04926>).

13. 40 C.F.R. Part 60, Subpart I, Hot Mix Asphalt Facilities.

14. 40 C.F.R. Part 60, Subpart J, Petroleum Refineries; amended September 12, 2012, at 77 FR 56421 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-02487>); except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. § 60.109(b).

15. 40 C.F.R. Part 60, Subpart Ja, Standards of Performance for Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007; amended February 25, 2011, at 76 FR 10524 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>); amended December 19, 2013, at 78 FR 76753 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04923>); except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. § 60.109a(b).

16. 40 C.F.R. Part 60, Subpart K, Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978.

17. 40 C.F.R. Part 60, Subpart Ka, Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984; except that the Secretary is not the Administrator for purposes of 40 C.F.R. § 60.114a.

18. 40 C.F.R. Part 60, Subpart Kb, Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. § 60.117b(b).

19. 40 C.F.R. Part 60, Subpart L, Secondary Lead Smelters.

20. 40 C.F.R. Part 60, Subpart M, Secondary Brass & Bronze Production Plants.

21. 40 C.F.R. Part 60, Subpart N, Primary Emissions from Basic Oxygen Process Furnaces for Which Construction is Commenced After June 11, 1973.

22. 40 C.F.R. Part 60, Subpart Na, Secondary Emissions from Basic Oxygen Process Steelmaking Facilities for Which Construction is Commenced After January 20, 1983.

23. 40 C.F.R. Part 60, Subpart O, Sewage Treatment Plants; amended February 27, 2014, 79 FR 11227 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04926>); except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. § 60.156(b).

24. 40 C.F.R. Part 60, Subpart P, Primary Copper Smelters.

25. 40 C.F.R. Part 60, Subpart Q, Primary Zinc Smelters.

26. 40 C.F.R. Part 60, Subpart R, Primary Lead Smelters.

27. 40 C.F.R. Part 60, Subpart S, Primary Aluminum Reduction Plants.

28. 40 C.F.R. Part 60, Subpart T, Phosphate Fertilizer Industry: Wet Process Phosphoric Acid Plants.

29. 40 C.F.R. Part 60, Subpart U, Phosphate Fertilizer Industry: Superphosphoric Acid Plants.

30. 40 C.F.R. Part 60, Subpart V, Phosphate Fertilizer Industry: Diammonium Phosphate Plants.

31. 40 C.F.R. Part 60, Subpart W, Phosphate Fertilizer Industry: Triple Superphosphate Plants.

32. 40 C.F.R. Part 60, Subpart X, Phosphate Fertilizer Industry: Granular Triple Superphosphate Storage Facilities.

33. 40 C.F.R. Part 60, Subpart Y, Coal Preparation Plants.

34. 40 C.F.R. Part 60, Subpart Z, Ferroalloy Production Facilities.

35. 40 C.F.R. Part 60, Subpart AA, Steel Plants: Electric Arc Furnaces Constructed After October 21, 1974, and on or Before August 17, 1983.

36. 40 C.F.R. Part 60, Subpart AAa, Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed After August 17, 1983.

37. 40 C.F.R. Part 60, Subpart BB, Kraft Pulp Mills; amended February 27, 2014, 79 FR 11227 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04926>).

38. 40 C.F.R. Part 60, Subpart CC, Glass Manufacturing Plants.

39. 40 C.F.R. Part 60, Subpart DD, Grain Elevators.

40. 40 C.F.R. Part 60, Subpart EE, Surface Coating of Metal Furniture; except that the Secretary is not the Administrator for purposes of 40 C.F.R. § 60.316(d).

41. 40 C.F.R. Part 60, Subpart GG, Stationary Gas Turbines; amended February 27, 2014, 79 FR 11227 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04926>); except that the Secretary is not the Administrator for purposes of 40 C.F.R. § 60.332(a)(4).

42. 40 C.F.R. Part 60, Subpart HH, Lime Manufacturing Plants.

43. 40 C.F.R. Part 60, Subpart KK, Lead-Acid Battery Manufacturing Plants; amended February 27, 2014, 79 FR 11227 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04926>).

44. 40 C.F.R. Part 60, Subpart LL, Metallic Mineral Processing Plants; amended February 27, 2014, 79 FR 11227 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04926>).

45. 40 C.F.R. Part 60, Subpart MM, Automobile and Light-Duty Truck Surface Coating Operations.

46. 40 C.F.R. Part 60, Subpart NN, Phosphate Rock Plants.

47. 40 C.F.R. Part 60, Subpart PP, Ammonium Sulfate Manufacturing.

48. 40 C.F.R. Part 60, Subpart QQ, Graphic Arts Industry: Publication Rotogravure Printing.

49. 40 C.F.R. Part 60, Subpart RR, Pressure Sensitive Tape and Label Surface Coating Operations; except that the Secretary is not the Administrator for purposes of 40 C.F.R. § 60.446(c).

50. 40 C.F.R. Part 60, Subpart SS, Industrial Surface Coating: Large Appliances; except that the Secretary is not the Administrator for purposes of 40 C.F.R. § 60.456(d).

51. 40 C.F.R. Part 60, Subpart TT, Metal Coil Surface Coating; except that the Secretary is not the Administrator for purposes of 40 C.F.R. § 60.466(d).

52. 40 C.F.R. Part 60, Subpart UU, Asphalt Processing and Asphalt Roofing Manufacture; amended February 27, 2014, 79 FR 11227 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04926>); except that the Secretary is not the Administrator for the purposes of 40 C.F.R. § 60.474(g).

53. 40 C.F.R. Part 60, Subpart VV, Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry; except that the Secretary is not the Administrator for purposes of 40 C.F.R. § 60.482-1(c)(2) and 40 C.F.R. § 60.484.

54. 40 C.F.R. Part 60, Subpart VVa, Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry; for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006; except that the Secretary is not the Administrator for purposes of 40 C.F.R. § 60.482-1a(c)(2) and 40 C.F.R. § 60.484a.

55. 40 C.F.R. Part 60, Subpart WW, Beverage Can Surface Coating Industry; except that the Secretary is not the Administrator for the purposes of 40 C.F.R. § 60.496(c).

56. 40 C.F.R. Part 60, Subpart XX, Bulk Gasoline Terminals; amended December 19, 2003, at 68 FR 70959; except that the Secretary is not the Administrator for the purposes of 40 C.F.R. § 60.502(e)(6).

57. 40 C.F.R. Part 60, Subpart BBB, Rubber Tire Manufacturing Industry; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. § 60.548(b).

58. 40 C.F.R. Part 60, Subpart DDD, Volatile Organic Compound (VOC) Emissions from the Polymer Manufacturing Industry; except that the Secretary is not the Administrator for the purposes of 40 C.F.R. § 60.562-2(c).

59. 40 C.F.R. Part 60, Subpart FFF, Flexible Vinyl and Urethane Coating and Printing.

60. 40 C.F.R. Part 60, Subpart GGG, Equipment Leaks of VOC in Petroleum Refineries; except that the Secretary is not the Administrator for purposes of 40 C.F.R. § 60.592(c).

61. 40 C.F.R. Part 60, Subpart GGGa, Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for which Construction, Reconstruction, or Modification Commenced After November 7, 2006; except that the Secretary is not the Administrator for purposes of 40 C.F.R. § 60.592a(c).

62. 40 C.F.R. Part 60, Subpart HHH, Synthetic Fiber Production Facilities.

63. 40 C.F.R. Part 60, Subpart III, Volatile Organic Compound (VOC) Emissions From the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Air Oxidation Unit Processes; except that the Secretary is not the Administrator for the purposes of 40 C.F.R. § 60.613(e).

64. 40 C.F.R. Part 60, Subpart JJJ, Petroleum Dry Cleaners; except that the Secretary is not the Administrator for purposes of 40 C.F.R. § 60.623.

65. 40 C.F.R. Part 60, Subpart KKK, Equipment Leaks of VOC From Onshore Natural Gas Processing Plants; amended August 16, 2012, at 77 FR 49489 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-02487>); except that the Secretary is not the Administrator for purposes of 40 C.F.R. § 60.634.

66. 40 C.F.R. Part 60, Subpart LLL, Onshore Natural Gas Processing SO₂ Emissions; amended August 16, 2012, at 77 FR 49489 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-02487>).

67. 40 C.F.R. Part 60, Subpart NNN, Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations; amended February 27, 2014, 79 FR 11227 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04926>); except that the Secretary is not the Administrator for the purposes of 40 C.F.R. § 60.663(e).

68. 40 C.F.R. Part 60, Subpart OOO, Nonmetallic Mineral Processing Plants.

69. 40 C.F.R. Part 60, Subpart PPP, Wool Fiberglass Insulation Manufacturing Plants.

70. 40 C.F.R. Part 60, Subpart QQQ, VOC Emissions From Petroleum Refinery Wastewater Systems; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. § 60.699(b).

71. 40 C.F.R. Part 60, Subpart RRR, Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. § 60.708(b).

72. 40 C.F.R. Part 60, Subpart SSS, Magnetic Tape Coating Facilities; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. § 60.718(b).

73. 40 C.F.R. Part 60, Subpart TTT, Industrial Surface Coating: Surface Coating of Plastic Parts for Business Machines; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. § 60.726(b).

74. 40 C.F.R. Part 60, Subpart UUU, Calciners and Dryers in Mineral Industries.

75. 40 C.F.R. Part 60, Subpart VVV, Polymeric Coating of Supporting Substrates Facilities; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. § 60.748.

76. 40 C.F.R. Part 60, Subpart WWW, Municipal Solid Waste Landfills; except that the Secretary is not the Administrator for

the purposes of 40 C.F.R. § 60.754(a)(5). Any municipal solid waste landfill subject to 40 C.F.R. 60, Subpart WWW, and which has a design capacity equal to or greater than 2.5 million Megagrams and 2.5 million cubic meters is subject to the permitting requirements of Chapter 62-213, F.A.C. Any municipal solid waste landfill subject to the permitting requirements of Chapter 62-213, F.A.C., solely because it is subject to 40 C.F.R. 60, Subpart WWW, shall file an application for an operation permit under Chapter 62-213, F.A.C., by the later of March 12, 1997, or 180 days after the issuance of the solid waste permit that modifies the design capacity of the facility to be equal to or greater than 2.5 million Megagrams and 2.5 million cubic meters.

77. 40 C.F.R. Part 60, Subpart AAAA, New Small Municipal Waste Combustion Units. Any small municipal waste combustion unit subject to the permitting requirements of Chapter 62-213, F.A.C., solely because it is subject to 40 C.F.R. 60, Subpart AAAA, shall file an application for an operation permit under the requirements of Chapter 62-213, F.A.C., in accordance with paragraph 62-213.420(1)(a), F.A.C.

78. 40 C.F.R. Part 60, Subpart CCCC, Commercial and Industrial Solid Waste Incineration Units; amended February 7, 2013, at 78 FR 9111 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-03492>). Any CISWI unit subject to the permitting requirements of Chapter 62-213, F.A.C., solely because it is subject to 40 C.F.R. 60, Subpart CCCC, shall file an application for an operation permit under the requirements of Chapter 62-213, F.A.C., in accordance with paragraph 62-213.420(1)(a), F.A.C.

79. 40 C.F.R. Part 60, Subpart EEEE, Other Solid Waste Incineration Units for Which Construction Is Commenced After December 9, 2004, or for Which Modification or Reconstruction Is Commenced on or After June 16, 2006; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. § 60.2889(b). Any solid waste incineration unit subject to the permitting requirements of Chapter 62-213, F.A.C., solely because it is subject to 40 C.F.R. Part 60, Subpart EEEE, shall file an application for an operation permit under the requirements of Chapter 62-213, F.A.C., in accordance with paragraph 62-213.420(1)(a), F.A.C.

80. 40 C.F.R. Part 60, Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines; amended June 28, 2011, at 76 FR 37954 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>); amended January 30, 2013, at 78 FR 6673 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-03483>); amended February 27, 2014, 79 FR 11227 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04926>); except that the Secretary is not the Administrator for purposes of 40 C.F.R. § 60.4201, 60.4202, 60.4203, 60.4210 and 60.4215 and 60.4216.

81. 40 C.F.R. Part 60, Subpart JJJJ, Standards of Performance for Stationary Spark Ignition Internal Combustion Engines; amended June 28, 2011, at 76 FR 37954 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>); amended January 30, 2013, at 78 FR 6673 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-03483>); amended February 27, 2014, 79 FR 11227 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04926>); except that the Secretary is not the Administrator for purposes of 40 C.F.R. § 60.4231, 60.4232, 60.4238, 60.4239, 60.4240, 60.4241, 60.4242, and 60.4247.

82. 40 C.F.R. Part 60, Subpart KKKK, Standards for Stationary Combustion Turbines.

83. 40 C.F.R. Part 60, Subpart LLLL, Standards of Performance for New Sewage Sludge Incineration Units; promulgated March 21, 2011, at 76 FR 15372; except that the Secretary is not the Administrator for purposes of 40 C.F.R. § 60.4785(c).

84. 40 C.F.R. Part 60, Subpart OOOO, Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution, promulgated August 16, 2012, at 77 FR 49489 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-02487>).

(c) The Standards of Performance for New Stationary Sources adopted by reference in this rule shall be controlling over other standards in the air pollution rules of the Department except that any emissions limiting standard contained in or determined pursuant to the air pollution rules of the Department which is more stringent than one contained in a Standard of Performance, or which regulates emissions of pollutants or emissions units not regulated by an applicable Standard of Performance, shall apply.

(d) General Provisions Adopted. The general provisions of 40 C.F.R. Part 60, Subpart A, revised as of July 1, 2009; amended October 6, 2009, at 74 FR 51368; amended September 13, 2010, at 75 FR 55636 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>), amended March 21, 2011, at 76 FR 15554 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04940>); amended January 18, 2012, at 77 FR 2456 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>); amended April 19, 2012, at 77 FR 23396 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-02487>); amended August 16, 2012, at 77 FR 49489 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-02487>); amended September 12, 2012, at 77 FR 56421 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-02487>); amended January 30, 2013, at 78 FR 6673 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-03483>); amended February 27, 2014, 79 FR 11227 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04926>); are adopted and incorporated by reference except that the

Secretary is not the Administrator for purposes of 40 C.F.R. § 60.4, 40 C.F.R. § 60.8(b)(2) and (3), 40 C.F.R. § 60.11(e)(7) and (8), 40 C.F.R. § 60.13(g), (i) and (j)(2), and 40 C.F.R. § 60.16.

(e) Appendices Adopted. The following appendices of 40 C.F.R. Part 60, revised as of July 1, 2009, or later as specifically indicated, are adopted and incorporated by reference:

1. 40 C.F.R. Part 60, Appendix A-1, Test Methods 1 through 2F; amended February 27, 2014, 79 FR 11227 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04926>).

2. 40 C.F.R. Part 60, Appendix A-2, Test Methods 2G through 3C; amended February 27, 2014, 79 FR 11227 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04926>).

3. 40 C.F.R. Part 60, Appendix A-3, Test Methods 4 through 5I; amended September 13, 2010, at 75 FR 55636 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>).

4. 40 C.F.R. Part 60, Appendix A-4, Test Methods 6 through 10B; amended September 13, 2010, at 75 FR 55636 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>); amended February 27, 2014, 79 FR 11227 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04926>).

5. 40 C.F.R. Part 60, Appendix A-5, Test Methods 11 through 15A; amended September 13, 2010, at 75 FR 55636 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>); amended February 27, 2014, 79 FR 11227 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04926>).

6. 40 C.F.R. Part 60, Appendix A-6, Test Methods 16 through 18; amended September 13, 2010, at 75 FR 55636 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>); amended July 30, 2012, at FR 44488 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-02487>); amended February 27, 2014, 79 FR 11227 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04926>).

7. 40 C.F.R. Part 60, Appendix A-7, Test Methods 19 through 25E; amended September 13, 2010, at 75 FR 55636 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>), amended January 18, 2012, at 77 FR 2456 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>); amended February 27, 2014, 79 FR 11227 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04926>); except that in Method 23, the toluene rinse concentrate may be added to the acetone and methylene chloride concentrate, the filter, and the resin in the Soxhlet apparatus specified at section 5.1.4 of the method prior to analysis, in lieu of separate analysis of the toluene rinse extract pursuant to section 5.1.6 of the method.

8. 40 C.F.R. Part 60, Appendix A-8, Test Methods 26 through 30B; amended September 13, 2010, at 75 FR 55636 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>); amended February 27, 2014, 79 FR 11227 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04926>).

9. 40 C.F.R. Part 60, Appendix B, Performance Specifications.

10. 40 C.F.R. Part 60, Appendix C, Determination of Emission Rate Change.

11. 40 C.F.R. Part 60, Appendix D, Required Emission Inventory Information.

12. 40 C.F.R. Part 60, Appendix F, Quality Assurance Procedures; amended February 27, 2014, 79 FR 11227 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04926>).

(9) Title 40, Code of Federal Regulations, Part 60, Emission Guidelines and Compliance Times.

(a) General Applicability and Definitions.

1. The purpose and effect of each subpart of 40 C.F.R. Part 60 or portion thereof adopted and incorporated by reference in this subsection is determined by the context in which it is cited within this subsection. The Emission Guidelines for Existing Sources adopted by reference in this rule shall be controlling over other standards in the air pollution rules of the Department except that any emissions limiting standard contained in or determined pursuant to the air pollution rules of the Department which is more stringent than one contained in an Emission Guideline, or which regulates emissions of pollutants or emissions units not regulated by an applicable Emission Guideline, shall apply.

2. For the purposes of subsection 62-204.800(9), F.A.C., the definitions contained in the various provisions of 40 C.F.R. Part 60 adopted herein shall apply, except that the term "Administrator," when used in any provision of 40 C.F.R. Part 60 that is delegated to the Department by the U.S. Environmental Protection Agency, shall mean the Secretary or the Secretary's designee.

(b) Municipal Waste Combustors. 40 C.F.R. 60, Subpart Cb, Emission Guidelines and Compliance Times for Large Municipal Waste Combustors That Are Constructed on or Before September 20, 1994, revised as of July 1, 2009, is hereby adopted and incorporated by reference, subject to the following provisions:

1. Applicability. The applicability of paragraph 62-204.800(9)(b), F.A.C., shall be the same as set forth in 40 C.F.R. § 60.32b.

2. Definitions. For purposes of paragraph 62-204.800(9)(b), F.A.C., the definitions in 40 C.F.R. § 60.31b shall apply.

3. Emission Limiting Standards.

a. The emission limit for particulate matter shall be the same as set forth in 40 C.F.R. § 60.33b(a)(1)(i).

b. The opacity limit shall be the same as set forth in 40 C.F.R. § 60.33b(a)(1)(iii).

c. The emission limits for cadmium and lead shall be the same as set forth in 40 C.F.R. § 60.33b(a)(2)(i) and (a)(4).

d. The emission limit for mercury shall be the same as set forth in 40 C.F.R. § 60.33b(a)(3) except that, where applicable, the emission limiting standards of Rule 62-296.416, F.A.C., also shall apply.

e. The emission limit for sulfur dioxide shall be the same as set forth in 40 C.F.R. § 60.33b(b)(1)(i) and (b)(3)(i).

f. The emission limit for hydrogen chloride shall be the same as set forth in 40 C.F.R. § 60.33b(b)(2)(i) and (b)(3)(ii).

g. The emission limit for total mass dioxin/furans (tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans) shall be the same as set forth in 40 C.F.R. § 60.33b(c)(1)(i), (c)(1)(ii), and (c)(1)(iii).

h. The emission limit for nitrogen oxides shall be the same as set forth in 40 C.F.R. 60 Subpart Cb, Table 1, or 40 C.F.R. § 60.33b(d)(3) as applicable. Emissions averaging pursuant to 40 C.F.R. § 60.33b(d)(1) shall be allowed. 40 C.F.R. § 60.33b(d)(2) shall not apply.

i. The emission limit for carbon monoxide shall be the same as set forth in 40 C.F.R. 60, Subpart Cb, Table 3.

4. Operating Practices. The operating practices applicable to each municipal waste combustor unit subject to paragraph 62-204.800(9)(b), F.A.C., shall be the same as set forth in 40 C.F.R. § 60.53b(b) and (c).

5. Operator Training. The operator training and certification requirements of 40 C.F.R. § 60.54b shall apply to all municipal waste combustor units subject to paragraph 62-204.800(9)(b), F.A.C. Compliance with these requirements shall be conducted according to the schedule specified in 40 C.F.R. § 60.39b(c)(4).

6. Fugitive Ash Emissions. The fugitive ash emissions requirements applicable to each municipal waste combustor unit subject to paragraph 62-204.800(9)(b), F.A.C., shall be the same as set forth in 40 C.F.R. § 60.55b.

7. Compliance and Performance Testing.

a. The compliance and performance testing requirements applicable to each municipal waste combustor unit subject to paragraph 62-204.800(9)(b), F.A.C., shall be the same as set forth in 40 C.F.R. § 60.58b, except as provided for under 40 C.F.R. § 60.24(b)(2) and subparagraph 62-204.800(9)(b)7.b., F.A.C.

b. The alternative performance testing schedule for dioxins/furans specified in 40 C.F.R. § 60.58b(g)(5)(iii) shall apply to municipal waste combustor plants that achieve a dioxin/furan emission level less than or equal to 15 nanograms per dry standard cubic meter, corrected to 7 percent oxygen.

8. Reporting and Recordkeeping. The reporting and recordkeeping requirements applicable to each municipal waste combustor unit subject to paragraph 62-204.800(9)(b), F.A.C., shall be the same as set forth in 40 C.F.R. § 60.59b, except for the siting requirements under 40 C.F.R. § 60.59b(a), (b)(5) and (d)(11).

(c) Municipal Solid Waste Landfills. 40 C.F.R. 60, Subpart Cc, Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills, revised as of July 1, 2009, is hereby adopted and incorporated by reference, subject to the following provisions:

1. Applicability.

a. The facility to which paragraph 62-204.800(9)(c), F.A.C., applies is each existing municipal solid waste (MSW) landfill:

(I) For which construction, reconstruction or modification was commenced before May 30, 1991; and

(II) Which has accepted waste at any time since November 8, 1987, or has additional design capacity available for future waste deposition.

b. Physical or operational changes made to an existing MSW landfill solely to comply with the provisions of paragraph 62-204.800(9)(c), F.A.C., are not considered a modification or reconstruction and would not subject an existing MSW landfill to the requirements of 40 C.F.R. 60, Subpart WWW (see 40 C.F.R. § 60.750).

2. Definitions. The terms used but not defined in 40 C.F.R. 60, Subpart Cc, have the meaning given to them in the Act and in Subparts A, B, and WWW of 40 C.F.R. § 60.

3. Standards for Air Emissions from MSW Landfills.

a. Each owner or operator of an MSW landfill subject to paragraph 62-204.800(9)(c), F.A.C., and which also meets the following conditions as of December 31, 1996, shall comply with the provisions of 40 C.F.R. § 60.752(b)(2)(i) through (v) commencing from December 31, 1996.

(I) The landfill has a design capacity greater than or equal to 2.5 million Megagrams and 2.5 million cubic meters. The landfill may calculate design capacity in either Megagrams or cubic meters for comparison with the exemption values. Any density conversions shall be documented and submitted with the initial design capacity report and any application for a solid waste permit; and

(II) The landfill has a nonmethane organic compound (NMOC) emission rate of 50 Megagrams per year or more.

b. Any MSW landfill which has a design capacity greater than or equal to 2.5 million Megagrams and 2.5 million cubic meters but whose NMOC emission rate as of December 31, 1996, is less than 50 Megagrams per year shall comply with the provisions of 40 C.F.R. § 60.752(b)(2)(i) through (v) commencing from December 31 of the first year after 1996 for which the nonmethane organic compound emission rate equals or exceeds 50 Megagrams per year.

4. Compliance Procedures. Each owner or operator of an MSW landfill subject to the air emissions standards of subparagraph 62-204.800(9)(c)3., F.A.C., shall:

a. Comply with the operational standards in 40 C.F.R. § 60.753;

b. Comply with the compliance provisions in 40 C.F.R. § 60.755; and

c. Comply with the monitoring provisions in 40 C.F.R. § 60.756.

5. Reporting and Recordkeeping. Each owner or operator of an MSW landfill to which paragraph 62-204.800(9)(c), F.A.C., applies shall comply with the reporting and recordkeeping provisions of 40 C.F.R. § 60.757 and .758, as applicable, except that the initial design capacity report and NMOC emission rate report described in 40 C.F.R. § 60.757 shall be submitted to the Department no later than December 31, 1996. The provisions of 40 C.F.R. § 60.754, as applicable, shall be used to calculate the landfill NMOC emission rate for the purposes of the submittal of NMOC emission rate reports and determining whether the landfill has a nonmethane organic compound (NMOC) emission rate of 50 Megagrams per year or more.

6. Permit Application Deadline. Each existing MSW landfill that is subject to paragraph 62-204.800(9)(c), F.A.C., and has a design capacity greater than or equal to 2.5 million Megagrams and 2.5 million cubic meters is subject to the permitting requirements of Chapter 62-213, F.A.C. Any existing MSW landfill subject to the requirements of Chapter 62-213, F.A.C., solely because it is subject to paragraph 62-204.800(9)(c), F.A.C., shall file an application for an operation permit under the requirements of Chapter 62-213, F.A.C., no later than December 31, 1997.

7. Effective Date of State Emission Standards for MSW Landfills. The provisions of paragraph 62-204.800(9)(c), F.A.C., shall become effective on December 31, 1996.

(d) Hospital/Medical/Infectious Waste Incinerators. 40 C.F.R. Part 60, Subpart Ce, Emission Guidelines and Compliance Times for Hospital/Medical/Infectious Waste Incinerators, revised as of July 1, 2001, is hereby adopted and incorporated by reference, subject to the following provisions:

1. Applicability. The applicability of paragraph 62-204.800(9)(d), F.A.C., shall be the same as set forth in 40 C.F.R. § 60.32e.

2. Definitions. The terms used but not defined in 40 C.F.R. 60, Subpart Ce, have the meaning given them in the Clean Air Act and in 40 C.F.R. 60, Subparts A, B and Ec.

3. Emission Limiting Standards.

a. The opacity limit applicable to each hospital/medical/infectious waste incinerator subject to paragraph 62-204.800(9)(d), F.A.C., shall be the same as set forth in 40 C.F.R. 60.52c(b).

b. Except as provided for in sub-subparagraph 62-204.800(9)(d)3.c., F.A.C., the emission limits applicable to each small, medium and large hospital/medical/infectious waste incinerator subject to paragraph 62-204.800(9)(d), F.A.C., shall be the same as set forth in Table 1 of 40 C.F.R. Part 60, Subpart Ce.

c. The emission limits applicable to each small hospital/medical/infectious waste incinerator, subject to paragraph 62-204.800(9)(d), F.A.C., located more than 50 miles from the boundary of the nearest Standard Metropolitan Statistical Area (defined in 40 C.F.R. § 60.31e), and which burns less than 2,000 pounds per week of hospital waste and medical/infectious waste, shall be the same as set forth in Table 2 of 40 C.F.R. Part 60, Subpart Ce. The 2,000 pound per week limitation shall not apply during performance tests.

4. Operator Training and Qualification. The operator training and qualification requirements applicable to each hospital/medical/infectious waste incinerator subject to paragraph 62-204.800(9)(d), F.A.C., shall be the same as set forth in 40 C.F.R. § 60.53c.

5. Waste Management. The waste management plan requirements applicable to each hospital/medical/infectious waste incinerator subject to paragraph 62-204.800(9)(d), F.A.C., shall be the same as set forth in 40 C.F.R. § 60.55c.

6. Inspection. Each small hospital/medical/infectious waste incinerator subject to the emission limits under sub-subparagraph 62-204.800(9)(d)3.c., F.A.C., shall comply with the inspection requirements and inspection schedule set forth in 40 C.F.R. § 60.36e. 7. Compliance and Performance Testing.

a. Except as provided for under sub-subparagraph 62-204.800(9)(d)7.b., F.A.C., the compliance and performance testing requirements applicable to each hospital/medical/infectious waste incinerator subject to paragraph 62-204.800(9)(d), F.A.C., shall be the same as set forth in 40 C.F.R. § 60.56c, excluding the fugitive emissions testing requirements under 40 C.F.R. §§ 60.56c(b)(14) and (c)(3).

b. Each small hospital/medical/infectious waste incinerator subject to the emission limits under sub-subparagraph 62-204.800(9)(d)3.c., F.A.C., shall comply with the compliance and performance testing requirements set forth in 40 C.F.R. § 60.37e(b).

8. Monitoring.

a. Except as provided for under sub-subparagraph 62-204.800(9)(d)8.b., F.A.C., the monitoring requirements applicable to each hospital/medical/infectious waste incinerator subject to paragraph 62-204.800(9)(d), F.A.C., shall be the same as set forth in 40 C.F.R. § 60.57c.

b. Each small hospital/medical/infectious waste incinerator subject to the emission limits under sub-subparagraph 62-204.800(8)(d)3.c., F.A.C., shall comply with the monitoring requirements set forth in 40 C.F.R. § 60.37e(d).

9. Reporting and Recordkeeping.

a. The reporting and recordkeeping requirements applicable to each hospital/medical/infectious waste incinerator subject to paragraph 62-204.800(9)(d), F.A.C., shall be the same as set forth in 40 C.F.R. § 60.58c(b), (c), (d), (e), and (f), excluding 60.58c(b)(2)(ii) and (b)(7).

b. In addition to the requirements of sub-subparagraph 62-204.800(9)(d)9.a., F.A.C., each small hospital/medical/infectious waste incinerator subject to the emission limits under sub-subparagraph 62-204.800(9)(d)3.c., F.A.C., shall comply with the reporting and recordkeeping requirements set forth in 40 C.F.R. § 60.38e(b).

10. Compliance Times.

a. Each hospital/medical infectious waste incinerator subject to paragraph 62-204.800(9)(d), F.A.C., shall comply with the operator training and qualification requirements of subparagraph 62-204.800(9)(d)4., F.A.C., according to the schedule set forth in 40 C.F.R. § 60.39e(e).

b. Each small hospital/medical/infectious waste incinerator subject to the emission limits under sub-subparagraph 62-204.800(9)(d)3.c., F.A.C., shall comply with the inspection requirements of subparagraph 62-204.800(9)(d)6., F.A.C., according to the schedule set forth in 40 C.F.R. § 60.39e(e).

c. Except as provided for under sub-subparagraph 62-204.800(9)(d)10.d., F.A.C., each hospital/medical/infectious waste incinerator subject to paragraph 62-204.800(9)(d), F.A.C., shall comply with all remaining requirements of paragraph 62-204.800(8)(d), F.A.C., according to the schedule set forth in 40 C.F.R. § 60.39e(b).

d. Each hospital/medical/infectious waste incinerator subject to paragraph 62-204.800(9)(d), F.A.C., that chooses to comply with the alternate schedule set forth in 40 C.F.R. 60.39e(c), shall submit to the Department the information specified in 40 C.F.R. § 60.39e(d)(1)(i) and (ii) as part of the permit application required pursuant to subparagraph 62-204.800(9)(d)11., F.A.C.

e. Each hospital/medical/infectious waste incinerator subject to paragraph 62-204.800(9)(d), F.A.C., shall comply with the requirements of this paragraph until the later of June 1, 2012, or such date as established pursuant to the provisions of sub-subparagraph 62-204.800(9)(g)9.d., F.A.C.

(e) Small Municipal Waste Combustion Units. 40 C.F.R. Part 60, Subpart BBBB, Emission Guidelines and Compliance Times for Small Municipal Waste Combustion Units Constructed on or Before August 30, 1999, revised as of July 1, 2009, is hereby adopted and incorporated by reference subject to the following provisions:

1. Applicability. The applicability of paragraph 62-204.800(9)(e), F.A.C., shall be the same as set forth in 40 C.F.R. Part 60, Subpart BBBB.

2. Increments of Progress. The requirements for meeting increments of progress and achieving final compliance applicable to each existing small municipal waste combustion unit subject to paragraph 62-204.800(9)(e), F.A.C., shall be the same as set forth in 40 C.F.R. Part 60, Subpart BBBB, provided that the final control plan shall be submitted no later than September 30, 2001.

3. Good Combustion Practices.

a. Operator Training. The operator training requirements applicable to each small municipal waste combustion unit subject to

paragraph 62-204.800(9)(e), F.A.C., shall be the same as set forth in 40 C.F.R. Part 60, Subpart BBBB.

b. Operator Certification. The operator certification requirements applicable to each small municipal waste combustion unit subject to paragraph 62-204.800(9)(e), F.A.C., shall be the same as set forth in 40 C.F.R. Part 60, Subpart BBBB.

c. Operating Requirements. The operating requirements applicable to each small municipal waste combustion unit subject to paragraph 62-204.800(9)(e), F.A.C., shall be the same as set forth in 40 C.F.R. Part 60, Subpart BBBB.

4. Emission Limits. The emission limits on eleven pollutants applicable to each small municipal waste combustion unit subject to paragraph 62-204.800(8)(e), F.A.C., shall be the same as set forth in 40 C.F.R. Part 60, Subpart BBBB.

5. Continuous Emission Monitoring. The continuous emission monitoring requirements applicable to each small municipal waste combustion unit subject to paragraph 62-204.800(9)(e), F.A.C., shall be the same as set forth in 40 C.F.R. Part 60, Subpart BBBB.

6. Stack Testing. The stack testing requirements applicable to each small municipal waste combustion unit subject to paragraph 62-204.800(9)(e), F.A.C., shall be the same as set forth in 40 C.F.R. Part 60, Subpart BBBB.

7. Other Monitoring Requirements. Other monitoring requirements applicable to each small municipal waste combustion unit subject to paragraph 62-204.800(9)(e), F.A.C., shall be the same as set forth in 40 C.F.R. Part 60, Subpart BBBB.

8. Recordkeeping Requirements. The recordkeeping requirements applicable to each small municipal waste combustion unit subject to paragraph 62-204.800(9)(e), F.A.C., shall be the same as set forth in 40 C.F.R. Part 60, Subpart BBBB.

9. Reporting Requirements. The reporting requirements applicable to each small municipal waste combustion unit subject to paragraph 62-204.800(9)(e), F.A.C., shall be the same as set forth in 40 C.F.R. Part 60, Subpart BBBB.

10. Title V Operating Permits. Any small municipal waste combustion unit subject to the permitting requirements of Chapter 62-213, F.A.C., solely because it is subject to 40 C.F.R. Part 60, Subpart BBBB, shall file an application for an operation permit under the requirements of Chapter 62-213, F.A.C., no later than December 1, 2002.

11. Air Curtain Incinerators. Requirements applicable to each Air Curtain Incinerator subject to paragraph 62-204.800(9)(e), F.A.C., shall be the same as set forth in 40 C.F.R. Part 60, Subpart BBBB.

12. Definitions. The terms used but not defined in 40 C.F.R. Part 60, Subpart BBBB, have the meaning given to them in the Clean Air Act and in 40 C.F.R. Part 60, Subparts A, B, and AAAA.

(f) Commercial and Industrial Solid Waste Incineration (CISWI) Units. 40 C.F.R. Part 60, Subpart DDDD, Emission Guidelines and Compliance Times for Commercial and Industrial Solid Waste Incineration Units that Commenced Construction on or Before June 4, 2010, revised as of July 1, 2009, amended February 7, 2003, at 78 FR 9112 (<https://www.flrules.org/gateway/reference.asp?NO=Ref-03695>), is hereby adopted and incorporated by reference subject to the following provisions:

1. Applicability. The applicability of paragraph 62-204.800(9)(f), F.A.C., shall be the same as set forth in 40 C.F.R. § 60.2550. Units exempted from the applicability of paragraph 62-204.800(9)(f), F.A.C., shall be the same as set forth in 40 C.F.R. § 60.2555. For the purposes of 40 C.F.R. § 60.2550, units that begin combusting solid waste that are not subject to 40 C.F.R. 60 Subpart CCCC are considered existing sources and must comply with paragraph 62-204.800(9)(f), F.A.C.

2. Increments of Progress. The requirements for meeting increments of progress and achieving final compliance applicable to each CISWI unit subject to paragraph 62-204.800(9)(f), F.A.C., shall be the same as set forth in 40 C.F.R. §§ 60.2575 through 60.2615, provided that the final control plan shall be submitted no later than August 7, 2015, and the final compliance date is no later than February 7, 2018.

3. Waste Management Plan. The waste management plan requirements applicable to each CISWI unit subject to paragraph 62-204.800(9)(f), F.A.C., shall be the same as set forth in 40 C.F.R. §§ 60.2620 through 60.2630.

4. Operator Training and Qualification. The operator training and qualification requirements applicable to each CISWI unit subject to paragraph 62-204.800(9)(f), F.A.C., shall be the same as set forth in 40 C.F.R. §§ 60.2635 through 60.2665.

5. Emission Limitations and Operating Limits. The emission limitations and operating limits applicable to each CISWI unit subject to paragraph 62-204.800(9)(f), F.A.C., shall be the same as set forth in 40 C.F.R. §§ 60.2670 through 60.2685.

6. Performance Testing. The performance testing requirements applicable to each CISWI unit subject to paragraph 62-204.800(9)(f), F.A.C., shall be the same as set forth in 40 C.F.R. §§ 60.2690 through 60.2695.

7. Initial Compliance Requirements. The initial compliance requirements applicable to each CISWI unit subject to paragraph 62-204.800(9)(f), F.A.C., shall be the same as set forth in 40 C.F.R. §§ 60.2700 through 60.2706.

8. Continuous Compliance Requirements. The continuous compliance requirements applicable to each CISWI unit subject to

paragraph 62-204.800(9)(f), F.A.C., shall be the same as set forth in 40 C.F.R. §§ 60.2710 through 60.2725.

9. Monitoring. The monitoring requirements applicable to each CISWI unit subject to paragraph 62-204.800(8)(f), F.A.C., shall be the same as set forth in 40 C.F.R. §§ 60.2730 through 60.2735.

10. Recordkeeping and Reporting Requirements. The recordkeeping and reporting requirements applicable to each CISWI unit subject to paragraph 62-204.800(9)(f), F.A.C., shall be the same as set forth in 40 C.F.R. §§ 60.2740 through 60.2800.

11. Title V Operating Permits. The Title V operating permit requirements applicable to each CISWI unit subject to paragraph 62-204.800(9)(f), F.A.C., shall be the same as set forth in 40 C.F.R. § 60.2805.

12. Air Curtain Incinerators. Requirements applicable to each Air Curtain Incinerator subject to paragraph 62-204.800(9)(f), F.A.C., shall be the same as set forth in 40 C.F.R. §§ 60.2810 through 60.2870.

13. Definitions. The definitions applicable to each CISWI unit subject to paragraph 62-204.800(9)(f), F.A.C., shall be the same as set forth in 40 C.F.R. § 60.2875. For purposes of paragraph 62-204.800(9)(f), F.A.C., the definition of the term administrator means the department, except that the EPA is the administrator for purposes of 40 C.F.R. § 60.2030(c). The terms used but not defined in 40 C.F.R. Part 60, Subpart DDDD, have the meaning given to them in the Clean Air Act and in 40 C.F.R. Part 60, Subparts A, B, and CCCC.

(g) Hospital/Medical/Infectious Waste Incinerators. 40 C.F.R. Part 60, Subpart Ce, Emission Guidelines and Compliance Times for Hospital/Medical/Infectious Waste Incinerators, revised as of July 1, 2009; amended October 6, 2009, at 74 FR 51368; amended April 4, 2011, at 76 FR 18407 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>); is hereby adopted and incorporated by reference, subject to the following provisions:

1. Applicability. The applicability of paragraph 62-204.800(9)(g), F.A.C., shall be the same as set forth at 40 C.F.R. § 60.32e, where the applicable compliance date at 40 C.F.R. § 60.32e(j) shall be the later of June 1, 2012, or such date as established pursuant to the provisions of sub-subparagraph 62-204.800(9)(g)9.d., F.A.C.

2. Definitions. The terms used but not defined in 40 C.F.R. 60, Subpart Ce, shall have the meaning given them at 40 C.F.R. 60, Subparts A, B and Ec.

3. Emission Limiting Standards.

a. The emission limits applicable to each hospital/medical/infectious waste incinerator subject to paragraph 62-204.800(9)(g), F.A.C., shall be the same as the emission limits set forth at 40 C.F.R. § 60.33e(a)(2) or (3).

b. The opacity limit applicable to each hospital/medical/infectious waste incinerator subject to paragraph 62-204.800(9)(g), F.A.C., shall be the same as the opacity limit set forth at 40 C.F.R. § 60.52c(b)(2).

4. Operator Training and Qualification. The operator training and qualification requirements applicable to each hospital/medical/infectious waste incinerator subject to paragraph 62-204.800(9)(g), F.A.C., shall be the same as set forth at 40 C.F.R. § 60.53c.

5. Waste Management. The waste management plan requirements applicable to each hospital/medical/infectious waste incinerator subject to paragraph 62-204.800(9)(g), F.A.C., shall be the same as set forth at 40 C.F.R. § 60.55c.

6. Inspection. Each hospital/medical/infectious waste incinerator subject to paragraph 62-204.800(9)(g), F.A.C., shall comply with the inspection requirements as set forth at 40 C.F.R. § 60.36e.

7. Compliance, Performance Testing, and Monitoring Provisions.

a. The compliance and performance testing requirements applicable to each hospital/medical/infectious waste incinerator subject to paragraph 62-204.800(9)(g), F.A.C., shall be the same as set forth at 40 C.F.R. § 60.56c, excluding the annual fugitive emissions testing requirements under § 60.56c(c)(3), the CO CEMS requirements under § 60.56c(c)(4), and the compliance requirements for monitoring listed in §§ 60.56c(c)(5)(ii) through (v), (c)(6), (c)(7), (e)(6) through (10), (f)(7) through (10), and (g)(6) through (10). Hospital/medical/infectious waste incinerators subject to the emission limits under § 60.33e(a)(2) and (a)(3) may, however, elect to use CO CEMS as specified under § 60.56c(c)(4) or bag leak detection systems as specified under § 60.57c(h).

b. The monitoring requirements applicable to each hospital/medical/infectious waste incinerator subject to paragraph 62-204.800(9)(g), F.A.C., shall be the same as set forth at 40 C.F.R. § 60.57c.

c. The use of previous emissions test results applicable to each hospital/medical/infectious waste incinerator subject to paragraph 62-204.800(9)(g), F.A.C., shall be the same as set forth at 40 CFR § 60.37e(f).

d. On or after June 1, 2012, any time the owner or operator of any hospital/medical/infectious waste incinerator subject to paragraph 62-204.800(9)(g), F.A.C., conducts a performance test for any reason for particulate matter (PM), the owner or operator

shall also conduct a performance test for mercury (Hg), cadmium (Cd), and lead (Pb). Testing shall be conducted in accordance with the applicable test procedures and methods set forth at 40 C.F.R. § 60.56c(b), and test data shall be reported to the Department in accordance with the provisions of 40 C.F.R. § 60.58c(c). This requirement for supplemental metals testing shall not apply if the owner or operator continuously monitors or samples Hg emissions in accordance with the provisions of 40 C.F.R. § 60.56c(c)(5) or 40 C.F.R. § 60.56c(c)(7).

8. Reporting and Recordkeeping.

a. The reporting and recordkeeping requirements applicable to each hospital/medical/infectious waste incinerator subject to paragraph 62-204.800(9)(g), F.A.C., shall be the same as set forth at 40 C.F.R. §§ 60.58c(b) through (g), excluding §§ 60.58c(b)(2)(xviii) (bag leak detection system alarms), (b)(2)(xix) (CO CEMS data), and (b)(7) (siting documentation).

b. In addition, each hospital/medical/infectious waste incinerator subject to paragraph 62-204.800(9)(g), F.A.C., shall comply with the reporting and recordkeeping requirements of 40 C.F.R. § 60.38e(b).

9. Compliance Times.

a. Each hospital/medical infectious waste incinerator subject to paragraph 62-204.800(9)(g), F.A.C., shall comply with the operator training and qualification requirements of subparagraph 62-204.800(9)(g)4., F.A.C., by June 1, 2012.

b. Each hospital/medical/infectious waste incinerator subject to paragraph 62-204.800(9)(g), F.A.C., shall comply with the inspection requirements of subparagraph 62-204.800(9)(g)6., F.A.C., by June 1, 2012.

c. Except as provided for under sub-subparagraph 62-204.800(9)(g)9.d., F.A.C., each hospital/medical/infectious waste incinerator subject to paragraph 62-204.800(9)(g), F.A.C., shall comply with all remaining requirements of paragraph 62-204.800(9)(g), F.A.C., by June 1, 2012.

d. Any hospital/medical/infectious waste incinerator subject to paragraph 62-204.800(9)(g), F.A.C., that chooses to comply with the alternate schedule set forth at 40 C.F.R. § 60.39e(c), shall submit to the Department the information specified at 40 C.F.R. § 60.39e(d)(1)(i) and (ii) as part of the permit application required pursuant to subparagraph 62-204.800(9)(g)10., F.A.C. The alternate schedule must provide for compliance with the remaining requirements of sub-subparagraph 62-204.800(9)(g)9.d., F.A.C., no later than June 1, 2014.

10. Permit Application Deadline. Any hospital/medical/infectious waste incinerator subject to paragraph 62-204.800(9)(g), F.A.C., shall file an application for Title V permit revision no later than June 1, 2011.

11. Related Provisions. Each hospital/medical/infectious waste incinerator subject to paragraph 62-204.800(9)(g), F.A.C., shall also comply with all requirements of paragraph 62-296.401(4), F.A.C., to the extent that such requirements are stricter than, or supplemental to, the requirements of paragraph 62-204.800(9)(g), F.A.C.

(h) Designated Facility Plan. Florida's state plan for implementing the Emission Guidelines, as approved by the Administrator pursuant to Section 111(d) of the Clean Air Act and identified at 40 C.F.R. Part 62, Subpart K, revised as of July 1, 2009; amended December 30, 2010, at 75 FR 82269 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>); amended April 25, 2011, at 79 FR 22822 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>); amended December 27, 2011, at 76 FR 80777 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>); amended February 9, 2012, at 77 FR 6681 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>); is adopted and incorporated by reference.

(10) Title 40, Code of Federal Regulations, Part 61, National Emission Standards for Hazardous Air Pollutants.

(a) Definitions. For purposes of subsection 62-204.800(10), F.A.C., the definitions contained in the various provisions of 40 C.F.R. Part 61 adopted herein shall apply, except that the term "Administrator," when used in any provision of 40 C.F.R. Part 61 that is delegated to the Department by the U.S. Environmental Protection Agency, shall mean the Secretary or the Secretary's designee.

(b) Standards Adopted. The following National Emission Standards for Hazardous Air Pollutants contained in 40 C.F.R. Part 61, revised as of July 1, 2001, or later as specifically indicated, are adopted and incorporated by reference:

1. 40 C.F.R. Part 61, Subpart C, Beryllium; amended February 27, 2014, 79 FR 11227 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04926>).

2. 40 C.F.R. Part 61, Subpart D, Beryllium Rocket Motor Firing; amended February 27, 2014, 79 FR 11227 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04926>).

3. 40 C.F.R. Part 61, Subpart E, Mercury; amended February 27, 2014, 79 FR 11227 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04926>).

4. 40 C.F.R. Part 61, Subpart F, Vinyl Chloride; except that the Secretary is not the Administrator for the purposes of 40 C.F.R.

§ 61.66.

5. 40 C.F.R. Part 61, Subpart J, Equipment Leaks (Fugitive Emission Sources) of Benzene; except that the Secretary is not the Administrator for the purposes of 40 C.F.R. § 61.112(c).

6. 40 C.F.R. Part 61, Subpart K, Radionuclide Emissions From Elemental Phosphorous Plants.

7. 40 C.F.R. Part 61, Subpart L, Benzene Emissions from Coke By-Product Recovery Plants; except that the Secretary is not the Administrator for the purposes of 40 C.F.R. § 61.136(d).

8. 40 C.F.R. Part 61, Subpart M, Asbestos; amended September 18, 2003, at 68 FR 54789; amended July 20, 2004, at 69 FR 43322; except that the Secretary is not the Administrator for the purposes of 40 C.F.R. § 61.149(c)(2), 40 C.F.R. § 61.150(a)(4), 40 C.F.R. § 61.151(c), 40 C.F.R. § 61.152(b)(3), 40 C.F.R. § 61.154(d), and 40 C.F.R. § 61.155(a); and except that DEP Form Number 62-257.900(1) shall be used in lieu of the form identified as Figure 3 in 40 C.F.R. § 61.145.

9. 40 C.F.R. Part 61, Subpart N, Inorganic Arsenic Emission From Glass Manufacturing Plants; amended February 27, 2014, 79 FR 11227 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04926>).

10. 40 C.F.R. Part 61, Subpart O, Inorganic Arsenic Emissions From Primary Copper Smelters.

11. 40 C.F.R. Part 61, Subpart P, Inorganic Arsenic Emissions From Arsenic Trioxide and Metallic Arsenic Production Facilities.

12. 40 C.F.R. Part 61, Subpart V, Equipment Leaks (Fugitive Emissions Sources).

13. 40 C.F.R. Part 61, Subpart Y, Benzene Emissions From Benzene Storage Vessels; except that the Secretary is not the Administrator for the purposes of 40 C.F.R. § 61.273.

14. 40 C.F.R. Part 61, Subpart BB, Benzene Emissions From Benzene Transfer Operations; except that the Secretary is not the Administrator for the purposes of 40 C.F.R. § 61.353.

15. 40 C.F.R. Part 61, Subpart FF, Benzene Waste Operations; amended November 12, 2002, at 67 FR 68526; amended February 6, 2003, at 68 FR 6082; amended December 4, 2003, at 68 FR § 67931.

(c) The National Emission Standards for Hazardous Air Pollutants adopted by reference in this rule shall be controlling over other standards in the air pollution rules of the Department, except that any emissions limiting standard contained in or determined pursuant to the air pollution rules of the Department which is more stringent than one contained in a National Emission Standard, or which regulates pollutants or emissions units not regulated by an applicable National Emission Standard, shall apply.

(d) General Provisions Adopted. The general provisions of 40 C.F.R. Part 61, Subpart A, revised as of July 1, 2001, amended May 16, 2007, at 72 FR 27437; amended September 13, 2010, at 75 FR 55636 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>); amended April 19, 2012, at 77 FR 23396 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-02487>); amended February 16, 2012, at 77 FR 9303 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04925>); amended February 27, 2014, 79 FR 11227 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04926>); are adopted and incorporated by reference; except for 40 C.F.R. § 61.08 and except that the Secretary is not the Administrator for the purposes of 40 C.F.R. § 61.04, 40 C.F.R. § 61.11, and 40 C.F.R. § 61.18. In lieu of the process set forth in 40 C.F.R. § 61.08, the Department will follow the permit processing procedures of Rule 62-4.055, F.A.C.

(e) Appendices Adopted. The following appendices of 40 C.F.R. Part 61, revised as of July 1, 2001, or later as specifically indicated, are adopted and incorporated by reference:

1. 40 C.F.R. Part 61, Appendix A, National Emission Standards for Hazardous Air Pollutants, Compliance Status Information.

2. 40 C.F.R. Part 61, Appendix B, Test Methods, except Method 111 for Polonium 210, Method 114 for Radionuclides and Method 115 for Radon-222; amended September 13, 2010, at 75 FR 55636 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>); amended February 27, 2014, 79 FR 11227 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04926>).

3. 40 C.F.R. Part 61 Appendix C, Quality Assurance Procedures.

(11) Title 40, Code of Federal Regulations, Part 63, National Emission Standards for Hazardous Air Pollutants for Source Categories.

(a) Definitions. For the purposes of subsection 62-204.800(11), F.A.C., the definitions contained in the various provisions of 40 C.F.R. Part 63 adopted herein shall apply, except that the term, "Administrator," when used in any provisions of 40 C.F.R. Part 63 that is delegated to the Department by the U.S. Environmental Protection Agency, shall mean the Secretary or the Secretary's designee.

(b) Standards Adopted. The following National Emission Standards for Hazardous Air Pollutants contained in 40 C.F.R. Part

63, revised as of July 1, 2009, or later as specifically indicated, are adopted and incorporated by reference:

1. 40 C.F.R. Part 63, Subpart F, Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.106(c)(1) through (4).

2. 40 C.F.R. Part 63, Subpart G, Organic Hazardous Air Pollutants From the Synthetic Organic Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater; amended February 27, 2014, 79 FR 11227 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04926>); except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.153(c)(1) through (4).

3. 40 C.F.R. Part 63, Subpart H, Organic Hazardous Air Pollutants for Equipment Leaks; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.183(c)(1) through (4).

4. 40 C.F.R. Part 63, Subpart I, Organic Hazardous Air Pollutants for Certain Processes Subject to the Negotiated Regulation for Equipment Leaks; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.193(c)(1) through (4).

5. 40 C.F.R. Part 63, Subpart J, Polyvinyl Chloride and Copolymers Production; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.216(b)(1) through (5).

6. 40 C.F.R. Part 63, Subpart L, Coke Oven Batteries; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.313(d)(1) through (5).

7. 40 C.F.R. Part 63, Subpart M, Perchloroethylene Dry Cleaning Facilities; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.326(c)(1) through (4).

8. 40 C.F.R. Part 63, Subpart N, Chromium Emissions From Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks; amended September 19, 2012, at 77 FR 58219 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-02487>); amended February 27, 2014, 79 FR 11227 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04926>); except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.348(c)(1) through (4).

9. 40 C.F.R. Part 63, Subpart O, Ethylene Oxide Emissions Standards for Sterilization Facilities; amended February 27, 2014, 79 FR 11227 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04926>); except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.368(c)(1) through (4).

10. 40 C.F.R. Part 63, Subpart Q, Industrial Process Cooling Towers; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.407(c)(1) through (4).

11. 40 C.F.R. Part 63, Subpart R, Gasoline Distribution Facilities (Bulk Gasoline Terminals and Pipeline Breakout Stations); except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.429(c)(1) through (4).

12. 40 C.F.R. Part 63, Subpart S, Pulp and Paper Industry; amended September 11, 2012, at 77 FR 55698 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-02487>); except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.458(c)(1) through (4).

13. 40 C.F.R. Part 63, Subpart T, Halogenated Solvent Cleaning; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.470(c)(1) through (4).

14. 40 C.F.R. Part 63, Subpart U, Group I Polymers and Resins; amended April 21, 2011, at 76 FR 22566 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>); except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.507(c)(1) through (4).

15. 40 C.F.R. Part 63, Subpart W, Epoxy Resins Production and Non-Nylon Polyamides Production; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.529(c)(1) through (4).

16. 40 C.F.R. Part 63, Subpart X, Secondary Lead Smelters; amended January 5, 2012, at 77 FR 556 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>); amended January 3, 2014, at 79 FR 367 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04927>); except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.551(c)(1) through (4).

17. 40 C.F.R. Part 63, Subpart Y, Marine Tank Vessel Loading Operations; amended April 21, 2011, at 76 FR 22566 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>); amended February 27, 2014, 79 FR 11227 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04926>); except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.568(c)(1) through (4).

18. 40 C.F.R. Part 63, Subpart AA, Phosphoric Acid Manufacturing Plants; except that the Secretary is not the Administrator

for purposes of the authorities cited at 40 C.F.R. §§ 63.611(c)(1) through (4).

19. 40 C.F.R. Part 63, Subpart BB, Phosphate Fertilizers Production Plants; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.632(c)(1) through (4).

20. 40 C.F.R. Part 63, Subpart CC, Petroleum Refineries; amended June 30, 2010, at 75 FR 37730 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>); amended June 20, 2013, at 78 FR 37133 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-03498>); except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.655(c)(1) through (4).

21. 40 C.F.R. Part 63, Subpart DD, Off-Site Waste and Recovery Operations; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.698(c)(1) through (4).

22. 40 C.F.R. Part 63, Subpart EE, Magnetic Tape Manufacturing Operations; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.708(c)(1) through (4).

23. 40 C.F.R. Part 63, Subpart GG, Aerospace Manufacturing and Rework Facilities; amended February 27, 2014, 79 FR 11227 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04926>); except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.759(c)(1) through (4).

24. 40 C.F.R. Part 63, Subpart HH, Oil and Natural Gas Production Facilities (Includes Appendix to Subpart HH); amended August 16, 2012, at 77 FR 49489 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-02487>); except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.776(c)(1) through (4).

25. 40 C.F.R. Part 63, Subpart II, Shipbuilding and Ship Repair (Surface Coating); amended November 21, 2011, at 76 FR 72050 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>); except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.789(c)(1) through (4).

26. 40 C.F.R. Part 63, Subpart JJ, Wood Furniture Manufacturing Operations; amended November 21, 2011, at 76 FR 72050 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>); except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.808(c)(1) through (5).

27. 40 C.F.R. Part 63, Subpart KK, Printing and Publishing Industry; amended April 21, 2011, at 76 FR 22566 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>); except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.831(c)(1) through (4).

28. 40 C.F.R. Part 63, Subpart LL, Primary Aluminum Reduction Plants; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.853(c)(1) through (4).

29. 40 C.F.R. Part 63, Subpart MM, Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-Alone Semichemical Pulp Mills; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.868(b)(1) through (4).

30. 40 C.F.R. Part 63, Subpart OO, Tanks-Level 1; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.908(c)(1) through (4).

31. 40 C.F.R. Part 63, Subpart PP, Containers; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.929(c)(1) through (4).

32. 40 C.F.R. Part 63, Subpart QQ, Surface Impoundments; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.949(c)(1) through (4).

33. 40 C.F.R. Part 63, Subpart RR, Individual Drain Systems; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.967(c)(1) through (4).

34. 40 C.F.R. Part 63, Subpart SS, Closed Vent Systems, Control Devices, Recovery Devices and Routing to a Fuel Gas System or a Process; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.992(b)(1) through (5).

35. 40 C.F.R. Part 63, Subpart TT, Equipment Leaks – Control Level 1; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.1000(b)(1)(i) through (v).

36. 40 C.F.R. Part 63, Subpart UU, Equipment Leaks – Control Level 2 Standards; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.1019(f)(1)(i) through (v).

37. 40 C.F.R. Part 63, Subpart VV, Oil-Water Separators and Organic-Water Separators; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.1050(c)(1) through (4).

38. 40 C.F.R. Part 63, Subpart WW, Storage Vessels (Tanks) – Control Level 2; except that the Secretary is not the

Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.1067(b)(1) through (5).

39. 40 C.F.R. Part 63, Subpart XX, Ethylene Manufacturing Process Units: Heat Exchange Systems and Waste Operations; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.1097(b)(1) through (5).

40. 40 C.F.R. Part 63, Subpart YY, Generic Maximum Achievable Control Technology Standards; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.1114(b)(1) through (5).

41. 40 C.F.R. Part 63, Subpart CCC, Steel Pickling – HCL Process Facilities and Hydrochloric Acid Regeneration Plants; amended September 19, 2012, at 77 FR 58219 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-02487>); except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.1166(c)(1) through (8).

42. 40 C.F.R. Part 63, Subpart DDD, Mineral Wool Production; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.1195(c)(1) through (4).

43. 40 C.F.R. Part 63, Subpart EEE, Hazardous Waste Combustors; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.1214(c)(1) through (4).

44. 40 C.F.R. Part 63, Subpart GGG, Pharmaceuticals Production; amended April 21, 2011, at 76 FR 22566 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>); amended February 27, 2014, 79 FR 11227 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04926>); except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.1261(c)(1) through (4).

45. 40 C.F.R. Part 63, Subpart HHH, Natural Gas Transmission and Storage Facilities (Includes Appendix to Subpart HHH); amended August 16, 2012, at 77 FR 49489 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-02487>); except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.1286(c)(1) through (4).

46. 40 C.F.R. Part 63, Subpart III, Flexible Polyurethane Foam Production; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.1309(c)(1) through (5).

47. 40 C.F.R. Part 63, Subpart JJJ, Group IV Polymers and Resins; amended March 27, 2014, at 79 FR 17339 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04932>); except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.1336(c)(1) through (4).

48. 40 C.F.R. Part 63, Subpart LLL, Portland Cement Manufacturing Industry; amended February 12, 2013, at 78 FR 10005 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-03494>); except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.1358(c)(1) through (4). If a facility becomes subject to the permitting requirements of Chapter 62-213, F.A.C., solely because it is subject to the emission limiting requirements of 40 C.F.R. Part 63, Subpart LLL, the facility shall submit an application for such permit no later than October 1, 2000.

49. 40 C.F.R. Part 63, Subpart MMM, Pesticide Active Ingredient Production; amended March 27, 2014, at 79 FR 17339 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04932>); except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.1369(c)(1) through (4).

50. 40 C.F.R. Part 63, Subpart NNN, Wool Fiberglass Manufacturing; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.1388(c)(1) through (4).

51. 40 C.F.R. Part 63, Subpart OOO, Manufacture of Amino/Phenolic Resins; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.1419(c)(1) through (4).

52. 40 C.F.R. Part 63, Subpart PPP, Polyether Polyols Production; amended March 27, 2014, at 79 FR 17339 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04932>); except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.1421(c)(1) through (4).

53. 40 C.F.R. Part 63, Subpart QQQ, Primary Copper Smelting; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.1458(c)(1) through (4).

54. 40 C.F.R. Part 63, Subpart RRR, Secondary Aluminum Production; amended February 27, 2014, 79 FR 11227 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04926>); except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.1519(c)(1) through (4).

55. 40 C.F.R. Part 63, Subpart TTT, Primary Lead Smelting; amended November 15, 2011, at 76 FR 70834 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>); except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.1550(c)(1) through (4).

56. 40 C.F.R. Part 63, Subpart UUU, Catalytic Cracking Units, Catalytic Reforming Units, and Sulfur Recovery Units; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.1578(c)(1) through (5).

57. 40 C.F.R. Part 63, Subpart VVV, Publicly Owned Treatment Works; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.1594(c)(1) through (4).

58. 40 C.F.R. Part 63, Subpart XXX, Ferroalloys Production: Ferromanganese and Silicomanganese; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.1661(c)(1) through (4).

59. 40 C.F.R. Part 63, Subpart AAAA, Municipal Solid Waste Landfills; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.1985(c).

60. 40 C.F.R. Part 63, Subpart CCCC, Manufacturing of Nutritional Yeast; amended February 27, 2014, 79 FR 11227 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04926>); except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.2191(c)(1) through (4).

61. 40 C.F.R. Part 63, Subpart DDDD, Plywood and Composite Wood Products; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.2291(c)(1) through (4).

62. 40 C.F.R. Part 63, Subpart EEEE, Organic Liquids Distribution (Non-Gasoline); except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.2402(b)(1) through (4).

63. 40 C.F.R. Part 63, Subpart FFFF, Miscellaneous Organic Chemical Manufacturing; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.2545(b)(1) through (4).

64. 40 C.F.R. Part 63, Subpart GGGG, Solvent Extraction for Vegetable Oil Production; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.2871(c)(1) through (5).

65. 40 C.F.R. Part 63, Subpart HHHH, Wet-Formed Fiberglass Mat Productions; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.3002(b)(1) through (4).

66. 40 C.F.R. Part 63, Subpart IIII, Surface Coating of Automobiles and Light-Duty Trucks; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.3175(c)(1) through (4).

67. 40 C.F.R. Part 63, Subpart JJJJ, Paper and Other Web Coating; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.3420(b).

68. 40 C.F.R. Part 63, Subpart KKKK, Surface Coating of Metal Cans; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.3560(c)(1) through (4).

69. 40 C.F.R. Part 63, Subpart MMMM, Surface Coating of Miscellaneous Metal Parts and Products; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.3980(c)(1) through (4).

70. 40 C.F.R. Part 63, Subpart NNNN, Surface Coating of Large Appliances; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.4180(c)(1) through (4).

71. 40 C.F.R. Part 63, Subpart OOOO, Printing, Coating, and Dyeing of Fabrics and Other Textiles; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.4370(c)(1) through (4).

72. 40 C.F.R. Part 63, Subpart PPPP, Surface Coating of Plastic Parts and Products; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.4580(c)(1) through (4).

73. 40 C.F.R. Part 63, Subpart QQQQ, Surface Coating of Wood Building Products; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.4780(c)(1) through (4).

74. 40 C.F.R. Part 63, Subpart RRRR, Surface Coating of Metal Furniture; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.4980(c)(1) through (4).

75. 40 C.F.R. Part 63, Subpart SSSS, Surface Coating of Metal Coil; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.5200(c)(1) through (4).

76. 40 C.F.R. Part 63, Subpart TTTT, Leather Finishing Operations, except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.5455(c)(1) through (4).

77. 40 C.F.R. Part 63, Subpart UUUU, Cellulose Products Manufacturing; amended February 27, 2014, 79 FR 11227 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04926>); except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.5605(b)(1) through (4).

78. 40 C.F.R. Part 63, Subpart VVVV, Boat Manufacturing, except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.5776(b)(1) through (4).

79. 40 C.F.R. Part 63, Subpart WWWW, Reinforced Plastic Composites Production; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.5930(c)(1) through (4).

80. 40 C.F.R. Part 63, Subpart XXXX, Rubber Tire Manufacturing; except that the Secretary is not the Administrator for

purposes of the authorities cited at 40 C.F.R. §§ 63.6014(c)(1) through (4).

81. 40 C.F.R. Part 63, Subpart YYYY, Stationary Combustion Turbines; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.6170(c)(1) through (5).

82. 40 C.F.R. Part 63, Subpart ZZZZ, Stationary Reciprocating Internal Combustion Engines; amended March 3, 2010, at 75 FR 9648 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>); amended June 30, 2010, at 75 FR 37732 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>); amended August 20, 2010, at 75 FR 51570 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>); amended March 9, 2011, at 76 FR 12863 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>); amended January 30, 2013, at 78 FR 6673 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-03483>), amended March 6, 2013, at 78 FR 14457 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-03497>); amended February 27, 2014, 79 FR 11227 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04926>); except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.6670(c)(1) through (5).

83. 40 C.F.R. Part 63, Subpart AAAAA, Lime Manufacturing Plants; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.7141(c)(1) through (6).

84. 40 C.F.R. Part 63, Subpart BBBB, Semiconductor Manufacturing; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.7194(c)(1) through (4).

85. 40 C.F.R. Part 63, Subpart CCCCC, Coke Ovens; Pushing, Quenching, and Battery Stacks; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.7351(c)(1) through (6).

86. 40 C.F.R. Part 63, Subpart DDDDD, Industrial, Commercial, and Institutional Boilers and Process Heaters; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.7570(b)(1) through (5), promulgated March 21, 2011 at 76 FR 15608 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-03495>); amended January 31, 2013 at 78 FR 7137 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-03496>).

87. 40 C.F.R. Part 63, Subpart EEEEE, Iron and Steel Foundries; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.7761(c)(1) through (4).

88. 40 C.F.R. Part 63, Subpart FFFFF, Integrated Iron and Steel Manufacturing Facilities; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.7851(c)(1) through (4).

89. 40 C.F.R. Part 63, Subpart GGGGG, Site Remediation; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.7956(c)(1) through (4).

90. 40 C.F.R. Part 63, Subpart HHHHH, Miscellaneous Coating Manufacturing; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.8100(b)(1) through (4).

91. 40 C.F.R. Part 63, Subpart IIIII, Mercury Emissions from Mercury Cell Chlor-Alkali Plants; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.8264(c)(1) through (4).

92. 40 C.F.R. Part 63, Subpart JJJJJ, Brick and Structural Clay Products Manufacturing; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.8510(c)(1) through (4).

93. 40 C.F.R. Part 63, Subpart KKKKK, Clay Ceramics Manufacturing; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.8660(c)(1) through (4).

94. 40 C.F.R. Part 63, Subpart LLLLL, Asphalt Processing and Asphalt Roofing Manufacturing; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.8697(b)(1) through (4).

95. 40 C.F.R. Part 63, Subpart MMMMM, Flexible Polyurethane Foam Fabrication Operations; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.8828(c)(1) through (4).

96. 40 C.F.R. Part 63, Subpart NNNNN, Hydrochloric Acid Production; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.9070(c)(1) through (4).

97. 40 C.F.R. Part 63, Subpart PPPPP, Engine Test Cells/Stands; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.9370(c)(1) through (4).

98. 40 C.F.R. Part 63, Subpart QQQQQ, Friction Materials Manufacturing Facilities; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.9560(c)(1) through (4).

99. 40 C.F.R. Part 63, Subpart RRRRR, Taconite Iron Ore Processing; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.9651(c)(1) through (4).

100. 40 C.F.R. Part 63, Subpart SSSSS, Refractory Products Manufacturing; except that the Secretary is not the Administrator

for purposes of the authorities cited at 40 C.F.R. §§ 63.9822(c)(1) through (4).

101. 40 C.F.R. Part 63, Subpart TTTTT, Primary Magnesium Refining; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.9941(c)(1) through (4).

102. 40 C.F.R. Part 63, Subpart UUUUU, Coal and Oil-Fired Electric Utility Steam Generating Units; promulgated February 16, 2012 at 77 FR 9303 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04925>); amended April 19, 2012, 77 FR 23399 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04914>); amended April 24, 2013, 78 FR 24073 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04917>); amended November 19, 2014, at 79 FR 68777 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04937>); except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.10041(b)(1) through (4).

103. 40 C.F.R. Part 63, Subpart YYYYY, Area Sources: Electric Arc Furnace Steelmaking Facilities; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.10691(c)(1) through (6).

104. 40 C.F.R. Part 63, Subpart ZZZZZ, Iron and Steel Foundries Area Sources; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.10905(c)(1) through (6).

105. 40 C.F.R. Part 63, Subpart DDDDD, Polyvinyl Chloride and Copolymers Production Area Sources; amended April 17, 2012, at 77 FR 22847 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-02487>); except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.11145(b)(1) through (4).

106. 40 C.F.R. Part 63, Subpart EEEEE, Primary Copper Smelting Area Sources; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.11152(c)(1) through (5).

107. 40 C.F.R. Part 63, Subpart FFFFF, Secondary Copper Smelting Area Sources; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.11159(c)(1) through (4).

108. 40 C.F.R. Part 63, Subpart GGGGG, Primary Nonferrous Metals Area Sources-Zinc, Cadmium, and Beryllium; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. 63.11168(c)(1) through (5), and (d)(1) through (4).

109. 40 C.F.R. Part 63, Subpart LLLLL, Acrylic and Modacrylic Fibers Production Area Sources; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.11399(b)(1) through (4).

110. 40 C.F.R. Part 63, Subpart MMMMM, Carbon Black Production Area Sources; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.11406(b)(1) through (4).

111. 40 C.F.R. Part 63, Subpart NNNNN, Chemical Manufacturing Area Sources: Chromium Compounds; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.11413(b)(1) through (4).

112. 40 C.F.R. Part 63, Subpart OOOOO, Flexible Polyurethane Foam Production and Fabrication Area Sources; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.11420(b)(1) through (4).

113. 40 C.F.R. Part 63, Subpart PPPPP, Lead Acid Battery Manufacturing Area Sources; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.11427(b)(1) through (4).

114. 40 C.F.R. Part 63, Subpart QQQQQ, Wood Preserving Area Sources; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.11434(b)(1) through (4).

115. 40 C.F.R. Part 63, Subpart RRRRR, Clay Ceramics Manufacturing Area Sources; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.11445(c)(1) through (4).

116. 40 C.F.R. Part 63, Subpart SSSSS, Glass Manufacturing Area Sources; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.11460(b)(1) through (4).

117. 40 C.F.R. Part 63, Subpart TTTTT, Secondary Nonferrous Metals Processing Area Sources; except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. §§ 63.11473(c)(1) through (4).

(c) The National Emission Standards for Hazardous Air Pollutants adopted by reference in this rule shall be controlling over other standards in the air pollution rules of the Department, except that any emissions limiting standard contained in or determined pursuant to the air pollution rules of the Department which is more stringent than one contained in a National Emission Standard, or which regulates pollutants or emissions units not regulated by an applicable National Emission Standard, shall apply.

(d) General Subparts Adopted. The following general subparts of 40 C.F.R. Part 63, revised as of July 1, 2009, or later as specifically indicated, are adopted and incorporated by reference:

1. 40 C.F.R. Part 63, Subpart A, General Provisions; amended September 13, 2010, at 75 FR 55636 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>); amended March 21, 2011, at 76 FR 15554

(<http://www.flrules.org/Gateway/reference.asp?No=Ref-01740>); amended March 21, 2011, at 76 FR 15608 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-03495>); amended January 5, 2012, at 77 FR 556 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>); amended April 17, 2012, at 77 FR 22847 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-02487>); amended August 14, 2012, at 77 FR 48433 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-02487>); amended August 16, 2012 at 77 FR 49489 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-02487>); amended September 11, 2012, at 77 FR 55698 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-02487>); amended January 30, 2013, at 78 FR 6673 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-03483>); amended January 31, 2013, at 78 FR 7137 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-03496>); amended February 1, 2013, at 78 FR 7487 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04941>); amended February 27, 2014, 79 FR 11227 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04926>); amended March 27, 2014, at 79 FR 17339 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04932>); except that the Secretary is not the Administrator for purposes of the authorities cited at 40 C.F.R. § 63.5(e), 40 C.F.R. § 63.5(f), 40 C.F.R. § 63.6(g), 40 C.F.R. § 63.6(h)(9), 40 C.F.R. § 63.6(j), 40 C.F.R. § 63.13, and 40 C.F.R. § 63.14.

2. 40 C.F.R. Part 63, Subpart B, Requirements for Control Technology Determinations for Major Sources in Accordance with Clean Air Act Sections, §§ 112(g) and 112(j); is adopted and incorporated by reference, subject to the following provisions:

a. The “effective date of Section 112(g)(2)(B)” as defined in 40 C.F.R. § 63.41 shall be July 1, 1997.

b. The “Notice of MACT Approval” as defined in 40 C.F.R. § 63.41 shall be the air construction permit.

c. The “permitting authority” as defined in 40 C.F.R. § 63.41 shall be the Department.

d. In lieu of the administrative procedures for review of the Notice of MACT Approval as set forth in 40 C.F.R. § 63.43(f)(1) through (5), the Department will follow the permit processing procedures of Rule 62-4.055, F.A.C.

e. In lieu of the opportunity for public comment on the Notice of MACT Approval as set forth in 40 C.F.R. § 63.43(h), the Department will provide opportunity for public comment on the Notice of MACT Approval pursuant to Rule 62-210.350, F.A.C.

f. The Notice of MACT Approval shall become effective upon issuance of the air construction permit by the Department.

3. 40 C.F.R. Part 63, Subpart C, List of Hazardous Air Pollutants, Petitions Process, Lesser Quantity Designations, Source Category List.

4. 40 C.F.R. Part 63, Subpart D, Compliance Extensions for Early Reductions of Hazardous Air Pollutants, except any notice required to be published by the Department shall be prepared by the Department and published by the applicant with proof of publication submitted to the Department.

5. 40 C.F.R. Part 63, Subpart E, Approval of State Programs and Delegation of Federal Authorities; Section 63.90, Program Overview, only.

(e) Appendices Adopted. The following appendices of 40 C.F.R. Part 63, revised as of July 1, 2009, or later as specifically indicated, are adopted and incorporated by reference:

1. Appendix A, Test Methods; amended September 13, 2010, at 75 FR 55636 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>); amended February 27, 2014, 79 FR 11227 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04926>).

2. Appendix B, Sources Defined for Early Reduction Provisions.

3. Appendix C, Determination of the Fraction Biodegraded (F_{bio}) in a Biological Treatment Unit.

4. Appendix D, Alternative Validation Procedure for EPA Waste and Wastewater Methods.

5. Appendix E, Monitoring Procedure for Nonthoroughly Mixed Open Biological Treatment Systems at Kraft Pulp Mills Under Unsafe Sampling Conditions.

(12) Title 40, Code of Federal Regulations, Part 64, Compliance Assurance Monitoring. The provisions of 40 C.F.R. Part 64, revised as of July 1, 2001, are adopted and incorporated by reference.

(13) Title 40, Code of Federal Regulations, Part 65, Consolidated Federal Air Rule. The following subparts of 40 C.F.R. Part 65, revised as of July 1, 2001, or later as specifically indicated, are adopted and incorporated by reference.

(a) 40 C.F.R. Part 65, Subpart A, General Provisions; amended April 20, 2006, at 71 FR 20445; amended August 27, 2007, at 72 FR 48938; amended December 28, 2007, at 72 FR 73625; amended December 22, 2008, at 73 FR 78199.

(b) 40 C.F.R. Part 65, Subpart B, Reserved.

(c) 40 C.F.R. Part 65, Subpart C, Storage Vessels.

(d) 40 C.F.R. Part 65, Subpart D, Process Vents.
 (e) 40 C.F.R. Part 65, Subpart E, Transfer Racks.
 (f) 40 C.F.R. Part 65, Subpart F, Equipment Leaks.
 (g) 40 C.F.R. Part 65, Subpart G, Closed Vent Systems, Control Devices and Routing to a Fuel Gas System or a Process.
 (14) Title 40, Code of Federal Regulations, Part 68. (Reserved).
 (15) Title 40, Code of Federal Regulations, Part 70, State Operating Permit Programs. The provisions of 40 C.F.R. Part 70, §§ 70.1 through 70.11, revised as of July 1, 2001; amended June 27, 2003, at 68 FR 38517, are adopted and incorporated by reference.
 (16) Title 40, Code of Federal Regulations, Part 72, Permits Regulation.
 (a) The following subparts of 40 C.F.R. Part 72, revised as of July 1, 2005, or later as specifically indicated, are adopted and incorporated by reference:
 1. 40 C.F.R. Part 72, Subpart A, Acid Rain Program General Provisions; amended April 28, 2006, at 71 FR 25327; amended September 7, 2007, at 72 FR 51493; amended January 24, 2008, at 73 FR 4311; amended March 28, 2011, at 76 FR 17288 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>).
 2. 40 C.F.R. Part 72, Subpart B, Designated Representative; amended April 28, 2006, at 71 FR 25327; amended October 19, 2007, at 72 FR 59190.
 3. 40 C.F.R. Part 72, Subpart C, Acid Rain Permit Applications.
 4. 40 C.F.R. Part 72, Subpart D, Acid Rain Compliance Plan and Compliance Options.
 5. 40 C.F.R. Part 72, Subpart E, Acid Rain Permit Contents.
 6. 40 C.F.R. Part 72, Subpart F, Federal Acid Rain Permit Issuance Procedures.
 7. 40 C.F.R. Part 72, Subpart G, Acid Rain Phase II Implementation.
 8. 40 C.F.R. Part 72, Subpart H, Permit Revisions.
 9. 40 C.F.R. Part 72, Subpart I, Compliance Certification.
 (b) The following appendices of 40 C.F.R. Part 72, revised as of July 1, 2005, or later as specifically indicated, are adopted and incorporated by reference:
 1. Appendix A, Methodology for Annualization of Emissions Limits.
 2. Appendix B, Methodology for Conversion of Emissions Limits.
 3. Appendix C, Actual 1985 Yearly SO₂ Emissions Calculation.
 4. Appendix D, Calculation of Potential Electric Output Capacity.
 (17) Title 40, Code of Federal Regulations, Part 73, Sulfur Dioxide Allowance System. The following subparts of 40 C.F.R. Part 73, revised as of July 1, 2005, or later as specifically indicated, are adopted and incorporated by reference:
 (a) 40 C.F.R. Part 73, Subpart A, Background and Summary.
 (b) 40 C.F.R. Part 73, Subpart B, Allowance Allocations.
 (c) 40 C.F.R. Part 73, Subpart C, Allowance Tracking System; amended April 28, 2006, at 71 FR 25327.
 (d) 40 C.F.R. Part 73, Subpart D, Allowance Transfers.
 (e) 40 C.F.R. Part 73, Subpart E, Auctions, Direct Sales, and Independent Power Producers Written Guarantee.
 (f) 40 C.F.R. Part 73, Subpart F, Energy Conservation and Renewable Energy Reserve.
 (g) 40 C.F.R. Part 73, Subpart G, Small Diesel Refineries.
 (18) Title 40, Code of Federal Regulations, Part 74, Sulfur Dioxide Opt-Ins. The following subparts of 40 C.F.R. Part 74, revised as of July 1, 2006, or later as specifically indicated, are adopted and incorporated by reference:
 (a) 40 C.F.R. Part 74, Subpart A, Background and Summary.
 (b) 40 C.F.R. Part 74, Subpart B, Permitting Procedures.
 (c) 40 C.F.R. Part 74, Subpart C, Allowance Calculations for Combustion Sources.
 (d) 40 C.F.R. Part 74, Subpart E, Allowance Tracking and Transfer and End of Year Compliance.
 (e) 40 C.F.R. Part 74, Subpart F, Monitoring Emissions: Combustion Sources.
 (19) Title 40, Code of Federal Regulations, Part 75, Continuous Emission Monitoring.
 (a) The following subparts of 40 C.F.R. Part 75, revised as of July 1, 2005, or later as specifically indicated, are adopted and incorporated by reference:
 1. 40 C.F.R. Part 75, Subpart A, General; amended January 24, 2008, at 73 FR 4311; amended March 28, 2011, at 76 FR 17288 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>); amended August 12, 2011, at 76 FR 50129

(<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>); amended January 18, 2012, at 77 FR 2456 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>).
 2. 40 C.F.R. Part 75, Subpart B, Monitoring Provisions; amended September 7, 2007, at 72 FR 51493; amended January 24, 2008, at 73 FR 4311; amended March 28, 2011, at 76 FR 17288 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>); amended April 4, 2011, at 76 FR 18415 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>).
 3. 40 C.F.R. Part 75, Subpart C, Operation and Maintenance Requirements; amended September 7, 2007, at 72 FR 51493; amended January 24, 2008, at 73 FR 4311; amended March 28, 2011, at 76 FR 17288 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>).
 4. 40 C.F.R. Part 75, Subpart D, Missing Data Substitution Procedures; amended January 24, 2008, at 73 FR 4311; amended March 28, 2011, at 76 FR 17288 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>).
 5. 40 C.F.R. Part 75, Subpart E, Alternative Monitoring Systems; amended March 28, 2011, at 76 FR 17288 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>).
 6. 40 C.F.R. Part 75, Subpart F, Recordkeeping Requirements; amended January 24, 2008, at 73 FR 4311; amended September 7, 2007, at 72 FR 51493; amended March 28, 2011, at 76 FR 17288 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>).
 7. 40 C.F.R. Part 75, Subpart G, Reporting Requirements; amended January 24, 2008, at 73 FR 4311; amended March 28, 2011, at 76 FR 17288 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>).
 8. 40 C.F.R. Part 75, Subpart H, NO_x Mass Emissions Provisions; amended January 24, 2008, at 73 FR 4311.
 9. 40 C.F.R. Part 75, Subpart I, Hg Mass Emission Provisions; amended January 24, 2008, at 73 FR 4311; amended September 7, 2007, at 72 FR 51493; amended March 28, 2011, at 76 FR 17288 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>).
 (b) The following appendices of 40 C.F.R. Part 75, revised as of July 1, 2005, or later as specifically indicated, are adopted and incorporated by reference:
 1. Appendix A, Specifications and Test Procedures; amended September 7, 2007, at 72 FR 51493; amended January 24, 2008, at 73 FR 4311; amended November 4, 2008, at 73 FR 65554; amended March 28, 2011, at 76 FR 17288 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>).
 2. Appendix B, Quality Assurance and Quality Control Procedures; amended September 7, 2007, at 72 FR 51493; amended January 24, 2008, at 73 FR 4311; amended March 28, 2011, at 76 FR 17288 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>).
 3. Appendix C, Missing Data Estimation Procedures.
 4. Appendix D, Optional SO₂ Emissions Data Protocol for Gas-Fired and Oil-Fired Units; amended January 24, 2008, at 73 FR 4311; amended August 12, 2011, at 76 FR 50129 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>); amended January 18, 2012, at 77 FR 2456 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>).
 5. Appendix E, Optional NO_x Emissions Estimation Protocol for Gas-Fired Peaking Units and Oil-Fired Peaking Units; amended January 24, 2008, at 73 FR 4311; amended March 28, 2011, at 76 FR 17288 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>).
 6. Appendix F, Conversion Procedures; amended January 24, 2008, at 73 FR 4311; amended February 13, 2008, at 73 FR 8408; amended September 7, 2007, at 72 FR 51493; amended March 28, 2011, at 76 FR 17288 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>); amended January 18, 2012, at 77 FR 2456 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>).
 7. Appendix G, Determination of CO₂ Emissions; amended January 24, 2008, at 73 FR 4311.
 8. Appendix H, Revised Traceability Protocol No. 1.
 9. Appendix I, Optional F-Factor/Fuel Flow Method; amended September 7, 2007, at 72 FR 51493.
 10. Appendix J, Compliance Dates for Revised Recordkeeping Requirements and Missing Data Procedures.
 11. Appendix K, Quality Assurance and Operating Procedures for Sorbent Trap Monitoring Systems; amended September 7, 2007, at 72 FR 51493; amended January 24, 2008, at 73 FR 4311; amended March 28, 2011, at 76 FR 17288 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>).
 (20) Title 40, Code of Federal Regulations, Part 76, Acid Rain Nitrogen Oxides Emission Reduction Program.
 (a) The provisions of 40 C.F.R. Part 76, §§ 76.1 through 76.15, revised as of July 1, 2001, are adopted and incorporated by reference.
 (b) The following appendices of 40 C.F.R. Part 76, revised as of July 1, 2001, or later as specifically indicated, are adopted and

incorporated by reference:

1. Appendix A, Phase I Affected Coal-Fired Utility Units with Group 1 or Cell Burner Boilers.
 2. Appendix B, Procedures and Methods for Estimating Costs of Nitrogen Oxides Controls Applied to Group 1, Phase I Boilers.
- (21) Title 40, Code of Federal Regulations, Part 77, Excess Emissions. The provisions of 40 C.F.R. Part 77, §§ 77.1 through 77.6, revised as of July 1, 2005, are adopted and incorporated by reference.
- (22) Title 40, Code of Federal Regulations, Part 78, Appeal Procedures for Acid Rain Program. The provisions of 40 C.F.R. Part 78, §§ 78.1 through 78.20, revised as of July 1, 2005, amended April 28, 2006, at 71 FR 25327, are adopted and incorporated by reference.
- (23) Title 40, Code of Federal Regulations, Part 81, Designation of Areas for Air Quality Planning Purposes.
- (a) 40 C.F.R. Part 81, Subpart B, Designation of Air Quality Control Regions §§ 81.49, 81.68, 81.91, 81.95, 81.96, and 81.97, revised as of July 1, 2009, are adopted and incorporated by reference.
- (b) 40 C.F.R. Part 81, Subpart C, Section 107 Attainment Status Designations, § 81.310, revised as of July 1, 2009; amended November 22, 2010, at 75 FR 71033 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>); amended November 22, 2011, at 75 FR 72097 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>); amended February 17, 2012, at 77 FR 9532 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01720>); amended May 21, 2012, at 77 FR 30087 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-02487>); amended August 5, 2013, 78 FR 47191 (<https://www.flrules.org/Gateway/reference.asp?No=Ref-04918>); is adopted and incorporated by reference.
- (c) 40 C.F.R. Part 81, Subpart D, Identification of Mandatory Class I Federal Areas Where Visibility Is An Important Value, § 81.407, revised as of July 1, 2009, is adopted and incorporated by reference.
- (24) Title 40, Code of Federal Regulations, Part 82, Protection of Stratospheric Ozone. The following subparts of 40 C.F.R. Part 82, revised as of July 1, 2001, or later as specifically indicated, are adopted and incorporated by reference:
- (a) 40 C.F.R. Part 82, Subpart A, Production and Consumption Controls.
 - (b) 40 C.F.R. Part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners.
 - (c) 40 C.F.R. Part 82, Subpart C, Ban on Nonessential Products Containing Class I Substances and Ban on Nonessential Products Containing or Manufactured With Class II Substances.
 - (d) 40 C.F.R. Part 82, Subpart E, The Labeling of Products Using Ozone-Depleting Substances.
 - (e) 40 C.F.R. Part 82, Subpart F, Recycling and Emissions Reduction.
 - (f) 40 C.F.R. Part 82, Subpart G, Significant New Alternatives Policy Program.
- (25) Title 40, Code of Federal Regulations, Part 89, Control of Emissions From New and In-Use Nonroad Compression-Ignition Engines. The following subparts of 40 C.F.R. Part 89, revised as of July 1, 2007, or later as specifically indicated, are adopted and incorporated by reference.
- (a) 40 C.F.R. Part 89, Subpart A, General; amended February 24, 2009, at 74 FR 8309.
 - (b) 40 C.F.R. Part 89, Subpart B, Emission Standards and Certification Provisions.
- (26) Title 40, Code of Federal Regulations, Part 93, Determining Conformity of Federal Actions to State or Federal Implementation Plans. The provisions of 40 C.F.R. 93, Subpart A, Conformity to State or Federal Implementation Plans of Transportation Plans, Programs, and Projects Developed, Funded or Approved Under Title 23 U.S.C. or the Federal Transit Laws, revised as of July 1, 2001; amended August 6, 2002, at 67 FR 50808, are adopted and incorporated by reference.
- (27) Title 40, Code of Federal Regulations, Part 96, NO_x Budget Trading Program and CAIR NO_x and SO₂ Trading Programs for State Implementation Plans. The following subparts of 40 C.F.R. Part 96, revised as of July 1, 2005, or later as specifically indicated, are adopted and incorporated by reference.
- (a) Subpart AA, CAIR NO_x Annual Trading Program General Provisions; amended April 28, 2006, at 71 FR 25327; amended December 13, 2006, at 71 FR 74792; amended October 19, 2007, at 72 FR 59190.
 - (b) Subpart BB, CAIR Designated Representative for CAIR NO_x Sources; amended April 28, 2006, at 71 FR 25327; amended December 13, 2006, at 71 FR 74792.
 - (c) Subpart CC, Permits; amended April 28, 2006, at 71 FR 25327; amended December 13, 2006, at 71 FR 74792.
 - (d) Subpart EE, CAIR NO_x Allowance Allocations; amended April 28, 2006, at 71 FR 25327; amended December 13, 2006, at 71 FR 74792.
 - (e) Subpart FF, CAIR NO_x Allowance Tracking System; amended April 28, 2006, at 71 FR 25327; amended December 13, 2006, at 71 FR 74792.
 - (f) Subpart GG, CAIR NO_x Allowance Transfers.

- (g) Subpart HH, Monitoring and Reporting; amended April 28, 2006, at 71 FR 25327.
- (h) Subpart AAA, CAIR SO₂ Trading Program General Provisions; amended April 28, 2006, at 71 FR 25327; amended December 13, 2006, at 71 FR 74792; amended October 19, 2007, at 72 FR 59190.
- (i) Subpart BBB, CAIR Designated Representative for CAIR SO₂ Sources; amended April 28, 2006, at 71 FR 25327; amended December 13, 2006, at 71 FR 74792.
- (j) Subpart CCC, Permits; amended April 28, 2006, at 71 FR 25327; amended December 13, 2006, at 71 FR 74792.
- (k) Subpart FFF, CAIR SO₂ Allowance Tracking System; amended April 28, 2006, at 71 FR 25327; amended December 13, 2006, at 71 FR 74792.
- (l) Subpart GGG, CAIR SO₂ Allowance Transfers; amended April 28, 2006, at 71 FR 25327.
- (m) Subpart HHH, Monitoring and Reporting; amended April 28, 2006, at 71 FR 25327; amended December 13, 2006, at 71 FR 74792.
- (n) Subpart AAAA, CAIR NO_x Ozone Season Trading Program General Provisions; amended April 28, 2006, at 71 FR 25327; amended December 13, 2006, at 71 FR 74792; amended October 19, 2007, at 72 FR 59190.
- (o) Subpart BBBB, CAIR Designated Representative for CAIR NO_x Ozone Season Sources; amended April 28, 2006, at 71 FR 25327.
- (p) Subpart CCCC, Permits; amended April 28, 2006, at 71 FR 25327.
- (q) Subpart EEEE, CAIR NO_x Ozone Season Allowance Allocations; amended April 28, 2006, at 71 FR 25327; amended December 13, 2006, at 71 FR 74792.
- (r) Subpart FFFF, CAIR NO_x Ozone Season Allowance Tracking System; amended April 28, 2006, at 71 FR 25327; amended December 13, 2006, at 71 FR 74792.
- (s) Subpart GGGG, CAIR NO_x Ozone Season Allowance Transfers.
- (t) Subpart HHHH, Monitoring and Reporting; amended April 28, 2006, at 71 FR 25327; amended December 13, 2006, at 71 FR 74792.

Rulemaking Authority 403.061, 403.8055 FS. Law Implemented 403.031, 403.061, 403.087, 403.0872, 403.8055 FS. History—New 3-13-96, Amended 6-25-96, 10-7-96, 10-17-96, 12-20-96, 4-18-97, 6-18-97, 7-7-97, 10-3-97, 12-10-97, 3-2-98, 4-7-98, 5-20-98, 6-8-98, 10-19-98, 4-1-99, 7-1-99, 9-1-99, 10-1-99, 4-1-00, 10-1-00, 1-1-01, 8-1-01, 10-1-01, 4-1-02, 7-1-02, 10-1-02, 1-1-03, 4-1-03, 10-1-03, 1-1-04, 4-1-04, 7-1-04, 10-1-04, 1-1-05, 4-1-05, 7-1-05, 10-1-05, 1-1-06, 4-1-06, 7-1-06, 9-4-06, 9-6-06, 1-8-07, 1-31-07, 4-2-07, 5-31-07, 7-2-07, 10-1-07, 2-1-08, 7-1-08, 10-1-08, 10-6-08, 12-1-08, 11-18-09, 6-11-10, 7-1-10, 10-1-10, 12-30-10, 12-1-11, 12-1-12, 5-22-13, 12-17-13, 1-24-14, 1-14-15.

Chapter 62-210, F.A.C.

Stationary Sources - General Requirements

CHAPTER 62-210
STATIONARY SOURCES – GENERAL REQUIREMENTS

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62-210.100 Purpose and Scope.

Rulemaking Authority 403.061 FS. Law Implemented 403.031, 403.061, 403.087 FS. History—New 2-9-93, Formerly 17-210.100, Amended 11-23-94, 1-10-07, Repealed 2-16-12.

62-210.200 Definitions.

The following words and phrases when used in this chapter and in Chapters 62-204, 62-212, 62-213, 62-214, 62-296, and 62-297, F.A.C., shall, unless the context clearly indicates otherwise, have the following meanings:

(1) “Acid Mist” – Liquid drops of any size of any acid including sulfuric acid, sulfur dioxide and sulfur trioxide as measured by EPA test method 8, as described at 40 C.F.R. Part 60, Appendix A-4, adopted and incorporated by reference at Rule 62-204.800, F.A.C.

(2) “Acid Rain Compliance Option” – A method of compliance available to an Acid Rain unit under the Federal Acid Rain Program.

(3) “Acid Rain Compliance Plan” – That portion of an Acid Rain Part application submitted by the designated representative of an Acid Rain source which specifies the methods, or compliance options, by which each Acid Rain unit at the source will meet the applicable Acid Rain emissions limitation and Acid Rain emissions reduction requirements.

(4) “Acid Rain Part” – That separate portion of the Title V source permit specifying the Federal Acid Rain Program requirements for an Acid Rain source, and for the owners, operators and the designated representative of the Acid Rain source or the Acid Rain unit.

(5) “Acid Rain Program or Federal Acid Rain Program” – The national sulfur dioxide and nitrogen oxides air pollution control and emissions reduction program established pursuant to 42 U.S.C. sections 7651-7651o and 40 C.F.R. Parts 72, 73, 75, 76, 77, and 78, adopted and incorporated by reference in Rule 62-204.800, F.A.C.

(6) “Acid Rain Source” – A Title V source with one or more Acid Rain units.

(7) “Acid Rain Unit” – A fossil fuel-fired combustion device listed as subject to any Acid Rain emissions reduction requirement or Acid Rain emissions limitation at 40 C.F.R. 72.6 or 79.2, adopted and incorporated by reference in Rule 62-204.800, F.A.C.

(8) “Actual Emissions” – The actual rate of emission of a pollutant from an emissions unit as determined in accordance with the following provisions:

(a) In general, actual emissions as of a particular date shall equal the average rate, in tons per year, at which the emissions unit actually emitted the pollutant during a consecutive 24-month period which precedes the particular date and which is representative of the normal operation of the emissions unit. The Department shall allow the use of a different time period upon a determination that it is more representative of the normal operation of the emissions unit. Actual emissions shall be calculated using the emissions unit’s actual operating hours, production rates and types of materials processed, stored, or combusted during the selected time period.

(b) The Department may presume that unit-specific allowable emissions for an emissions unit are equivalent to the actual emissions of the emissions unit provided that such unit-specific allowable emissions limits are federally enforceable.

(c) For any emissions unit that has not begun normal operations on a particular date, actual emissions shall equal the potential emissions of the emissions unit on that date.

(9) “Administrator” – The Administrator of the United States Environmental Protection Agency or the Administrator’s designee.

(10) “Affected Pollutant” – In a nonattainment area or area of influence for any pollutant other than ozone, the pollutant for which the area is designated nonattainment. In the case of an ozone nonattainment area classified as marginal or higher, the affected pollutants are volatile organic compounds (VOC) and nitrogen oxides (NOx). For a transitional ozone nonattainment area, the affected pollutant is VOC only. A pollutant is no longer an affected pollutant upon redesignation of the nonattainment area to an attainment area by the U.S. Environmental Protection Agency.

(11) “Affected States” – All states, specifically, Alabama, Georgia, or Mississippi or any combination thereof, whose air quality may be affected by the operation of, or that are within 50 miles of, a Title V source for which a permit, permit revision, or permit renewal is being proposed under Chapter 62-213, F.A.C.

(12) “Air Curtain Incinerator” – A portable or stationary combustion device that directs a plane of high velocity forced draft air through a manifold head into a pit with vertical walls in such a manner as to maintain a curtain of air over the surface of the pit and a recirculating motion of air under the curtain.

(13) “Air Dried Coating” – Coatings which are dried by the use of air or forced warm air at temperatures up to 194 degrees Fahrenheit (90 degrees Celsius).

(14) “Air General Permit” – An authorization by rule as described in subsection 62-210.300(4), F.A.C., to construct or operate an air pollutant emitting facility. Use of such authorization by any individual facility does not require agency action.

(15) “Air Pollutant” – Any substance (particulate, liquid, gaseous, organic or inorganic) which if released, allowed to escape, or emitted, whether intentionally or unintentionally, into the outdoor atmosphere may result in or contribute to air pollution.

(16) “Air Pollution” – The presence in the outdoor atmosphere of the state of any one or more substances or pollutants in quantities which are or may be harmful or injurious to human health or welfare, animal or plant life, or property, or unreasonably interfere with the enjoyment of life or property, including outdoor recreation.

(17) “Air Quality Control Region” – Any air quality control region designated pursuant to Section 107 of the Clean Air Act. The boundaries of the air quality control regions in Florida are set forth in 40 C.F.R. Part 81, Sections 81.49, 81.68, 81.91, 81.95, 81.96 and 81.97, adopted and incorporated by reference in Rule 62-204.800, F.A.C.

(18) “Allowable Emissions” – The emission rate calculated using the maximum rated capacity of the emissions unit, as limited or modified by any state or federally enforceable restrictions on the operating rate or hours of operation, or both, and the most stringent state or federal emission limiting standard applicable to the emissions unit; or the maximum allowable emission rate specified by any state or federally enforceable permit conditions.

(19) “Ambient Air Quality Standard” or “Ambient Standard” – A restriction specified at 40 C.F.R. Part 50, and monitored by the Department pursuant to 40 C.F.R. Part 53 and 58, all adopted and incorporated by reference at Rule 62-204.800, F.A.C., to limit the quantity or concentration of an air pollutant that may be allowed to exist in the ambient air for any specific period of time.

(20) “Animal Crematory” – Any combustion apparatus used solely for the cremation of animal remains.

(21) “Applicable Requirement” – For purposes of the permitting requirements of Chapter 62-213, F.A.C., applicable requirement means all of the following as they apply to a Title V source or any emissions unit at such source:

(a) Any standard or other requirement provided for in the State Implementation Plan or Designated Facility Plan.

(b) Any term or condition of any preconstruction permit issued by the Environmental Protection Agency pursuant to 40 C.F.R. §52.21 or by the Department pursuant to subparagraph 62-204.800(11)(d)2., F.A.C. (formerly 62-204.800(10)(d)2.); Rule 62-212.300, F.A.C. (formerly 17-212.300, formerly 17-2.520); Rule 62-212.400, F.A.C. (formerly 17-212.400, formerly 17-2.500); Rule 62-212.500, F.A.C. (formerly 17-212.500, formerly 17-2.510); Rule 62-212.720, F.A.C.; Rule 17-2.17, F.A.C. (repealed); or Rule 62-4.210, F.A.C. (formerly 17-4.210, formerly 17-4.21).

(c) Any term or condition of any air operation permit issued pursuant to paragraph 62-210.300(2)(b), F.A.C.

(d) Any standard or other requirement under Chapter 62-4, 62-204, 62-210, 62-212, 62-213, 62-214, 62-252, 62-256, 62-257, 62-281, 62-296, or 62-297, F.A.C.

(e) Any standard or other requirement pursuant to the definition of “applicable requirement” in 40 C.F.R. § 70.2, adopted and

incorporated by reference at Rule 62-204.800, F.A.C.

(f) If incorporated into the Specific Operating Agreement with the Department, any standard or other requirement adopted by a local air pollution control program having geographical jurisdiction over the emission unit, unless such standard or requirement conflicts with the provisions of the Federal Acid Rain Program or the Florida Electrical Power Plant Siting Act.

(22) “Application Area” – The area where a coating is applied by spraying, dipping, or flowcoating techniques.

(23) “Approved Conditional Compliance Option” – A conditional compliance option which has been incorporated into the Acid Rain Part.

(24) “Area of Influence” – An area which is outside the boundary of a nonattainment or air quality maintenance area but within the locus of all points that are fifty kilometers outside of the boundary of the nonattainment or air quality maintenance area.

(25) “Asphalt” – A dark brown to black cementitious material (solid, semi-solid, or liquid in consistency) in which the predominating constituents are bitumens which occur in nature as such or which are obtained as a residue in refining petroleum.

(26) “Asphalt Concrete Plant” or “Hot Mix Asphalt Plant” – Any facility that produces hot mix asphalt by heating and drying aggregate and mixing with asphalt cements.

(27) “Base Emission Limit” – The maximum emission offset that any emissions unit is eligible to provide to another emissions unit. In an ozone nonattainment area classified as marginal or higher, the base emission limit is defined separately for emissions of volatile organic compounds (VOC) and nitrogen oxides (NOx).

(28) “Baseline Actual Emissions” and “Baseline Actual Emissions for PAL” – The rate of emissions, in tons per year, of a PSD pollutant, as follows:

(a) For any existing electric utility steam generating unit, baseline actual emissions means the average rate, in tons per year, at which the unit actually emitted the pollutant during any consecutive 24-month period selected by the owner or operator within the 5-year period immediately preceding the date a complete permit application is received by the Department. The Department shall allow the use of a different time period upon a determination that it is more representative of normal source operation.

1. The average rate shall include fugitive emissions to the extent quantifiable, and emissions associated with startups and shutdowns.

2. The average rate shall be adjusted downward to exclude any non-compliant emissions that occurred while the source was operating above any emission limitation that was legally enforceable during the consecutive 24-month period.

3. For a PSD pollutant, when a project involves multiple emissions units, only one consecutive 24-month period must be used to determine the baseline actual emissions for the emissions units being changed. A different consecutive 24-month period can be used for each PSD pollutant.

4. The average rate shall not be based on any consecutive 24-month period for which there is inadequate information for determining annual emissions, in tons per year, and for adjusting this amount if required by subparagraph (a)2. above.

(b) For an existing emissions unit (other than an electric utility steam generating unit), baseline actual emissions means the average rate, in tons per year, at which the emissions unit actually emitted the pollutant during any consecutive 24-month period selected by the owner or operator within the 10-year period immediately preceding the date a complete permit application is received by the Department, except that the 10-year period shall not include any period earlier than November 15, 1990.

1. The average rate shall include fugitive emissions to the extent quantifiable, and emissions associated with startups and shutdowns.

2. The average rate shall be adjusted downward to exclude any non-compliant emissions that occurred while the source was operating above an emission limitation that was legally enforceable during the consecutive 24-month period.

3. The average rate shall be adjusted downward to exclude any emissions that would have exceeded an emission limitation with which the major stationary source must currently comply, had such major stationary source been required to comply with such limitations during the consecutive 24-month period.

4. For a PSD pollutant, when a project involves multiple emissions units, only one consecutive 24-month period must be used to determine the baseline actual emissions for all the emissions units being changed. A different consecutive 24-month period can be used for each PSD pollutant.

5. The average rate shall not be based on any consecutive 24-month period for which there is inadequate information for determining annual emissions, in tons per year, and for adjusting this amount if required by subparagraphs (b)2. and 3. above.

(c) For a new emissions unit, the baseline actual emissions for purposes of determining the emissions increase that will result from the initial construction and operation of such unit shall equal zero; and thereafter, for all other purposes, shall equal the unit's

potential to emit.

(29) “Baseline Area” –

(a) The baseline area for sulfur dioxide is all of the state.

(b) The baseline area for nitrogen dioxide is all of the state.

(c) The baseline area for PM₁₀ is all of the state.

(d) The baseline area for PM_{2.5} is all of the state.

(30) “Baseline Concentration” – For each pollutant for which a minor source baseline date is established and for each averaging time for which a maximum allowable increase is established, the ambient concentration level that exists in the baseline area at the time of the applicable minor source baseline date.

(a) The baseline concentration shall include the concentration attributable to:

1. The actual emissions representative of sources in existence on the applicable minor source baseline date, except as provided at paragraph (b) below; and

2. The federally enforceable allowable emissions of major stationary sources on which construction commenced on or before the major source baseline date but which were not in operation by the applicable minor source baseline date.

(b) The baseline concentration shall not include the concentration attributable to the following emissions; rather, such emissions shall affect the amount of any applicable allowable increase remaining available:

1. The actual emissions from any major stationary source on which construction commenced after the major source baseline date; and

2. Any increase or decrease in the actual emissions of facilities occurring after the applicable minor source baseline date.

(c) For purposes of this definition, “construction” means any physical change or change in the method of operation (including fabrication, erection, installation, demolition, shutdown or modification of an emissions unit) that would result in a change in emissions, and “commence construction” has the meaning given at Rule 62-210.200, F.A.C., provided, however, that in the case of demolition or shutdown of an emissions unit, “commence construction” means that the owner or operator has permanently ceased all operations of the unit.

(d) Notwithstanding the provisions of paragraph (b) above:

1. The change in concentration attributable to any decrease in the actual emissions of a facility on which the Department has relied in demonstrating attainment, defining reasonable further progress, or issuing a permit under the provisions of Rule 17-2.17 (repealed), 17-2.510 (transferred), 17-2.650 (transferred), 62-212.500, 62-296.500 through 62-296.570, or 62-296.700 through 62-296.712, F.A.C., shall be included in the baseline concentration and not be considered in determining the amount of any maximum allowable increase remaining available; and

2. Concentrations of particulate matter attributable to the increase in emissions from construction or other temporary emission-related activities of new or modified facilities shall be excluded in determining compliance with any maximum allowable increase.

(31) “Batch Process” – A process which takes in the basic raw materials at the beginning of a cycle and processes them in accordance with a predetermined scheme during which no more basic raw materials are added to the process. Two variations include:

(a) Processes where some of the reactants (materials) are added at the beginning with the remainder added as the reaction progresses.

(b) Processes where once the materials are added, one or more products are continuously removed as the reaction progresses. Such processes include production of super phosphate, basic oxygen furnaces, and cement batch plants.

(32) “Best Available Control Technology” or “BACT” –

(a) An emission limitation, including a visible emissions standard, based on the maximum degree of reduction of each pollutant emitted which the Department, on a case by case basis, determines is achievable through application of production processes and available methods, systems and techniques (including fuel cleaning or treatment or innovative fuel combustion techniques) for control of each such pollutant, taking into account:

1. Energy, environmental and economic impacts, and other costs;

2. All scientific, engineering, and technical material and other information available to the Department; and

3. The emission limiting standards or BACT determinations of Florida and any other state.

(b) If the Department determines that technological or economic limitations on the application of measurement methodology to a particular part of an emissions unit or facility would make the imposition of an emission standard infeasible, a design, equipment,

work practice, operational standard or combination thereof, may be prescribed instead to satisfy the requirement for the application of BACT. Such standard shall, to the degree possible, set forth the emissions reductions achievable by implementation of such design, equipment, work practice or operation.

(c) Each BACT determination shall include applicable test methods or shall provide for determining compliance with the standard(s) by means which achieve equivalent results.

(d) In no event shall application of best available control technology result in emissions of any pollutant which would exceed the emissions allowed by any applicable standard under 40 CFR Parts 60, 61, and 63.

(33) “Biological Waste” – Solid waste that causes or has the capability of causing disease or infection and which includes biomedical waste, diseased or dead animals, and other wastes capable of transmitting pathogens to humans or animals.

(34) “Biological Waste Incinerator” – Any incinerator operated or utilized for the disposal or treatment of biological waste. The term does not include any air curtain incinerator used or authorized by the Department of Agriculture and Consumer Services for the emergency destruction of animal carcasses.

(35) “Biomass” – Vegetative matter and untreated wood.

(36) “Biomedical Waste” – Any solid or liquid waste which may present a threat of infection to humans, including nonliquid tissue, body parts, blood, blood products, and body fluids from humans and other primates; laboratory and veterinary wastes which contain human disease-causing agents; and discarded sharps. The following are also included:

(a) Used absorbent materials saturated with blood, blood products, body fluids, or excretions or secretions contaminated with visible blood; and absorbent materials saturated with blood or blood products that have dried.

(b) Non-absorbent, disposable devices that have been contaminated with blood, body fluids, or secretions or excretions visibly contaminated with blood, but have not been treated by a method listed in Section 381.0098, F.S., or a method approved pursuant to Chapter 64E-16, F.A.C.

(37) “Black Liquor Solids” – The dry weight of the solids which enter the kraft recovery furnace in the black liquor.

(38) “Building Enclosure” – A building or room enclosure that contains an activity, process, or emissions unit that emits an air pollutant.

(39) “Bulk Gasoline Plant” – Any gasoline storage and distribution facility that receives gasoline from bulk terminals by pipeline, ship, barge, or gasoline cargo tank, stores it in tanks, and subsequently delivers it to resellers, farms, businesses, service stations, or other end users, and that has an annual average daily throughput of less than 20,000 gallons (75,700 liters), calculated on the basis of the number of calendar days that the facility receives or distributes gasoline.

(40) “Bulk Gasoline Terminal” – Any gasoline storage and distribution facility that receives gasoline from its supply sources primarily by pipeline, ship, barge, or gasoline cargo tank and delivers gasoline to bulk gasoline plants or to commercial or retail accounts primarily by tanker truck or trailer, and that has an annual average daily throughput of equal to or more than 20,000 gallons (75,700 liters) of gasoline, calculated on the basis of the number of calendar days that the facility receives or distributes gasoline.

(41) “CAIR” – Abbreviation for federal Clean Air Interstate Rule.

(42) “CAIR NOx Allowance” – A limited authorization issued by the Department pursuant to Rule 62-296.470, F.A.C., to emit one ton of nitrogen oxides during a control period of the specified calendar year for which the authorization is allocated, or of any calendar year thereafter, under the CAIR NOx Annual Trading Program.

(43) “CAIR NOx Annual Trading Program” – The program implemented at subsection 62-296.470(3), F.A.C., which, upon approval by the U.S. Environmental Protection Agency, requires CAIR NOx units in Florida to participate in the multi-state air pollution control and emission reduction program administered by the U.S. Environmental Protection Agency pursuant to 40 CFR Part 96, adopted and incorporated by reference in Rule 62-204.800, F.A.C.

(44) “CAIR NOx Ozone Season Allowance” – A limited authorization issued by the Department pursuant to Rule 62-296.470, F.A.C., to emit one ton of nitrogen oxides during a control period of the specified calendar year for which the authorization is allocated, or of any calendar year thereafter, under the CAIR NOx Ozone Season Trading Program.

(45) “CAIR NOx Ozone Season Trading Program” – The program implemented at subsection 62-296.470(5), F.A.C., which, upon approval by the U.S. Environmental Protection Agency, requires CAIR NOx Ozone Season units in Florida to participate in the multi-state air pollution control and emission reduction program administered by the U.S. Environmental Protection Agency pursuant to 40 CFR Part 96, adopted and incorporated by reference in Rule 62-204.800, F.A.C.

(46) “CAIR NOx Ozone Season Unit” – A unit that is subject to the CAIR NOx Ozone Season Trading Program pursuant to 40 CFR 96.304, adopted and incorporated by reference in Rule 62-204.800, F.A.C.

(47) “CAIR NOx Unit” – A unit that is subject to the CAIR NOx Annual Trading Program pursuant to 40 CFR 96.104, adopted and incorporated by reference in Rule 62-204.800, F.A.C.

(48) “CAIR Part” or “CAIR Permit” – DEP Form No. 62-210.900(1)(b), completed and certified by the designated representative and incorporated as a part of the Title V source permit or air construction permit. The CAIR Part shall specify the CAIR Program requirements applicable to the CAIR source, to each CAIR unit at the source, and to the owners and operators and the designated representative of the CAIR source and each such unit.

(49) “CAIR Program” – Any or all of the following:

(a) CAIR NOx Annual Trading Program;

(b) CAIR SO₂ Trading Program; or

(c) CAIR NOx Ozone Season Trading Program.

(50) “CAIR SO₂ Allowance” – A limited authorization issued by the Administrator under the Acid Rain Program to emit sulfur dioxide during the control period of the specified calendar year for which the authorization is allocated, or of any calendar year thereafter, under the CAIR SO₂ Trading Program.

(51) “CAIR SO₂ Trading Program” – The program implemented at subsection 62-296.470(4), F.A.C., which, upon approval by the U.S. Environmental Protection Agency, requires CAIR SO₂ units in Florida to participate in the multi-state air pollution control and emission reduction program administered by the U.S. Environmental Protection Agency pursuant to 40 CFR Part 96, adopted and incorporated by reference in Rule 62-204.800, F.A.C.

(52) “CAIR SO₂ Unit” – A unit that is subject to the CAIR SO₂ Trading Program pursuant to 40 CFR 96.204, adopted and incorporated by reference in Rule 62-204.800, F.A.C.

(53) “CAIR Source” – A facility that includes one or more CAIR units.

(54) “CAIR Unit” –

(a) A CAIR NOx unit;

(b) A CAIR SO₂ unit; or

(c) A CAIR NOx Ozone Season unit.

(55) “Calcliner” – A device used to calcine lime mud, consisting primarily of calcium carbonate, into quicklime (calcium oxide), by using a fluidized bed to burn or reburn the lime mud in suspension.

(56) “Capacity Factor” – The ratio of the average load on or output of a machine or unit operation to the permitted capacity rating of the machine or unit operation for a normal operation period or cycle. The “capacity factor” shall be expressed as a percent of rating.

(57) “Capture” – The containment or recovery of emissions from an activity, process, or emissions unit for direction into a duct which may be exhausted through a stack or sent to a destructive or nondestructive control device.

(58) “Capture Efficiency” – The weight per unit time of an air pollutant entering a capture system and delivered to a control device divided by the weight per unit time of the total amount of the same air pollutant which was generated by the emissions unit or emissions units served by the capture system, expressed as a percentage.

(59) “Capture System” – All equipment, including hoods, ducts, fans, booths, ovens, dryers, etc., used to contain, collect, capture, or transport a pollutant to a control device.

(60) “Carbon Adsorption System” – A device containing adsorbent material (e.g., activated carbon, aluminum, silica gel); an inlet and outlet for exhaust gases; and a system to regenerate the saturated adsorbent. The carbon adsorption system must provide for the proper disposal or reuse of all VOC adsorbed.

(61) “Carbonaceous Fuel” – Solid materials composed primarily of vegetative matter such as tree bark, wood waste, or bagasse.

(62) “Carbonaceous Fuel Burning Equipment” – A firebox, furnace or combustion device which burns carbonaceous and fossil fuels for the primary purpose of producing steam or to heat other liquids or gases. The term includes bagasse burners, bark burners, and waste wood burners, but does not include teepee or conical wood burners or incinerators.

(63) “Cast Polymer Operation” – An operation where gel coat resin is sprayed or otherwise applied to a mold, after which a casting resin is applied without spraying. A cast polymer operation does not incorporate the spray lay-up of fiber reinforcement.

(64) “Cause or Contribute” – With respect to a violation of an ambient air quality standard, to have a significant impact on the ambient air concentration of a pollutant at any locality that does not or would not meet the applicable standard.

(65) “C.F.R.” or “CFR” – Code of Federal Regulations

(66) “Class I Area” – The following areas are designated as Class I areas.

- (a) Areas designated at 40 C.F.R. Part 81, Subpart D, adopted and incorporated by reference at Rule 62-204.800, F.A.C.
- (b) Bradwell Bay National Wilderness Area.
- (67) “Class II Area” – All areas of the state are designated Class II except for those areas designated Class I.
- (68) “Clean Air Act (CAA)” or “Act” – The Federal Clean Air Act (42 U.S.C. s. 7401 et seq.)
- (69) “Clean Coal Technology” – Any technology, including technologies applied at the precombustion, combustion, or post combustion stage, at a new or existing facility which will achieve significant reductions in air emissions of sulfur dioxide or oxides of nitrogen associated with the utilization of coal in the generation of electricity, or process steam which was not in widespread use as of November 15, 1990.
- (70) “Clean Coal Technology Demonstration Project” – A project using funds appropriated under the heading “Department of Energy – Clean Coal Technology”, up to a total amount of \$2,500,000,000 for commercial demonstration of clean coal technology, or similar projects funded through appropriations for the Environmental Protection Agency. The Federal contribution for a qualifying project shall be at least 20 percent of the total cost of the demonstration project. A temporary clean coal technology demonstration project is a clean coal technology demonstration project that is operated for a period of 5 years or less, and which complies with the state implementation plans for the state in which the project is located and other requirements necessary to attain and maintain the national ambient air quality standards during the project and after it is terminated.
- (71) “Clear Coat ” – A coating which lacks color and opacity or is transparent and uses the undercoat as a reflectant base or undertone color.
- (72) “Coating” – The application of a protective, decorative, or functional film to a surface.
- (73) “Coating Application System” – Any operations and equipment which apply, convey, and dry a surface coating, including spray booths, flow coaters, conveyors, flashoff areas, air dryers and ovens.
- (74) “Coating Applicator” – An apparatus used to apply a surface coating to a surface.
- (75) “Coating Line” – One or more apparatus or operations which include a coating applicator, flashoff area, and oven wherein a surface coating is applied, dried and/or cured.
- (76) “Coil Coating” – The coating of any flat metal sheet or strip that comes in rolls or coils.
- (77) “Cold Cleaning” – The batch process of cleaning and removing soils from metal surfaces by brushing, flushing or immersion while maintaining the solvent below its boiling point. Wipe cleaning is not included in this definition.
- (78) “Cold Mixed Asphaltic Concrete Patching Material” – A mixture of asphalt cement, stone aggregate, and mineral filler blended together with a small amount of petroleum solvent (diluent). The diluent prevents the material from hardening after the heat of mixing has dissipated, thereby allowing stockpile storage of the material for use in pavement repairs when the use of hot asphaltic concrete is impractical.
- (79) “Commence Construction” – As applied to the construction or modification of a facility, means that the owner has all preconstruction permits and approvals required under federal air pollution control laws and regulations and those air pollution control laws and regulations which are part of the State Implementation Plan (SIP) or which are part of Chapter 62-210 or 62-212, F.A.C., to the extent that the provisions of these laws and regulations specify conditions or requirements for obtaining a state construction permit for an emissions unit, and:
- (a) Begins a continuous program of actual on-site construction or physical modification of the facility, to be completed within a time commensurate with the nature of the construction project; or
- (b) Enters into binding agreements or contractual obligations, which cannot be cancelled or modified without substantial loss to the owner or operator, to undertake a program of actual construction or physical modification of the facility to be completed within a time commensurate with the nature of the construction project; or
- (c) Begins those on-site activities, other than preparatory activities, which mark the initiation of a change in the method of operation of the facility.
- (80) “Commence Operation” –
- (a) For purposes of the Acid Rain Program, to begin any mechanical, chemical, or electronic process, including start-up of an emissions control technology or emissions monitor or of an emissions unit’s combustion chamber.
- (b) For the purposes of the CAIR Program, commence operation shall mean “commence operation” as defined in 40 CFR 96.102, 96.202, or 96.302, adopted and incorporated by reference in Rule 62-204.800, F.A.C.
- (c) Otherwise, to set into operation any emissions unit for any purpose.
- (81) “Complete” – In reference to an application for a permit, means that the application contains all of the information

necessary for processing the application, except as otherwise provided in Rule 62-213.420, F.A.C.

- (82) “Condensable Particulate Matter” or “Condensable PM” – Gaseous emissions from a source or activity which condense at ambient temperatures to form particulate matter.
- (83) “Condensable PM₁₀” – Gaseous emissions from a source or activity which condense at ambient temperatures to form PM₁₀.
- (84) “Condensable PM_{2.5}” – Gaseous emissions from a source or activity which condense at ambient temperatures to form PM_{2.5}.
- (85) “Condensate” – Hydrocarbon liquid separated from natural gas which condenses due to changes in the temperature and/or pressure and remains liquid at standard conditions.
- (86) “Condensate Stripper System” – A column and associated condensers, used to strip, with air or steam, total reduced sulfur (TRS) compounds from contaminated condensate streams.
- (87) “Conditional Compliance Option” – A compliance option submitted as part of an Acid Rain compliance plan which is not intended to be immediately active, but which may be activated at a later date during the term of the permit.
- (88) “Construction” –
- (a) The act of performing on-site fabrication, erection, installation or modification of an emissions unit or facility of a permanent nature, including installation of foundations or building supports; laying of underground pipe work or electrical conduit; and fabrication or installation of permanent storage structures, component parts of an emissions unit or facility, associated support equipment, or utility connections. Land clearing and other site preparation activities are not a part of the construction activities.
- (b) For the purposes of Rules 62-212.300, 62-212.400, 62-212.500, and 62-212.720, F.A.C., construction means any physical change or change in the method of operation (including fabrication, erection, installation, or modification of an emissions unit) that would result in a change in emissions.
- (c) For the purposes of the provisions of 40 CFR Parts 60 and 61, adopted by reference in Rule 62-204.800, F.A.C., construction means fabrication, erection, or installation of an affected facility.
- (d) For the purposes of the provisions of 40 CFR Part 63, adopted by reference in Rule 62-204.800, F.A.C., construction means the on-site fabrication, erection, or installation of an affected source. Construction does not include the removal of all equipment comprising an affected source from an existing location and reinstallation of such equipment at a new location. The owner or operator of an existing affected source that is relocated may elect not to reinstall minor ancillary equipment including piping, ductwork, and valves. However, removal and reinstallation of an affected source will be construed as reconstruction if it satisfies the criteria for reconstruction as defined in this section. The costs of replacing minor ancillary equipment must be considered in determining whether the existing affected source is reconstructed.
- (89) “Continuous Emissions Monitoring System” or “CEMS” – All of the equipment that may be required to meet the data acquisition and availability requirements to sample, condition or analyze; and provide a record of emissions on a continuous basis.
- (90) “Continuous Monitoring System” – All equipment, required under applicable rules, used to calibrate, sample, condition (if applicable), and analyze air pollutant emissions, or used to provide a permanent record of emissions or process parameters.
- (91) “Continuous Parameter Monitoring System” or “CPMS” – All of the equipment necessary to meet the data acquisition and availability requirements of 40 CFR 52.21, adopted by reference in Rule 62-204.800, F.A.C., to monitor process and control device operational parameters including control device secondary voltages and electric currents; and other information including gas flow rate, oxygen or carbon dioxide concentrations; and to record average operational parameter value (s) on a continuous basis.
- (92) “Control Device” or “Control Equipment” – Device or equipment, including that used to separate entrained particulate matter or organic vapors from gases, gas separation equipment, thermal oxidation equipment, and chemical reaction/conversion equipment, which is designed and used to reduce the discharge of a specific air pollutant to the atmosphere.
- (a) “Destructive Control Device” – Any device intended and designed for the reduction of VOC pollutant emissions from an emissions unit which alters the chemical composition of the pollutant flowing through the device.
- (b) “Non-Destructive Control Device” – Any device intended and designed for the reduction of VOC pollutant emissions from an emissions unit which does not alter the chemical composition of the pollutant flowing through the device.
- (93) “Control System” – A combination of one or more capture systems and control devices working in concert to reduce the discharges of an air pollutant to the ambient air.
- (94) “ConveyORIZED Degreasing” – The continuous process of cleaning and removing soils from metal surfaces by operating with either cold or vaporized solvents.
- (95) “Cross Recovery Furnace” – A furnace used to recover chemicals consisting primarily of sodium and sulfur compounds by

burning black liquor which on a quarterly basis contains more than 7 weight percent of the total pulp solids from the neutral sulfite semichemical (NSSC) process and has a green liquor sulfidity of more than 28 percent.

(96) “Crude Oil” – A naturally occurring mixture which consists of hydrocarbons and/or sulfur, nitrogen and/or oxygen derivatives of hydrocarbons and which is liquid at standard conditions.

(97) “Cutback Asphalt” – Asphalt cement which has been liquefied by blending with petroleum solvents (dilutents). Upon exposure to atmospheric conditions the diluents evaporate, leaving the asphalt cement to perform its function.

(98) “Department” – The State of Florida Department of Environmental Protection.

(99) “Designated Facility Plan” – Collectively, all plans and plan revisions of a state approved by the Administrator pursuant to Section 111(d) of the Clean Air Act. Unless otherwise stated, the term refers specifically to the Designated Facility Plan for the State of Florida, identified in 40 C.F.R. Part 62, Subpart K, adopted and incorporated by reference at Rule 62-204.800, F.A.C.

(100) “Designated Representative” –

(a) For the purposes of the Acid Rain Program, a responsible natural person authorized, by the owners and operators of an Acid Rain source and of all Acid Rain units at the source, in accordance with 40 C.F.R. Part 72, Subpart B, adopted and incorporated by reference in Rule 62-204.800, F.A.C., to represent and legally bind each owner and operator, as a matter of federal law, in matters pertaining to the Acid Rain Program.

(b) For the purposes of the CAIR Program, designated representative shall mean “CAIR designated representative” as defined in 40 CFR 96.102, 96.202, or 96.302, adopted and incorporated by reference in Rule 62-204.800, F.A.C.

(101) “Destruction or Removal Efficiency” – The weight per unit time of an air pollutant entering a control device or set of control devices minus the weight per unit time of that air pollutant exiting the control device(s), divided by the weight per unit time of that air pollutant entering the control device(s), expressed as a percentage.

(102) “Digester System” – Each continuous digester or each batch digester used for the cooking of wood in white liquor, and associated flash tank(s), blow tank(s), chip steamer(s) and condenser(s).

(103) “Digital Printing” – The transfer of electronic files directly from the computer to an electronically driven output device that prints the image directly on the selected media (substrate).

(104) “Draft Permit” – The version of a Title V permit for which the Department offers public participation under subsection 62-210.350(3), F.A.C., or affected state review under subsection 62-213.450(2), F.A.C.

(105) “Dry Cleaning Facility” – A facility engaged in the cleaning of fabrics in a nonaqueous solvent by means of one or more washes in solvent, extraction of excess solvent by spinning, and drying by tumbling in an airstream. The facility includes washer, dryer, filter and purification systems; emission control equipment; waste disposal systems; holding tanks; pumps and attendant piping and valves.

(106) “Electric Utility” – Cities and towns, counties, public utility districts, regulated electric companies, electric cooperatives, and joint operating agencies, or combinations thereof, engaged in, or authorized to engage in, the business of generating, transmitting, or distributing electric energy.

(107) “Electron Beam-Cured” – An ink and coating drying process by which monomers, oligomers, and other components polymerize to form a film when exposed to an electron beam radiation.

(108) “Electric Utility Steam Generating Unit” – Any steam electric generating unit that is constructed for the purpose of supplying more than one-third of its potential electric output capacity and more than 25 MW electrical output to any utility power distribution system for sale. Any steam supplied to a steam distribution system for the purpose of providing steam to a steam-electric generator that would produce electrical energy for sale is also considered in determining the electrical energy output capacity of the unit.

(109) “Emission” – The discharge or release into the atmosphere of one or more air pollutants.

(110) “Emission Limiting Standard” or “Emission Standard” or “Emission Limitation” or “Performance Standard” – Any restriction established in or pursuant to a regulation adopted by the Department which limits the quantity, rate, concentration or opacity of any pollutant released, allowed to escape or emitted, whether intentionally or unintentionally, into the atmosphere, including any restriction which prescribes equipment, sets fuel specifications, or prescribes operation or maintenance procedures for an emissions unit to assure emission reduction or control.

(111) “Emission Offset” or “Offset” – A compensating reduction in the emissions of an affected pollutant from a permitted emissions unit to provide an emission allowance for a new or modified emissions unit.

(112) “Emission Point” or “Discharge Point” – The point at which an air pollutant first enters the atmosphere.

(113) “Emissions Unit” – Any part or activity of a facility that emits or has the potential to emit any air pollutant.

(114) “End Sealing Compound” – A synthetic rubber compound which when coated on a can end functions as a gasket when the end is assembled on the can.

(115) “Environmental Protection Agency” or “EPA” – The United States Environmental Protection Agency.

(116) “Existing Emissions Unit” – An emissions unit which was in existence, in operation, or under construction, or had received a permit to begin construction prior to January 18, 1972. However, “existing emissions unit” for the purposes of Rules 62-296.700 through 62-296.712, and 62-212.500, F.A.C., shall mean any emissions units which is not defined as a new emissions unit with respect to a specific rule or provision of any of those sections. For the purpose of Rules 62-296.500 through 62-296.512, F.A.C., existing emissions units are those emissions units which were constructed or for which a construction permit was issued prior to July 1, 1979. For the purposes of Rule 62-212.400, F.A.C., an existing emissions unit is an emissions unit which is not a new emissions unit as defined for the purposes of Rule 62-212.400, F.A.C.

(117) “Exterior Base Coating” – A coating applied to the exterior of a can to provide exterior protection to the metal and background for the lithographic or printing operation.

(118) “External Floating Roof” – A storage vessel cover in an open top tank consisting of a double deck or pontoon single deck which rests upon and is supported by the petroleum liquid being contained and is equipped with a closure seal or seals to close the space between the roof edge and tank shell.

(119) “Extreme Performance Coating” – Coating designed to withstand exposure to harsh conditions such as continuous weather exposure and temperatures consistently above 203 degrees Fahrenheit (95 degrees Celsius), or abrasive and scouring agents.

(120) “Fabric Coating” – The coating of a textile substrate with a knife, roll, or rotogravure coater to impart properties that are not initially present, such as strength, stability, water or acid repellency, or appearance.

(121) “Facility” – All of the emissions units which are located on one or more contiguous or adjacent properties, and which are under the control of the same person (or persons under common control).

(122) “Federal Land Manager” – With respect to any lands in the United States, the Secretary of the department with authority over such lands.

(123) “Federally-Enforceable” – Pertaining to limitations and conditions which are enforceable by the Administrator, including any requirements developed pursuant to Title 40 of the Code of Federal Regulations, any requirements within the State Implementation Plan, and any requirements established pursuant to permits issued under:

(a) The state’s Title V operation permit program, consistent with 40 C.F.R. Part 70.

(b) Paragraph 62-210.300(2)(b), F.A.C.;

(c) 40 C.F.R. 52.21; or

(d) Subparagraph 62-204.800(11)(d)2., F.A.C. (formerly 62-204.800(10)(d)2.); Rule 62-212.300, F.A.C. (formerly 17-212.300, formerly 17-2.520); Rule 62-212.400, F.A.C. (formerly 17-212.400, formerly 17-2.500); Rule 62-212.500, F.A.C. (formerly 17-212.500, formerly 17-2.510); Rule 17-2.17, F.A.C. (repealed); or Rule 62-4.210, F.A.C. (formerly 17-4.210, formerly 17-4.21).

(124) “Final Permit” – The version of a Title V source permit issued by the Department for which all review procedures required by Rule 62-213.450, F.A.C., have been completed.

(125) “Firebox” – The chamber or compartment of a boiler or furnace in which materials are burned but does not mean the combustion chamber of an incinerator.

(126) “Flashoff Area” – The space between the application area and the oven.

(127) “Flexographic Printing” – The application of words, designs and pictures to a substrate by means of a roll printing technique in which the pattern to be applied is raised above the printing roll and the image carrier is made of rubber or other elastomeric materials.

(128) “Fossil Fuel” – Natural gas, petroleum, coal, or any form of solid, liquid, or gaseous fuel derived from such material.

(129) “Fossil Fuel Steam Generators” – A furnace or boiler which produces steam by combustion of oil, coal, or gas of fossil origin.

(130) “Fountain Solution” – A mixture of water and other volatile and non-volatile chemicals and additives that maintains the quality of the printing plate and reduces the surface tension of the water so that it spreads easily across the printing plate surface. The fountain solution wets the non-image area so that the ink is maintained within the image areas. Non-volatile additives include mineral salts and hydrophilic gums.

(131) “Fountain Solution Additives” – Wetting additives that include alcohol and alcohol substitutes, including isopropyl

alcohol, glycol ethers and ethylene glycol, which are used to reduce the surface tension of the fountain solution.

(132) "Freeboard Height" –

(a) For heated vapor degreasers is the distance from the top of the vapor zone to the top of the degreaser tank.

(b) For cold cleaning degreasers is the distance from the solvent to the top edge of the cold cleaner.

(133) "Freeboard Ratio" – The freeboard height divided by the width of the degreaser.

(134) "Fugitive Emissions" – Those emissions which could not reasonably pass through a stack, chimney, vent or other functionally equivalent opening.

(135) "Gas/Gas Method" – Either of two EPA methods for determining capture efficiency which rely only on gas phase measurements. One method, prescribed in paragraph 62-297.450(2)(a), F.A.C., requires construction of a temporary total enclosure to assure all otherwise unconfined air pollutant emissions are measured. The other method, prescribed in paragraph 62-297.450(2)(c), F.A.C., uses the room or building which houses the emissions activity, process, or source as an enclosure.

(136) "Gasoline" – Any petroleum distillate having a Reid vapor pressure of 4 psia (27.6 kilopascals) or greater.

(137) "Gasoline Cargo Tank" – A delivery tanker truck, trailer, or railcar that is loading or unloading gasoline.

(138) "Gasoline Dispensing Facility" – Any stationary facility that dispenses gasoline directly into the fuel tank of a motor vehicle.

(139) "Green Liquor Sulfidity" – The sulfidity of the liquor which leaves the smelt dissolving tank.

(140) "Hardboard" – A panel manufactured primarily from inter-felted lignocellulosic fibers which are consolidated under heat and pressure in a hot press.

(141) "Hardwood Plywood" – Plywood whose surface layer is a veneer or hardwood.

(142) "Hazardous Air Pollutant (HAP)" – An air pollutant:

(a) Identified by the CAS number or chemical name from the following list:

CAS Number	Chemical Name
1. 75070	Acetaldehyde
2. 60355	Acetamide
3. 75058	Acetonitrile
4. 98862	Acetophenone
5. 53963	2-Acetylaminofluorene
6. 107028	Acrolein
7. 79061	Acrylamide
8. 79107	Acrylic acid
9. 107131	Acrylonitrile
10. 107051	Allyl chloride
11. 92671	4-Aminobiphenyl
12. 62533	Aniline
13. 90040	o-Anisidine
14. 0	Antimony Compounds
15. 0	Arsenic Compounds (inorganic including arsine)
16. 1332214	Asbestos
17. 71432	Benzene (including benzene from gasoline)
18. 92875	Benzidine
19. 98077	Benzotrichloride
20. 100447	Benzyl chloride
21. 0	Beryllium Compounds
22. 92524	Biphenyl
23. 117817	Bis (2-ethylhexyl) phthalate (DEHP)
24. 542881	Bis (chloromethyl) ether
25. 75252	Bromoform
26. 106990	1, 3-Butadiene
27. 0	Cadmium Compounds

28. 156627	Calcium cyanamide
29. Reserved	
30. 133062	Captan
31. 63252	Carbaryl
32. 75150	Carbon disulfide
33. 56235	Carbon tetrachloride
34. 463581	Carbonyl sulfide
35. 120809	Catechol
36. 133904	Chloramben
37. 57749	Chlordane
38. 7782505	Chlorine
39. 79118	Chloroacetic acid
40. 532274	2-Chloroacetophenone
41. 108907	Chlorobenzene
42. 510156	Chlorobenzilate
43. 67663	Chloroform
44. 107302	Chloromethyl methyl ether
45. 126998	Chloroprene
46. 0	Chromium Compounds
47. 0	Cobalt Compounds
48. 0	Coke Oven Emissions
49. 1319773	Cresols/Cresylic acid (isomers and mixture)
50. 95487	o-Cresol
51. 108394	m-Cresol
52. 106445	p-Cresol
53. 98828	Cumene
54. 0	Cyanide Compounds (X' CN where X = H' or any other group where a formal dissociation may occur. For example KCN or Ca (CN) 2.)
55. 94757	2, 4-D, salts and esters
56. 3547044	DDE
57. 334883	Diazomethane
58. 132649	Dibenzofurans
59. 96128	1, 2-Dibromo-3-chloropropane
60. 84742	Dibutylphthalate
61. 106467	1, 4-Dichlorobenzene (p)
62. 91941	3, 3-Dichlorobenzidene
63. 111444	Dichloroethyl ether (Bis (2-chloroethyl) ether)
64. 542756	1, 3-Dichloropropene
65. 62737	Dichlorvos
66. 111422	Diethanolamine
67. 121697	N, N-Diethyl aniline (N, N-Dimethylaniline)
68. 64675	Diethyl sulfate
69. 119904	3, 3-Dimethoxybenzidine
70. 60117	Dimethyl aminoazobenzene
71. 1119937	3, 3-Dimethyl benzidine
72. 79447	Dimethyl carbamoyl chloride
73. 68122	Dimethyl formamide
74. 57147	1, 1-Dimethyl hydrazine

75. 131113	Dimethyl phthalate
76. 77781	Dimethyl sulfate
77. 534521	4, 6-Dinitro-o-cresol, and salts
78. 51285	2, 4-Dinitrophenol
79. 121142	2, 4-Dinitrotoluene
80. 123911	1, 4-Dioxane (1, 4-Diethyleneoxide)
81. 122667	1, 2-Diphenylhydrazine
82. 106898	Epichlorohydrin (1-Chloro-2, 3-epoxypropane)
83. 106887	1, 2-Epoxybutane
84. 140885	Ethyl acrylate
85. 100414	Ethyl benzene
86. 51796	Ethyl carbamate (Urethane)
87. 75003	Ethyl chloride (Chloroethane)
88. 106934	Ethylene dibromide (Dibromoethane)
89. 107062	Ethylene dichloride (1, 2-Dichloroethane)
90. 107211	Ethylene glycol
91. 151564	Ethylene imine (Aziridine)
92. 75218	Ethylene oxide
93. 96457	Ethylene thiourea
94. 75343	Ethylidene dichloride (1, 1-Dichloroethane)
95. 50000	Formaldehyde
96. 0	Glycol ethers (Includes mono- and di-ethers of ethylene glycol, diethylene glycol, and triethylene glycol R-(OCH ₂ CH ₂) n -OR' where n =1, 2, or 3; R = alkyl C7 or less; or R = phenyl or alkyl substituted phenyl; R' = H or alkyl C7 or less; or OR' consisting of carboxylic acid ester, sulfate, phosphate, nitrate, or sulfonate. Excludes ethylene glycol monobutyl ether (EGBE, 2 - Butoxyethanol - CAS Number 111-76-2).)
97. 76448	Heptachlor
98. 118741	Hexachlorobenzene
99. 87683	Hexachlorobutadiene
100. 77474	Hexachlorocyclopentadiene
101. 67721	Hexachloroethane
102. 822060	Hexamethylene-1, 6-diisocyanate
103. 680319	Hexamethylphosphoramide
104. 110543	Hexane
105. 302012	Hydrazine
106. 7647010	Hydrochloric acid
107. 7664393	Hydrogen fluoride (Hydrofluoric acid)
108. 123319	Hydroquinone
109. 78591	Isophorone
110. 0	Lead Compounds
111. 58899	Lindane (all isomers)
112. 108316	Maleic anhydride
113. 0	Manganese Compounds
114. 0	Mercury Compounds
115. 67561	Methanol
116. 72435	Methoxychlor
117. 74839	Methyl bromide (Bromomethane)

118. 74873	Methyl chloride (Chloromethane)
119. 71556	Methyl chloroform (1, 1, 1-Trichloroethane)
120. Reserved	
121. 60344	Methyl hydrazine
122. 74884	Methyl iodide (Iodomethane)
123. 108101	Methyl isobutyl ketone (Hexone)
124. 624839	Methyl isocyanate
125. 80626	Methyl methacrylate
126. 1634044	Methyl tert butyl ether
127. 101144	4, 4-Methylene bis (2-chloroaniline)
128. 75092	Methylene chloride (Dichloromethane)
129. 101688	Methylene diphenyl diisocyanate (MDI)
130. 101779	4, 4-Methylenedianiline
131. 0	Mineral fibers (fine), includes mineral fiber emissions from facilities manufacturing or processing glass, rock, or slag fibers (or other mineral derived fibers) of average diameter 1 micrometer or less.
132. 91203	Naphthalene
133. 0	Nickel Compounds
134. 98953	Nitrobenzene
135. 92933	4-Nitrobiphenyl
136. 100027	4-Nitrophenol
137. 79469	2-Nitropropane
138. 684935	N-Nitroso-N-methylurea
139. 62759	N-Nitrosodimethylamine
140. 59892	N-Nitrosomorpholine
141. 56382	Parathion
142. 82688	Pentachloronitrobenzene (Quintobenzene)
143. 87865	Pentachlorophenol
144. 108952	Phenol
145. 106503	p-Phenylenediamine
146. 75445	Phosgene
147. 7803512	Phosphine
148. 7723140	Phosphorus
149. 85449	Phthalic anhydride
150. 1336363	Polychlorinated biphenyls (Aroclors)
151. 0	Polycyclic organic matter (includes organic compounds with more than one benzene ring, and which have a boiling point greater than or equal to 100° C)
152. 1120714	1, 3-Propane sultone
153. 57578	beta-Propiolactone
154. 123386	Propionaldehyde
155. 114261	Propoxur (Baygon)
156. 78875	Propylene dichloride (1, 2-Dichloropropane)
157. 75569	Propylene oxide
158. 75558	1, 2-Propylenimine (2-Methyl aziridine)
159. 91225	Quinoline
160. 106514	Quinone
161. 0	Radionuclides (including radon), a type of atom which spontaneously undergoes radioactive decay

162. 0	Selenium Compounds
163. 100425	Styrene
164. 96093	Styrene oxide
165. 1746016	2, 3, 7, 8- Tetrachlorodibenzo-p-dioxin
166. 79345	1, 1, 2, 2- Tetrachloroethane
167. 127184	Tetrachloroethylene (Perchloroethylene)
168. 7550450	Titanium tetrachloride
169. 108883	Toluene
170. 95807	2, 4-Toluene diamine
171. 584849	2, 4-Toluene diisocyanate
172. 95534	o-Toluidine
173. 8001352	Toxaphene (chlorinated camphene)
174. 120821	1, 2, 4-Trichlorobenzene
175. 79005	1, 1, 2-Trichloroethane
176. 79016	Trichloroethylene
177. 95954	2, 4, 5-Trichlorophenol
178. 88062	2, 4, 6-Trichlorophenol
179. 121448	Triethylamine
180. 1582098	Trifluralin
181. 540841	2, 2, 4-Trimethylpentane
182. 108054	Vinyl acetate
183. 593602	Vinyl bromide
184. 75014	Vinyl chloride
185. 75354	Vinylidene chloride (1, 1-Dichloroethylene)
186. 1330207	Xylenes (isomers and mixtures)
187. 95476	o-Xylenes
188. 108383	m-Xylenes
189. 106423	p-Xylenes

(b) For all listings above which contain the word “compounds” and for glycol ethers, the following applies: unless otherwise specified, these listings are defined as including the named chemical and any unique chemical substance that contains the named chemical (i.e., antimony, arsenic, etc.) as part of that chemical’s infrastructure.

(143) “Heatset” – A lithographic web printing process where heat is used to evaporate ink oils from the printing ink. Heatset dryers (typically hot air) are used to deliver the heat to the printed web.

(144) “Hood” – A partial enclosure or canopy for capturing and exhausting, by means of a draft, an air pollutant rising from an activity, process, or source of the air pollutant.

(145) “Human Crematory” – Any combustion apparatus used solely for the cremation of either human or fetal remains.

(146) “Hydrocarbon” – Any organic compound of carbon and hydrogen only.

(147) “Incinerator” – A combustion apparatus designed for the ignition and burning of solid, semi-solid, liquid or gaseous combustible wastes.

(148) “Indian Governing Body” – The governing body of any tribe, band, or group of Indians subject to the jurisdiction of the United States and recognized by the United States as possessing power of self-government.

(149) “Innovative Control Technology” – Any system of air pollution control that has not been adequately demonstrated in practice, but would have a substantial likelihood of achieving greater continuous emissions reduction than any control system in current practice or of achieving at least comparable reductions at lower cost in terms of energy, economics, or nonair quality environmental impacts.

(150) “Interior Base Coating” – A coating applied by roller coater or spray to the interior of a can to provide a protective lining between the can metal and product.

(151) “Interior Body Spray” – A coating sprayed on the interior of the can body to provide a protective film between the

product and the can.

(152) “Internal Floating Roof” – A cover or roof in a fixed roof tank which rests upon or is floated upon the petroleum liquid being contained, and is equipped with a closure seal or seals to close the space between the roof edge and tank shell.

(153) “Knife Coating” – The application of a coating material to a substrate by means of drawing the substrate beneath a knife that spreads the coating evenly over the full width of the substrate.

(154) “Kraft (Sulfate) Pulp Mill” – Any facility that produces cellulose or cellulosic materials by chemically cooking (digesting) wood chips or other cellulosic raw materials in an alkaline solution containing water, sodium hydroxide, and sodium sulfide under conditions of elevated temperature and pressure. The regeneration of the cooking chemicals through a recovery process also constitutes part of the kraft (sulfate) pulp mill.

(155) “Kraft Recovery Furnace” – Any straight kraft recovery furnace or cross recovery furnace used to recover chemicals consisting primarily of sodium and sulfur by burning black liquor. If the kraft recovery furnace is equipped with a direct contact evaporator or wet-bottom electrostatic precipitator, this equipment shall be considered part of the kraft recovery furnace.

(156) “Land Clearing Debris” – Uprooted or cleared vegetation resulting from a land clearing operation, including any untreated wood generated by the land clearing operation (e.g., untreated fence posts).

(157) “Land Clearing Operation” – The uprooting or clearing of vegetation in connection with construction for buildings and rights-of-way; land development; or mineral operations. It does not include landscaping and yard maintenance operations or other such routine property clean-up activities.

(158) “Large Appliances” – For purposes of the Reasonably Available Control Technology rules of Chapter 62-296, F.A.C., doors, cases, lids, panels, and interior support parts of residential and commercial washers, dryers, ranges, refrigerators, freezers, water heaters, dishwashers, trash compactors, air conditioners and other similar products.

(159) “Lead Processing Operation” – Any facility that emits or has the potential to emit greater than 100 pounds per year of lead, lead alloys or lead compounds in its lead alloys or lead compounds in its operation. These operations include primary lead smelters, secondary lead smelters, primary lead-acid battery manufacturing operations, lead oxide and lead compound manufacturing or handling operations, pot furnaces that melt lead, lead-based paint pigment storage and handling operations, electric arc furnace equipped secondary steel manufacturing operations, secondary steel manufacturing slag handling operations, and all other lead-containing slag processing or handling operations where the lead content of the slag is greater than 0.25 percent by weight. Lead processing operations do not include indoor or outdoor firearm ranges unless recovered spent lead materials are melted on-site, waste-to-energy facilities, fossil fuel-fired steam generators, and facilities that use waste oil as fuel.

(160) “Lease Custody Transfer” – The transfer of produced crude oil and/or condensate, after processing and/or treating in the producing operations, from storage tanks or automatic transfer facilities to pipelines or any other forms of transportation.

(161) “Letterpress Printing” – A printing system in which the image area is raised relative to the non-image area and the ink is transferred to the substrate directly from the image surface.

(162) “Lime Kiln” – An inclined rotary drum device used to calcine lime mud, which consists primarily of calcium carbonate, into quicklime, which is calcium oxide.

(163) “Liquid/Gas Method” – Either of two EPA methods for determining capture efficiency which require both gas phase and liquid phase measurements and analysis. One liquid/gas method, prescribed in paragraph 62-297.450(2)(b), F.A.C., requires construction of a temporary enclosure. The other, prescribed in paragraph 62-297.450(2)(d), F.A.C., uses the room or building which houses the emissions activity, process, or source as an enclosure.

(164) “Liquid Mounted Seal” – A primary seal mounted in continuous contact with the liquid between the tank wall and the floating roof around the circumference of the tank.

(165) “Lithographic Printing” – A planographic printing system where the image and non-image areas are chemically differentiated. The image area is oil receptive and non-image area is water receptive. Ink film from the lithographic plate is transferred to an intermediary surface (blanket), which, in turn, transfers the ink film to the substrate. Fountain solution is applied to maintain the hydrophilic properties of the non-image area. Ink drying is divided into heatset and non-heatset.

(166) “Loading Rack” – An aggregation or combination of loading equipment arranged so that all loading outlets in the combination can be connected to a tank truck or trailer.

(167) “Low Solvent Coating” – Coatings which contain less organic solvent than the conventional coatings used by the industry. Low solvent coatings include water-borne, higher solids, electrodeposition and powder coatings.

(168) “Lowest Achievable Emission Rate” or “LAER” – An allowable emission rate determined in accordance with the

provisions of Rule 62-212.500, F.A.C. This term applied to a modification means the lowest achievable emission rate for that portion of the facility which is modified.

(169) “Magnet Wire Coating” – The process of applying a coating of electrically insulating varnish or enamel to aluminum or copper wire for use in electrical machinery.

(170) “Major Facility” – Any facility which emits, or has the potential to emit:

(a) 5 tons per year or more of lead or lead compounds, measured as elemental lead;

(b) 30 tons per year or more of acrylonitrile; or

(c) 100 tons per year or more of any other air pollutant subject to regulation under Chapter 403, F.S.

(171) “Major Modification” –

(a) Any physical change in or change in the method of operation of a major stationary source that would result in a significant emissions increase of a PSD pollutant and a significant net emissions increase of that pollutant from the major stationary source.

(b) Any significant emissions increase from any emissions units or net emissions increase at a major stationary source that is significant for volatile organic compounds or nitrogen oxides shall be considered significant for ozone.

(c) A physical change or change in the method of operation shall not include:

1. Routine maintenance, repair and replacement.

2. Use of an alternative fuel or raw material by reason of an order under Sections 2 (a) and (b) of the Energy Supply and Environmental Coordination Act of 1974, or any superseding legislation, or by reason of a natural gas curtailment plan pursuant to the Federal Power Act;

3. Use of an alternative fuel by reason of an order or rule under Section 125 of the Clean Air Act;

4. Use of an alternative fuel at a steam generating unit to the extent that the fuel is generated from municipal solid waste;

5. Use of an alternative fuel or raw material by a stationary source which:

a. The source was capable of accommodating before January 6, 1975, unless such change would be prohibited under any federally enforceable permit condition which was established after January 6, 1975; or

b. The source is approved to use under any federally enforceable permit condition issued under 40 CFR 52.21 or under regulations approved pursuant to 40 CFR 51.166;

6. An increase in the hours of operation or in the production rate, unless such change would be prohibited under any federally enforceable permit condition which was established after January 6, 1975.

7. Any change in ownership at a stationary source.

8. The installation, operation, cessation, or removal of a temporary clean coal technology demonstration project, provided that the project complies with:

a. The State Implementation Plan, and

b. Other requirements necessary to attain and maintain the national ambient air quality standards during the project and after it is terminated.

9. The installation or operation of a permanent clean coal technology demonstration project that constitutes repowering, provided that the project does not result in an increase in the potential to emit of any regulated pollutant emitted by the unit. This exemption shall apply on a pollutant-by-pollutant basis.

10. The reactivation of a very clean coal-fired electric utility steam generating unit.

(d) This definition shall not apply with respect to a particular PSD pollutant when the major stationary source is complying with the requirements under Rule 62-212.720, F.A.C., for a PAL for that pollutant. Instead, the definition at 40 CFR 52.21(aa)(2)(viii), adopted by reference in Rule 62-204.800, F.A.C., shall apply.

(172) “Major Source Baseline Date” – Pursuant to 40 C.F.R. 51.166(b)(14)(i), adopted and incorporated by reference at Rule 62-204.800, F.A.C.:

(a) In the case of PM₁₀ and sulfur dioxide, January 6, 1975;

(b) In the case of nitrogen dioxide, February 8, 1988; and

(c) In the case of PM_{2.5}, October 20, 2010.

(173) “Major Source of Air Pollution,” “Major Source,” or “Title V Source” – A facility containing an emissions unit, or any group of emissions units, which is or includes any of the following:

(a) For pollutants other than radionuclides, any emissions unit or group of emissions units that emits or has the potential to emit, in the aggregate, 10 tons per year or more of any one hazardous air pollutant (HAP), 25 tons per year or more of any combination of

HAPs, or any lesser quantity of a HAP as established through EPA rulemaking. Notwithstanding the preceding sentence, HAP emissions from any oil or gas exploration or production well (with its associated equipment) and HAP emissions from any pipeline compressor or pump station shall not be aggregated with HAP emissions from other similar units, whether or not such units are in a contiguous area or under common control, to determine whether such units or stations are Title V sources.

(b) An emissions unit or group of emissions units, all belonging to the same two-digit Major Group as described in the Standard Industrial Classification Manual, 1987, that directly emits or has the potential to emit, 100 tons per year or more, except as otherwise provided for in 40 CFR 70 as adopted and incorporated by reference at Rule 62-204.800, F.A.C., of any regulated air pollutant. The fugitive emissions of an emissions unit or group of emissions units shall not be considered in determining whether it is a Title V source for purposes of this paragraph unless the emissions unit or group of emissions units belongs to one of the following categories:

1. Coal cleaning plants (with thermal dryers);

2. Kraft pulp mills;

3. Portland cement plants;

4. Primary zinc smelters;

5. Iron and steel mills;

6. Primary aluminum ore reduction plants;

7. Primary copper smelters;

8. Municipal incinerators capable of charging more than 250 tons of refuse per day;

9. Hydrofluoric, sulfuric, or nitric acid plants;

10. Petroleum refineries;

11. Lime plants;

12. Phosphate rock processing plants;

13. Coke oven batteries;

14. Sulfur recovery plants;

15. Carbon black plants (furnace process);

16. Primary lead smelters;

17. Fuel conversion plant;

18. Sintering plants;

19. Secondary metal production plants;

20. Chemical process plants (the term “chemical process plants” shall not include ethanol production facilities that produce ethanol by natural fermentation included in North American Industry Classification System (NAICS) codes 325193 or 312140);

21. Fossil-fuel boilers (or combination thereof) totaling more than 250 million British thermal units per hour heat input;

22. Petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels;

23. Taconite ore processing plants;

24. Glass fiber processing plants;

25. Charcoal production plants;

26. Fossil fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input;

27. Any other stationary source category, which as of August 7, 1980, is being regulated under Section 111 or 112 of the Act;

(c) A major stationary source.

(d) A major stationary source as described in Part D of Title I of the Federal Clean Air Act which includes:

1. For ozone nonattainment areas, an emissions unit or group of emissions units, all belonging to the same two (2) digit Major Group as described in the Standard Industrial Classification Manual, 1987, with the potential to emit 100 tons per year or more of volatile organic compounds or oxides of nitrogen in areas classified as “marginal” or “moderate,” fifty (50) tons per year or more in areas classified as “serious,” twenty-five (25) tons per year or more in areas classified as “severe,” and ten (10) tons per year or more in areas classified as “extreme,” except that the references in the clause of 100, fifty (50), twenty-five (25), and ten (10) tons per year of nitrogen oxides shall not apply with respect to any source for which EPA has made in finding, under 42 U.S.C. § 7511a(f)(a) or (2), that requirements under 42 U.S.C. § 7511a(f) do not apply;

2. For ozone transport regions established pursuant to 42 U.S.C. § 7511c, an emissions unit or group of emissions units, all belonging to the same two (2) digit Major Group as described in the Standard Industrial Classification Manual, 1987, with the

potential to emit fifty (50) tons per year or more of volatile organic compounds (VOCs);

3. For carbon monoxide nonattainment areas (i) that are classified as “serious”, and (ii) in which stationary sources contribute significantly to carbon monoxide levels as determined under rules issued by EPA, an emissions unit or group of emissions units, all belonging to the same two (2) digit Major Group as described in the Standard Industrial Classification Manual, 1987, with the potential to emit fifty (50) tons per year or more of carbon monoxide;

4. For particulate matter (PM₁₀) nonattainment areas classified as “serious”, an emissions unit or group of emissions units, all belonging to the same two (2) digit Major Group as described in the Standard Industrial Classification Manual, 1987, with the potential to emit seventy (70) tons or more per year of PM₁₀;

(e) An emissions unit or group of emissions units, all belonging to the same two (2) digit Major Group as described in the Standard Industrial Classification Manual, 1987, that emits or has the potential to emit five (5) tons per year or more of lead or lead compounds, measured as elemental lead;

(f) An emissions unit or group of emissions units with one (1) or more emissions units subject to standards or regulations promulgated under 40 C.F.R. Part 60, 61 or 63, adopted and incorporated by reference at Rule 62-204.800, F.A.C., however, such emissions unit or group of emissions units is not a Title V source solely because:

1. It is subject to a reporting requirement;

2. It is subject to 40 C.F.R. Part 61, Subpart M – National Emission Standard for Asbestos Section 61.145, Standard for Demolition and Renovation, adopted and incorporated by reference at Rule 62-204.800, F.A.C.;

3. It is subject to a standard or regulation promulgated under 40 C.F.R. Part 60, adopted and incorporated by reference at Rule 62-204.800, F.A.C., unless such standard or regulation specifies that the emission unit or group of emissions units requires a Title V permit; or

4. It is subject to an area source standard or regulation promulgated under 40 C.F.R. Part 61 or 63, adopted and incorporated by reference at Rule 62-204.800, F.A.C., unless such standard or regulation specifies that the emission unit or group of emissions units requires a Title V permit.

(g) One (1) or more acid rain units; or

(h) An emissions unit or group of emission units designated as a Part 70 source under 40 C.F.R. 70.3(a)(5), adopted and incorporated by reference in Rule 62-204.800, F.A.C.

(174) “Major Stationary Source” –

(a) A major stationary source is:

1. Any of the following stationary sources of air pollutants which emits, or has the potential to emit, 100 tons per year or more of any PSD pollutant: Fossil fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input, coal cleaning plants (with thermal dryers), kraft pulp mills, portland cement plants, primary zinc smelters, iron and steel mill plants, primary aluminum ore reduction plants, primary copper smelters, municipal incinerators capable of charging more than 250 tons of refuse per day, hydrofluoric, sulfuric, and nitric acid plants, petroleum refineries, lime plants, phosphate rock processing plants, coke oven batteries, sulfur recovery plants, carbon black plants (furnace process), primary lead smelters, fuel conversion plants, sintering plants, secondary metal production plants, chemical process plants (the term “chemical process plants” shall not include ethanol production facilities that produce ethanol by natural fermentation included in North American Industry Classification System (NAICS) codes 325193 or 312140), fossil fuel boilers (or combinations thereof) totaling more than 250 million British thermal units per hour heat input, petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels, taconite ore processing plants, glass fiber processing plants, and charcoal production plants;

2. Any stationary source which emits, or has the potential to emit, 250 tons per year or more of a PSD pollutant; or

3. Any physical change that would occur at a stationary source not otherwise qualifying as a major stationary source, if the change would constitute a major stationary source by itself.

(b) A major stationary source that is major for volatile organic compounds or nitrogen oxides shall be considered major for ozone.

(c) The fugitive emissions of a stationary source shall not be included in determining for any of the purposes of this definition whether it is a major stationary source, unless the source belongs to one of the following categories of stationary sources:

1. Coal cleaning plants (with thermal dryers);

2. Kraft pulp mills;

3. Portland cement plants;

4. Primary zinc smelters;

5. Iron and steel mills;

6. Primary aluminum ore reduction plants;

7. Primary copper smelters;

8. Municipal incinerators capable of charging more than 250 tons of refuse per day;

9. Hydrofluoric, sulfuric, or nitric acid plants;

10. Petroleum refineries;

11. Lime plants;

12. Phosphate rock processing plants;

13. Coke oven batteries;

14. Sulfur recovery plants;

15. Carbon black plants (furnace process);

16. Primary lead smelters;

17. Fuel conversion plants;

18. Sintering plants;

19. Secondary metal production plants;

20. Chemical process plants (the term “chemical process plants” shall not include ethanol production facilities that produce ethanol by natural fermentation included in North American Industry Classification System (NAICS) codes 325193 or 312140);

21. Fossil-fuel boilers (or combination thereof) totaling more than 250 million British thermal units per hour heat input;

22. Petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels;

23. Taconite ore processing plants;

24. Glass fiber processing plants;

25. Charcoal production plants;

26. Fossil fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input, and

27. Any other stationary source category which, as of August 7, 1980, is being regulated under Section 111 or 112 of the Clean Air Act.

(d) For purposes of this definition, a stationary source is all of the pollutant-emitting activities which belong to the same industrial grouping, are located on one or more contiguous or adjacent properties, and are under the control of the same person or persons under common control, except the activities of any vessel; which emit or may emit a PSD pollutant. Pollutant-emitting activities shall be considered as part of the same industrial grouping if they belong to the same Major Group, or have the same first two digit code, as described in the Standard Industrial Classification Manual, 1972, as amended by the 1977 Supplement.

(175) “Malfunction” – Any unavoidable mechanical and/or electrical failure of air pollution control equipment or process equipment or of a process resulting in operation in an abnormal or unusual manner.

(176) “Maximum Achievable Control Technology” or “MACT” – Maximum achievable control technology as defined in 40 C.F.R. Part 63, Subpart B, adopted and incorporated by reference in Rule 62-204.800, F.A.C.

(177) “Maximum Allowable Increase” or “PSD Increment” – A maximum allowable increase over the baseline concentration as set forth at 40 C.F.R. § 52.21(c), adopted and incorporated by reference at Rule 62-204.800, F.A.C.

(178) “Maximum Uncontrolled Emissions” – The maximum capacity of an emissions unit or facility to emit a pollutant under its physical and operational design, including any quantifiable fugitive and unconfined emissions and excluding any restrictions on hours of operation or on the type or amount of material that may be combusted, stored, or processed and any air pollution control equipment, methods, or techniques that may be used. The maximum uncontrolled emission rate is the maximum emission rate that would occur absent the use of any air pollution control equipment, methods, or techniques and absent any regulatory restrictions on hours of operation or on the type or amount of fuels or materials combusted, stored, or processed, when the emissions unit is operated at its maximum physical and operational capacity. The maximum uncontrolled emissions of an emissions unit or facility do not include any secondary emissions that may be associated with the emissions unit or facility.

(179) “Metal Furniture Coating” – The surface coating of any furniture made of metal or any metal part which will be assembled with other metal, wood, fabric, plastic, or glass parts to form a furniture piece.

(180) “Method of Operation” – For purposes of the Title V source permitting program, a procedure to operate one or more specific emissions units within a Title V source in a particular manner which may affect air pollutant emissions.

(181) "Minor Betterment of Public Roads" – Improvements to existing public roads intended to increase their safety and serviceability as the need is dictated by increased traffic levels, or other changes in their use. These improvements include the extension or construction of acceleration lanes, deceleration lanes, turning storage lanes, or median crossovers.

(182) "Minor Facility" – Any facility that is not a major facility.

(183) "Minor Source Baseline Date" – Pursuant to 40 C.F.R. 51.166(b)(14)(ii), adopted and incorporated by reference at Rule 62-204.800, F.A.C., the minor source baseline date for each pollutant for which maximum allowable increases have been established is as follows:

(a) The sulfur dioxide minor source baseline date for the sulfur dioxide baseline area is December 27, 1977;

(b) The nitrogen dioxide minor source baseline date for the nitrogen dioxide baseline area is March 28, 1988

(c) The PM₁₀ minor source baseline date for the PM₁₀ baseline area is December 27, 1977; and

(d) The PM_{2.5} minor source baseline date for the PM_{2.5} baseline area is October 21, 2011.

(184) "Mode of Operation" – For purposes of the Title V source permitting program, a method of operation that involves two or more specific air emissions units in emissions trading pursuant to Rule 62-213.415, F.A.C.

(185) "Modification" – Any physical change in, change in the method of operation of, or addition to a facility which would result in an increase in the actual emissions of any air pollutant subject to regulation under the Act, including any not previously emitted, from any emissions unit or facility.

(a) A physical change or change in the method of operation shall not include:

1. Routine maintenance, repair, or replacement of component parts of an emissions unit; or

2. A change in ownership of an emissions unit or facility.

(b) For any pollutant that is specifically regulated by the EPA under the Clean Air Act, a change in the method of operation shall not include an increase in the hours of operation or in the production rate, unless such change would be prohibited under any federally enforceable permit condition which was established after January 6, 1975.

(c) For any pollutant that is not specifically regulated by the EPA under the Clean Air Act, a change in the method of operation shall not include an increase in the hours of operation or in the production rate, unless such change would exceed any restriction on hours of operation or production rate included in any applicable Department air construction or air operation permit.

(186) "Multiple Effect Evaporator System" – The multiple effect evaporators and concentrators and associated condenser(s) and hotwell(s) used to concentrate the spent cooking liquor (black liquor) that is separated from the pulp.

(187) "Natural Conditions" – Naturally occurring phenomena that reduce visibility as measured in terms of visual range, contrast, or coloration.

(188) "Natural Finish Hardwood Plywood Panels" – Panels whose original grain pattern is enhanced by essentially transparent finishes frequently supplemented by fillers and toners.

(189) "Net Emissions Increase" –

(a) With respect to any PSD pollutant emitted by a major stationary source, the amount by which the sum of the following exceeds zero (0):

1. The increase in emissions from a particular physical change or change in the method of operation as calculated pursuant to paragraph 62-212.400(2)(a), F.A.C.; and

2. Any other increases and decreases in actual emissions at the major stationary source that are contemporaneous with the particular change and are creditable. Baseline actual emissions for calculating increases and decreases under this subparagraph shall be determined as provided by the definition of "baseline actual emissions", except that subparagraphs (a)3. and (b)4. of such definition shall not apply.

(b) An increase or decrease in actual emissions is contemporaneous with the increase from the particular change only if it occurs between:

1. The date five years before construction on the particular change commences; and

2. The date that the increase from the particular change occurs.

(c) An increase or decrease in actual emissions is creditable only if the Department has not relied on it in issuing a permit for the source pursuant to Rule 62-212.400 or 62-212.500, F.A.C., which permit is in effect when the increase in actual emissions from the particular change occurs.

(d) An increase or decrease in actual emissions of sulfur dioxide, particulate matter, or nitrogen oxides that occurs before the applicable minor source baseline date is creditable only if it is required to be considered in calculating the amount of maximum

allowable increases remaining available.

(e) An increase in actual emissions is creditable only to the extent that the new level of actual emissions exceeds the old level.

(f) A decrease in actual emissions is creditable only to the extent that:

1. The old level of actual emissions or the old level of allowable emissions, whichever is lower, exceeds the new level of actual emissions;

2. It is federally enforceable as a practical matter at and after the time that actual construction on the particular change begins; and

3. It has approximately the same qualitative significance for public health and welfare as that attributed to the increase from the particular change.

(g) An increase that results from a physical change at a source occurs when the emissions unit on which construction occurred becomes operational and begins to emit a particular pollutant. Any replacement unit that requires shakedown becomes operational only after a reasonable shakedown period, not to exceed 180 days.

(h) Paragraph (a) of the definition of "actual emissions" shall not apply for determining creditable increases and decreases.

(190) "Neutral Sulfite Semichemical (NSSC) Pulping Operation" – Any series of unit operations in which pulp is produced from wood by cooking (digesting) wood chips in a solution of sodium sulfite and sodium bicarbonate, followed by mechanical defibrating (grinding).

(191) "New Design Direct-Fired Kraft Recovery Furnace" – Any new design kraft recovery furnace which was initially designed and constructed to burn black liquor received from a multiple effect evaporator system using a noncontact evaporator or concentrator to achieve the final level of solids concentration rather than a direct contact evaporator system connected to the kraft recovery furnace duct work.

(192) "New Design Direct-Fired Suspension-Burning Kraft Recovery Furnace" – Any new design direct-fired kraft recovery furnace designed to evaporate remaining water from and burn the organic content of a spray of finely divided concentrated black liquor droplets while the droplets are in suspension. Such a furnace will have only two levels of air introduction (primary and secondary) and a flat hearth with the smelt spouts located above the hearth.

(193) "New Design Kraft Recovery Furnace" – Any straight kraft recovery furnace which is of "membrane wall" construction to minimize air in-leakage and has an adjustable air introduction system to deliver an adequate quantity of air while providing both effective air distribution and penetration into the furnace. The air induction system on "new design" Babcock & Wilcox furnaces will consist of primary, secondary, and tertiary ports. In Combustion Engineering units the secondary air (introduced above the black liquor gun elevation) will be introduced tangentially.

(194) "New Emissions Unit" – An emissions unit which is not in existence, for which an application for a permit to construct has not been submitted before the effective date of an applicable section or provision. For the purposes of Rule 62-212.400, F.A.C., a new emissions unit is any emission unit that is or will be newly constructed and that has existed for less than 2 years from the date such emissions unit first operated.

(195) "Nitric Acid Plant" – Any facility producing weak nitric acid by employing either the pressure or atmospheric pressure process.

(196) "Nitrogen Oxides" – All oxides of nitrogen, except nitrous oxide, as measured by test methods set forth in 40 C.F.R. Part 60, adopted and incorporated by reference at Rule 62-204.800, F.A.C., and expressed as nitrogen dioxide.

(197) "Nonattainment Area" – Any area not meeting ambient air quality standards and designated as a nonattainment area under Rule 62-204.340, F.A.C. Such an area may be designated as a particulate, sulfur dioxide, nitrogen dioxide, carbon monoxide, lead or ozone nonattainment area, depending on which ambient standard has been violated. An area may be designated as nonattainment for more than one air pollutant. Ozone nonattainment areas may be transitional, marginal, moderate, serious, severe, or extreme as classified in Rule 62-204.340, F.A.C.

(198) "Non-heatset" – A lithographic printing process where the printing inks are set without the use of heat. Traditional non-heatset inks set and dry by absorption and/or oxidation of the ink oils. Ultraviolet-cured, thermography and electron beam-cured inks are considered non-heatset although radiant energy is required to cure these inks.

(199) "North American Industry Classification System" or "NAICS" – A federal system of classifying business establishments according to similarity in the processes used to produce goods or services, as described in the 2007 NAICS definition file (available free of cost at <http://www.census.gov/eos/www/naics/> or available in CD ROM or book form at a cost from the U.S. Department of Commerce at 1(800)553-6847), hereby adopted and incorporated by reference

(<https://www.flrules.org/Gateway/reference.asp?No=Ref-00705>).

(200) “Objectionable Odor” – Any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance.

(201) “Odor” – A sensation resulting from stimulation of the human olfactory organ.

(202) “Old Design Kraft Recovery Furnace” – Any straight kraft recovery furnace which is not of “membrane wall” construction to minimize air in-leakage.

(203) “Opacity” – A condition which renders material partially or wholly impervious to rays of light causing obstruction of observer’s view.

(204) “Open Burning” – The burning of any matter in such a manner that the products of combustion resulting from the burning are emitted directly into the outdoor atmosphere without passing through a stack or chimney.

(205) “Open Top Vapor Degreasing” – The batch process of cleaning and removing soils from metal surfaces by condensing hot solvent vapor on the colder metal parts.

(206) “Operating Change” – For purposes of the Title V source permitting program, any physical change to, or change to the operation of, any Title V source or any emissions unit within any Title V source which contravenes a permit term or condition, other than one described at paragraphs 62-213.400(2)(a)-(j), F.A.C., but which does not constitute a modification and does not otherwise subject the source to a requirement for permit revision pursuant to Rule 62-213.400, F.A.C.

(207) “Organic Compounds” – Any substance that contains the element carbon, except carbon oxides and various carbonates.

(208) “Oven” – A chamber within which heat is used to bake, cure, polymerize, and/or dry a surface coating.

(209) “Overall Emission Reduction Efficiency” – The product of the capture efficiency and the control equipment destruction or removal efficiency, divided by 100, expressed as a percentage.

(210) “Overvarnish” – A coating applied directly over ink to reduce the coefficient of friction, to provide a gloss, and to protect the finish against abrasion and corrosion.

(211) “Owner” or “Operator” – Any person or entity who or which owns, leases, operates, controls or supervises an emissions unit or facility.

(212) “Packaging Rotogravure Printing” – Rotogravure printing upon paper, paper board, metal foil, plastic film, and other substrates, which are, in subsequent operations, formed into packing products and labels for articles to be sold.

(213) “Paper Coating” – Coatings put on paper and pressure sensitive tapes regardless of substrate. Related web coating processes on plastic film and decorative coatings on metal foil are included in this definition.

(214) “Particulate Matter” –

(a) With respect to concentrations in the atmosphere, particulate matter means any airborne finely divided solid or liquid material.

(b) With respect to emissions, particulate matter means all finely divided solid or liquid material, other than uncombined water, emitted to the atmosphere as measured by applicable reference methods, or an equivalent or alternative method, specified in 40 C.F.R. Part 60, Appendix A, adopted and incorporated by reference in Rule 62-204.800, F.A.C.

(215) “Penetrating Prime Coat” – An application of low viscosity liquid asphalt to an absorbent surface. It is used to prepare an untreated base for an asphalt surface. The prime penetrates the base and plugs the voids, hardens the top, and helps bind to the overlying asphalt course. It also reduces the necessity of maintaining an untreated base course prior to placing the asphalt pavement.

(216) “Permanent Total Enclosure” – With respect to VOC emissions, a permanent total enclosure is an enclosure which contains an activity, process, or emissions unit that emits VOC and meets the specifications given in Procedure T which is adopted by reference in Rule 62-204.800, F.A.C.

(217) “Permit Revision” or “Permit Modification” – Any alteration to a permit term or condition except an administrative permit correction or amendment described at Rule 62-210.360, F.A.C.

(218) “Petroleum Liquids” – Petroleum, condensate, and any finished or intermediate products manufactured in a petroleum refinery but does not mean No. 2 through No. 6 fuel oils, gas turbine fuel oils No. 2-GT through No. 4-GT, or diesel fuel oils No. 2-D and No. 4-D.

(219) “Plant Section” – A part of a plant consisting of one or more unit operations including auxiliary equipment which provides the complete processing of input (raw) materials to produce a marketable product, including granular triple super phosphate, phosphoric acid, run-of-pile triple super phosphate, and diammonium phosphate, or one or more unit operations

including auxiliary equipment or structures which are used for the functions such as: storage, shipping, loading, unloading, or bagging.

(220) “PM₁₀” –

(a) PM₁₀ means particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers.

(b) For purposes of Rules 62-212.400 and 62-212.500, F.A.C., including determinations of applicability and establishment of limitations to avoid applicability of Rule 62-212.400 or 62-212.500, F.A.C., PM₁₀ emissions shall include condensable PM₁₀. Compliance with PM₁₀ emissions limitations originating in a permit issued pursuant to Rule 62-212.400 or 62-212.500, F.A.C., and issued prior to January 1, 2011, shall not be based on condensable PM₁₀ unless required by the terms and conditions of the permit.

(221) “PM_{2.5}” –

(a) PM_{2.5} means particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers.

(b) For purposes of Rules 62-212.400 and 62-212.500, F.A.C., including determinations of applicability and establishment of limitations to avoid applicability of Rule 62-212.400 or 62-212.500, F.A.C., PM_{2.5} emissions shall include condensable PM_{2.5}. Compliance with PM_{2.5} emissions limitations originating in a permit issued pursuant to Rule 62-212.400 or 62-212.500, F.A.C., and issued prior to January 1, 2011, shall not be based on condensable PM_{2.5} unless required by the terms and conditions of the permit.

(222) “Pollution Control Project” – Any activity or project undertaken at an existing electric utility steam generating unit for purposes of reducing emissions from such unit. Such activities or projects are limited to:

(a) A permanent clean coal technology demonstration project conducted under Title II, section 101(d) of the Further Continuing Appropriations Act of 1985 (sec. 5903(d) of title 42 of the United States Code), or subsequent appropriations, up to a total amount of \$2,500,000,000 for commercial demonstration of clean coal technology, or similar projects funded through appropriations for the Environmental Protection Agency; or

(b) A permanent clean coal technology demonstration project that constitutes a repowering project.

(223) “Polyester Resin Material” – Materials used in polyester resin operations which include isophthalic, orthophthalic, halogenated, bisphenol-A, vinyl-ester or furan resins; cross-linking agents; catalysts, gel coats, inhibitors, accelerators, promoters, and any other VOC containing materials.

(224) “Portland Cement Plant” – Any facility manufacturing Portland Cement by either the wet or dry process.

(225) “Potential to Emit” – The maximum capacity of an emission unit or facility to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the emissions unit or facility to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable. Secondary emissions do not count in determining the potential to emit of an emission unit or facility.

(226) “Predictive Emissions Monitoring System” or “PEMS” – All of the equipment necessary to monitor process and control device operational parameters including control device secondary voltages and electric currents; and other information including gas flow rate, oxygen or carbon dioxide concentrations; and calculate and record the mass emissions rate such as 1b/hr on a continuous basis.

(227) “Prime Coat” – The first film of coating applied in a multi-coat operation.

(228) “Printed Interior Panels” – Panels whose grain or natural surface is obscured by fillers and basecoats upon which a simulated grain or decorative pattern is printed.

(229) “Printing Line” – A printing production assembly composed of one or more units used to produce a printed substrate including any associated coating, spray powder application, or infrared, natural gas, or electric heating units or dryers.

(230) “Projected Actual Emissions” – The maximum annual rate, in tons per year, at which an existing emissions unit is projected to emit a PSD pollutant in any one of the 5 years following the date the unit resumes regular operation after the project, or in any one of the 10 years following that date, if the project involves increasing the emissions unit’s design capacity or its potential to emit that PSD pollutant and full utilization of the unit would result in a significant emissions increase or a significant net emissions increase at the major stationary source. One year is one 12-month period. In determining the projected actual emissions, the Department:

(a) Shall consider all relevant information, including historical operational data, the company’s own representations, the company’s expected business activity and the company’s highest projections of business activity, the company’s filings with the State or Federal regulatory authorities, and compliance plans or orders, including consent orders; and

(b) Shall include fugitive emissions to the extent quantifiable and emissions associated with startups and shutdowns; and

(c) Shall exclude that portion of the unit's emissions following the project that an existing unit could have accommodated during the consecutive 24-month period used to establish the baseline actual emissions and that are also unrelated to the particular project including any increased utilization due to product demand growth; or

(d) In lieu of using the method set out in paragraphs (a) through (c) above, may be directed by the owner or operator to use the emissions unit's potential to emit, in tons per year.

(231) "Process Weight" – The total weight of all materials introduced into any process. Solid fuels and recycled materials are included in the determination of process weights; but uncombined water, liquid and gaseous fuels, combustion air, or excess air are not included.

(232) "Proposed Acid Rain Part" – The version of an Acid Rain Part of a Title V source permit that the Department submits to EPA pursuant to Rule 62-213.450, F.A.C., after the public comment period.

(233) "Proposed Permit" – The version of a Title V source permit that the Department proposes to issue and forwards to EPA in compliance with subsection 62-213.450(1), F.A.C.

(234) "PSD Pollutant" –

(a) Any pollutant listed as having a significant emission rate as defined in Rule 62-210.200, F.A.C.; and

(b) Any "Regulated NSR Pollutant" as defined at 40 CFR 52.21(b)(50) and as adopted and incorporated by reference in Rule 62-204.800, F.A.C.

(235) "Publication Rotogravure" – Rotogravure printing upon paper which is subsequently formed into books, magazines, catalogues, brochures, directories, newspaper supplements and other types of printed materials.

(236) "Quench Area" – A chamber where the hot metal exiting the oven is cooled by either a spray of water or a blast of air followed by water cooling.

(237) "Reasonable Further Progress" – A level of annual incremental reductions in emissions of affected air pollutants such as may be required for ensuring attainment of the applicable national ambient air quality standards by the applicable date.

(238) "Reasonably Available Control Technology" or "RACT" – The lowest emission limit that a particular emissions unit is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility. It may require technology that has been applied to similar, but not necessarily identical, source categories.

(239) "Reconstruction" – For the purposes of Rule 62-212.400, F.A.C., the replacement of components of an existing emissions unit to such an extent that the fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new emissions unit.

(240) "Regulated Air Pollutant" –

(a) Nitrogen oxides or volatile organic compounds;

(b) Any pollutant regulated under 42 U.S.C. s. 7411 – Standards of Performance for New Stationary Sources, or 42 U.S.C. s. 7412 – Hazardous Air Pollutants; or

(c) Any pollutant for which a national primary ambient air quality standard has been specified at 40 C.F.R. Part 50, adopted and incorporated by reference in Rule 62-204.800, F.A.C.

(d) Any pollutant listed at 40 CFR Part 82, Subpart A, Appendix A or B, adopted and incorporated by reference at Rule 62-204.800, F.A.C.

(241) "Reid Vapor Pressure" – The absolute vapor pressure of volatile crude oil and volatile non-viscous petroleum liquids except liquefied petroleum gases as determined by American Society for Testing and Materials, Part 17, 1973, D-323-72 (reapproved 1977).

(242) "Reinforced Polyester Resin Operations" – An operation that entails saturating a reinforcing material such as glass fiber with a polyester resin material. Such operations include the production or rework of product by mixing, pouring, hand laying-up, impregnating, injecting, forming, spraying, and/or curing unsaturated polyester materials with fiberglass, fillers, or any other reinforcement materials and associated cleanup.

(243) "Relocatable Facility" – A facility such as, but not limited to, an asphalt plant, portable power generator, or cement batch plant, which is designed to be physically moved to, and operated on, different sites by being wholly or partially dismantled and re-erected in essentially the same configuration. It shall not be operable while in transit.

(244) "Removal Efficiency" – See "Destruction or Removal Efficiency" above.

(245) "Repowering" – For the purposes of Rule 62-212.400, F.A.C., replacement of an existing coal-fired boiler with one of the following clean coal technologies: atmospheric or pressurized fluidized bed combustion, integrated gasification combined cycle,

magnetohydrodynamics, direct and indirect coal-fired turbines, integrated gasification fuel cells, or as determined by the Administrator, in consultation with the Secretary of Energy, a derivative of one or more of these technologies, and any other technology capable of controlling multiple combustion emissions simultaneously with improved boiler or generation efficiency and with significantly greater waste reduction relative to the performance of technology in widespread commercial use as of November 15, 1990. Repowering shall also include any oil and/or gas-fired unit which has been awarded clean coal technology demonstration funding as of January 1, 1991, by the Department of Energy.

(246) "Responsible Official" – One of the following:

(a) For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C.;

(b) For a partnership or sole proprietorship, a general partner or the proprietor, respectively;

(c) For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official; or

(d) For implementation of the Federal Acid Rain Program at an Acid Rain source: The designated representative. For other purposes at an Acid Rain source: Either the designated representative or any person that would qualify as a responsible official under paragraphs (a) through (c) of this definition.

(247) "Roll Coating" – The application of a coating material to a substrate by means of hard rubber or steel rolls.

(248) "Roll Printing" – The application of words, designs, and pictures to a substrate usually by means of a series of hard rubber or steel rolls each with only partial coverage.

(249) "Rotogravure Coating" – The application of a coating material to a substrate by means of a roll coating technique in which the pattern to be applied is etched on the coating roll. The coating material is picked up in these recessed areas and is transferred to the substrate.

(250) "Rotogravure Printing" – The application of words, designs, and pictures to a substrate by means of a roll printing technique which involves an intaglio or recessed image areas in the form of cells.

(251) "Routine Maintenance of Public Roads" – Those activities necessary to maintain the public highway system in as near original condition as is practical, not to include large scale resurfacing, or reconstruction.

(252) "Sand Seal Coat" – A thin asphalt surface treatment designed to seal surface cracks in existing pavements for the purpose of preventing the intrusion of water into the pavement base. The sand seal coat consists of a light application of liquid asphalt covered with fine aggregate.

(253) "Screen Printing" – A printing system where the printing ink passes through a web or fabric to which a refined form of stencil has been applied. The stencil openings determine the form and dimensions of the imprint.

(254) "Secondary Emissions" – The emissions which occur as a result of the construction or operation of a facility or a modification to a facility, but which are not discharged into the atmosphere from the facility itself. Secondary emissions may include but are not limited to emissions from ships or trains coming to or leaving a new or modified facility and emissions from any off-site support facility which would not otherwise be constructed or increase its emissions except as a result of the construction or operation of the new or modified facility. Secondary emissions must be specific, well defined, quantifiable, and impact the same general area as the facility or modification which causes the secondary emissions.

(255) "Secretary" – The Secretary of the Department.

(256) "Sharps" – Devices with physical characteristics capable of puncturing, lacerating, or otherwise penetrating the skin. These devices include needles, intact or broken glass, and intact or broken hard plastic.

(257) "Shutdown" – The cessation of the operation of an emissions unit for any purpose.

(258) "Significant Emissions Rate" –

(a) With respect to any emissions increase or any net emissions increase, or the potential of a facility to emit any of the following pollutants, significant emissions rate means a rate of pollutant emissions that would equal or exceed:

1. A rate listed at 40 CFR 52.21(b)(23)(i), adopted and incorporated by reference at Rule 62-204.800, F.A.C.; specifically, any of the following rates:

a. Carbon monoxide: 100 tons per year (tpy);

b. Nitrogen oxides: 40 tpy;

c. Sulfur dioxide: 40 tpy;
d. Particulate matter: 25 tpy;
e. PM₁₀: 15 tpy;
f. PM_{2.5}: 10 tpy of direct PM_{2.5} emissions, 40 tpy of sulfur dioxide emissions, or 40 tpy of nitrogen oxides emissions;
g. Ozone: 40 tpy of volatile organic compounds or nitrogen oxides;
h. Lead: 0.6 tpy;
i. Fluorides: 3 tpy;
j. Sulfuric acid mist: 7 tpy;
k. Hydrogen sulfide (H₂S): 10 tpy;
l. Total reduced sulfur (including H₂S): 10 tpy;
m. Reduced sulfur compounds (including H₂S): 10 tpy;
n. Municipal waste combustor organics (measured as total tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans): 3.2×10^6 megagrams per year (3.5×10^6 tons per year);
o. Municipal waste combustor metals (measured as particulate matter): 14 megagrams per year (15 tons per year);
p. Municipal waste combustor acid gases (measured as sulfur dioxide and hydrogen chloride): 36 megagrams per year (40 tons per year);
q. Municipal solid waste landfills emissions (measured as nonmethane organic compounds): 45 megagrams per year (50 tons per year); or
2. A rate previously listed at Table 62-212.400-2; specifically, Mercury: 0.1 tpy.
(b) Significant emissions rate also means, for the pollutants listed above in paragraph (a), any emissions rate or any net emissions increase associated with a major stationary source or major modification which would construct within 10 kilometers of a Class I area and have an impact on such area equal to or greater than 1 microgram per cubic meter, 24-hour average.
(c) For purposes of substances listed in paragraph (d) of the definition of "Regulated Air Pollutant" that do not otherwise have a threshold at paragraph (a) or (b), above, or for which 40 CFR 52.21(b)(50)(iv) prohibits regulation under the prevention of significant deterioration program, "Significant Emissions Rate" shall have the rate specified at 40 CFR 52.21(b)(23)(ii), adopted and incorporated by reference at Rule 62-204.800, F.A.C.
(259) "Significant Impact" – An impact of emissions on ambient air quality in excess of any of the following pollutant-specific concentration values:
(a) Sulfur Dioxide.
1. Maximum three-hour concentration not to be exceeded more than once per year – 25.0 micrograms per cubic meter.
2. Maximum 24-hour concentration not to be exceeded more than once per year – 1.0 microgram per cubic meter for Class I areas; 5.0 micrograms per cubic meter for all other areas.
3. Annual arithmetic mean – 1.0 microgram per cubic meter.
(b) PM₁₀.
1. Maximum 24-hour concentration not to be exceeded more than once per year – 1.0 microgram per cubic meter for Class I areas; 5.0 micrograms per cubic meter for all other areas.
2. Annual arithmetic mean – 1.0 microgram per cubic meter.
(c) PM_{2.5}.
1. Maximum 24-hour concentration not to be exceeded more than once per year – 0.07 micrograms per cubic meter for Class I areas; 1.2 micrograms per cubic meter for all other areas.
2. Annual arithmetic mean – 0.06 micrograms per cubic meter for Class I areas; 0.3 micrograms per cubic meter for all other areas.
(d) Nitrogen Dioxide.
Annual arithmetic mean – 1.0 microgram per cubic meter.
(e) Carbon Monoxide.
1. Maximum one-hour concentration not to be exceeded more than once per year – 2.0 milligrams per cubic meter.
2. Maximum eight-hour concentration not to be exceeded more than once per year – 0.5 milligram per cubic meter.
(f) Lead. Maximum quarterly arithmetic mean – 0.03 microgram per cubic meter.
(260) "Single Coat" – Single film of coating applied directly to the metal substrate omitting the primer application.

(261) "Small Business Stationary Source" – Either paragraph (a) or (b) as follows:
(a) A facility which:
1. Is owned or operated by a person who employs 100 or fewer individuals;
2. Is a small business concern as defined in 15 U.S.C. s. 632;
3. Is other than a major stationary source within the meaning of 42 U.S.C. s. 7602(j), and is other than a major emitting facility within the meaning of 42 U.S.C. s. 7479, and is other than a major stationary source within the meaning of 42 U.S.C. s. 7503;
4. Emits less than 50 tons per year of any regulated pollutant; and
5. Emits less than 75 tons per year of all regulated pollutants; or
(b) A facility which:
1. Is owned or operated by a person that employs 100 or fewer individuals;
2. Is a small business concern as defined in 15 U.S.C. s. 632; and
3. Emits not more than 100 tons per year of all regulated air pollutants and demonstrates compliance with the requirements of paragraph 62-210.220(2)(b), F.A.C., including all the requirements of subparagraph 62-210.220(2)(b)1. through 9., F.A.C.
(262) "Smelt Dissolving Tank" – A vessel used for dissolving the smelt collected from the recovery furnace.
(263) "Soil Thermal Treatment Facility" – Either a stationary or mobile facility system designed, constructed, or utilized, and permitted by the Department to handle, store, and thermally treat or process petroleum contaminated soils. "Soil thermal treatment facility" does not include electrical power plants in which thermal treatment of contaminated soils from their own property results in ash which is disposed of in accordance with Chapter 62-701 or 62-702, F.A.C., or facilities that treat RCRA and hazardous waste or hazardous substances.
(264) "Solid Waste" – Includes garbage, refuse, yard trash, clean debris, white goods, special waste, ashes, sludge, or other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from domestic, industrial, commercial, mining, agricultural, or governmental operations.
(265) "Solvent" – Organic materials which are liquid at standard conditions and which are used as solvers, viscosity reducers, or cleaning agents.
(266) "Solvent Metal Cleaning" – The process of cleaning soil from metal surfaces by cold cleaning or open top vapor degreasing or conveyorized degreasing.
(267) "Special Waste" – Solid wastes that can require special handling and management, including white goods, whole tires, used oil, mattresses, furniture, lead-acid batteries, and biological wastes.
(268) "Stack" – A pipe, duct, chimney, or other functionally equivalent device that confines and conveys air pollutants from an emissions unit or group of emissions units into the atmosphere through an emission point designed to discharge air pollutants into the atmosphere, but not including flares.
(269) "Stack in Existence" – A stack where the owner or operator had, as of a particular date:
(a) Begun, or caused to begin, a continuous program of physical on-site construction of the stack; or
(b) Entered into binding agreements or contractual obligations, which could not be cancelled or modified without substantial loss to the owner or operator, to undertake a program of construction of the stack to be completed in a reasonable time.
(270) "Standard Conditions" – A temperature of 68 degrees Fahrenheit (20 degrees Celsius) and a pressure of 14.7 pounds per square inch absolute (760 mm Hg).
(271) "Startup" – The commencement of operation of any emissions unit which has shut down or ceased operation for a period of time sufficient to cause temperature, pressure, chemical or pollution control device imbalances, which result in excess emissions.
(272) "State Implementation Plan (SIP)" or "Implementation Plan" – Collectively, all plans and plan revisions of a state approved by the Administrator pursuant to Section 110 of the Clean Air Act. Unless otherwise stated, the term refers specifically to the State Implementation Plan for the State of Florida, identified in 40 C.F.R. Part 52, Subpart K, adopted and incorporated by reference at Rule 62-204.800, F.A.C.
(273) "Straight Kraft Recovery Furnace" – A furnace used to recover chemicals consisting primarily of sodium and sulfur compounds by burning black liquor which on a quarterly basis contains 7 weight percent or less of the total pulp solids from the neutral sulfite semichemical (NSSC) process or has a green liquor sulfidity of 28 percent or less.
(274) "Submerged Filling" – The filling of a gasoline cargo tank or a stationary storage tank through an internal fill pipe whose discharge is no more than six (6) inches from the bottom of the tank. Bottom filling of gasoline cargo tanks or stationary storage tanks is included in this definition.

(275) “Sulfur Recovery Plant” – Any plant that recovers sulfur from crude (unrefined) petroleum materials.

(276) “Sulfuric Acid Plant” – Any installation producing sulfuric acid by burning elemental sulfur, alkylation acid, hydrogen sulfides, organic sulfides, mercaptans, or acid sludge.

(277) “Synthetic Non-Title V Source” – A facility that would be classified as a Title V source, but for a physical or operational limitation assumed by the owner or operator on the capacity of the facility to emit a pollutant, including any air pollution control equipment and any restriction on hours of operation or on the type or amount of material combusted, stored, or processed, provided that such physical or operational limitation is federally enforceable.

(278) “Tack Coat” – A light application of liquid asphalt to an existing asphalt pavement or base to insure a bond between the surface being paved, or repaired, and the overlying paving or patching material.

(279) “Tall Oil Plant” – A plant which recovers the crude tall oil fraction from the spent kraft cooking liquor (black liquor) used in the kraft process. Included are all associated tanks and vents from which reduced sulfur compounds are emitted to the atmosphere.

(280) “Temporary Total Enclosure” – With respect to VOC emissions, a temporary total enclosure is an enclosure which is built around an activity, process, or emissions unit that emits VOC and meets the specifications given in Procedure T which is adopted by reference in Rule 62-204.800, F.A.C.

(281) “Thermography” – The process of spreading thermal powders on the wet ink of a print application and heating it in order to melt the powder into a single solid mass which creates a raised printing effect. The heating is accomplished with a natural gas or electric oven.

(282) “Thin Particleboard” – A manufactured board 1/2 inch or less in thickness made of individual wood particles which have been coated with binder and formed into flat sheets by pressure.

(283) “Three-Piece Can Side-Seam Spray” – A coating sprayed on the exterior and interior of a welded, cemented or soldered seam to protect the exposed metal.

(284) “Tileboard” – Paneling that has a colored waterproof surface coating.

(285) “Title V Operation Permit Program” – The EPA-approved operation permit program which Title V of the Act requires a state to submit to the Administrator.

(286) “Title V Source” – A major source of air pollution as defined above.

(287) “Title V Source Permit” – A permit issued pursuant to Chapter 62-213, F.A.C.

(288) “Topcoat” – The final film of coating applied in a multiple coat operation.

(289) “Total Reduced Sulfur (TRS)” – The sum of the sulfur compounds hydrogen sulfide, methyl mercaptan, dimethyl sulfide, and dimethyl disulfide that are released during the kraft pulping process and measured by Reference Method 16 or a designated alternate method.

(290) “True Vapor Pressure” – The equilibrium partial pressure exerted by a petroleum liquid as determined in accordance with methods described in American Petroleum Institute Bulletin 2517, “Evaporation Loss from External Floating Roof Tanks,” 1980. The above reference is available from American Petroleum Institute, 2101 L. Street, Northwest, Washington, D.C., and may be inspected at the Department’s Tallahassee office.

(291) “Two-Piece Can Exterior End Coating” – A coating applied by roller coating or spraying to the exterior end of a can to provide protection to the metal.

(292) “Ultraviolet-Cured” – An ink and coating drying process by which monomers, oligomers, and other components polymerize to form a film when exposed to ultraviolet radiation.

(293) “Unconfined Emissions” – Emissions which escape and become airborne from unenclosed operations or which are emitted into the atmosphere without being conducted through a stack.

(294) “Unit-Specific Applicable Requirement” – For purposes of the permitting requirements of Chapter 62-213, F.A.C., a unit-specific applicable requirement means any applicable requirement that applies specifically to a given emissions unit; however, applicable requirements which are not considered unit-specific applicable requirements include the following:

(a) Any subpart of 40 C.F.R. Part 60, 61, or 63 that imposes nothing more than a recordkeeping or reporting requirement on an emissions unit;

(b) 40 CFR Part 61, Subpart M – National Emission Standard for Asbestos, Section 61.145, Standard for Demolition and Renovation;

(c) Subsection 62-296.320(2), F.A.C., Objectionable Odor Prohibited;

(d) Paragraph 62-296.320(4)(b), F.A.C., General Visible Emissions Standard, except subparagraph 62-296.320(4)(b)2., F.A.C.;

(e) Paragraph 62-296.320(4)(c), F.A.C., Unconfined Emissions of Particulate Matter;

(f) Rule 62-4.160, F.A.C., except subsection 62-4.160(13), F.A.C.; and

(g) Any standard or other requirement under Chapters 62-252, 62-256, 62-257, and 62-281, F.A.C.

(295) “Unit-Specific Limitation or Requirement” – For purposes of the air construction and air operation permitting requirements of Chapters 62-210 and 62-212, F.A.C., and for purposes of the air general permit provisions and air permitting exemption criteria of Chapter 62-210, F.A.C., a unit-specific limitation or requirement means any limitation or requirement that applies specifically to a given emissions unit, including a PAL; however, limitations and requirements which are not considered unit-specific limitations or requirements for these purposes include the following:

(a) Any limitation or requirement under any subpart of 40 C.F.R. Part 60, 61, or 63 that has not been adopted and incorporated by reference at Rule 62-204.800, F.A.C.

(b) Any limitation or requirement under any of the following EPA regulations adopted and incorporated by reference at Rule 62-204.800, F.A.C.

- 40 CFR Part 61, Subpart M – National Emission Standard for Asbestos, Section 61.145, Standard for Demolition and Renovation.
- Any subpart of 40 C.F.R. Part 60, 61, or 63 that imposes nothing more than a recordkeeping or reporting requirement on an emissions unit.

(c) Subsection 62-296.320(2), F.A.C., Objectionable Odor Prohibited.

(d) Paragraph 62-296.320(4)(b), F.A.C., General Visible Emissions Standard, except subparagraph 62-296.320(4)(b)2., F.A.C.

(e) Paragraph 62-296.320(4)(c), F.A.C., Unconfined Emissions of Particulate Matter.

(f) Rule 62-4.160, F.A.C.

(g) Any standard or other requirement under Chapter 62-252, 62-256, 62-257, or 62-281, F.A.C.

(296) “Untreated Wood” – Wood (including lighter pine, tree trunks, limbs and stumps, shrubs, and lumber) which is free of paint, glue, filler, pentachlorophenol, creosote, tar, asphalt, chromated copper arsenate (CCA), and other wood preservatives or treatments.

(297) “Vapor Collection System” – A vapor transport system which uses direct displacement by the liquid loaded to force vapors from the tank into a vapor control system.

(298) “Vapor Control System” – A system that will not allow emissions of volatile organic compounds in the displaced vapor at a rate greater than 80 milligrams per liter (4.7 grains/gallon (gr./gal.)) of gasoline transferred.

(299) “Vapor-mounted Seal” – A primary seal mounted so there is an annular vapor space underneath the seal. The annular vapor space is bounded by the bottom of the primary seal, the tank wall, the liquid surface, and the floating roof.

(300) “Vinyl Coating” – Applying a decorative or protective topcoat, or printing on vinyl-coated fabric or vinyl sheets. VOC emission reduction credit is not allowed when plastisols are used in emission averaging involving vinyl printing and topcoating.

(301) “Visibility Impairment” or “Impairment to Visibility” – Any humanly perceptible change in visibility (visual range, contrast, coloration) from that which would have existed under natural conditions.

(302) “Visible Emission” – An emission greater than 5 percent opacity or 1/4 Ringelmann measured by standard methods.

(303) “Volatile Organic Compounds (VOC)” – Any one or more volatile organic compounds as defined at 40 CFR 51.100, adopted and incorporated by reference at Rule 62-204.800, F.A.C.

(304) “Waste-to-Energy Facility” – A facility that uses an enclosed device using controlled combustion to thermally break down solid, liquid or gaseous combustible solid waste to an ash residue that contains little or no combustible material, and that produces electricity, steam, or other energy as a result. The term does not include facilities that primarily burn fuels other than solid waste, even if the facilities also burn some solid waste as a fuel supplement. The term also does not include facilities that burn vegetative, agricultural, or silvicultural wastes, bagasse, clean dry wood, methane or other landfill gas, wood fuel derived from construction or demolition debris, or waste tires, alone or in combination with fossil fuel. For the purposes of Rule 62-296.416, F.A.C., the term does not include facilities that primarily burn biohazardous or hazardous waste and industrial boilers that burn pelletized paper waste as a supplemental fuel.

(305) “Water-based Ink/Coating/Adhesive” – An ink, coating or adhesive with a VOC content less than or equal to 25 percent by weight as applied.

(306) “Waxy, Heavy Pour Crude Oil” – A crude oil with a pour point of 50 degrees or higher.

Rulemaking Authority 403.061, 403.8055 FS. Law Implemented 403.031, 403.061, 403.087, 403.0872, 403.8055 FS. History—Formerly 17-2.100,

Amended 2-9-93, 11-28-93, Formerly 17-210.200, Amended 11-23-94, 4-18-95, 1-2-96, 3-13-96, 3-21-96, 8-15-96, 10-7-96, 10-15-96, 5-20-97, 11-13-97, 2-5-98, 2-11-99, 4-16-01, 2-19-03, 4-1-05, 7-6-05, 2-2-06, 4-1-06, 9-4-06, 9-6-06, 1-10-07, 5-9-07, 7-16-07, 3-16-08, 10-12-08, 6-29-09, 3-11-10, 6-29-11, 12-4-11, 3-28-12, 10-23-13, 8-25-14.

62-210.220 Small Business Assistance Program.

A “Small Business Stationary Source Technical and Environmental Compliance Assistance Program,” or “Small Business Assistance Program,” is established as an organizational unit of the Department’s Division of Air Resources Management. The purpose of this rule is to establish procedures for notifying small business stationary sources of their rights and to assure an opportunity for public comment on any petition filed by any facility seeking inclusion on the list of small business stationary sources maintained by the Small Business Assistance Program.

(1) Notification of Rights. The Department shall provide, at a minimum, notice to small business stationary sources as identified pursuant to subsection 62-210.220(2), F.A.C., of state requirements.

(a) The Small Business Assistance Program shall provide notice of those rules related to air pollution which have been proposed by the Department and published in the Florida Administrative Register. Each notice shall contain:

1. The subject matter of the rule;
2. The publication date;
3. Any published effective date;
4. The Florida Administrative Weekly location, by volume and page number; and
5. The Small Business Assistance Program Hotline telephone number.

(b) The Department shall provide those small business stationary sources identified pursuant to subsection 62-210.220(2), F.A.C., which are also Title V sources with notice of any requirements of Chapter 62-213, F.A.C., in accordance with the provisions of Chapter 62-213, F.A.C.

(2) Public Notice and Comment. The Small Business Assistance Program shall create and maintain a list of interested entities to receive the notices identified in subsection 62-210.220(1), F.A.C.

(a) The Small Business Assistance Program shall create a list of small business stationary sources as follows:

1. The program shall identify, using existing Department air pollutant emitting facility computerized records, all permitted facilities that have the potential to emit not more than 100 tons per year of all regulated air pollutants. The program shall request of each such facility:

- a. The total number of full-time and part-time employees, including temporary employees, employed by the person, corporation or partnership which owns or operates the facility;
- b. The type of business in which the facility is engaged; and
- c. The total amount of annual receipts for the most recently completed fiscal year.

2. Each facility desiring consideration as a small business stationary source shall provide the information listed in subparagraph 62-210.220(2)(a)1., F.A.C. The Small Business Assistance Program shall review the information and determine, based upon the information submitted by the facility and upon the air pollutant emission information contained in the Department’s computerized air facility records, whether the facility is a “small business stationary source” as defined in subsection 62-210.200, F.A.C.

(b) Any facility may petition for inclusion on the list described at paragraph 62-210.220(2)(a), F.A.C. Each petitioning facility must publish notice of such petition in a newspaper of general circulation in each county in which the facility operates. No less than 30 days after receipt of both the notice of publication and a petition meeting the requirements of this paragraph, the Small Business Assistance Program shall add to the list the name and address of any such facility which conforms to the requirements of paragraph (b) of the definition of “small business stationary source” at Rule 62-210.200, F.A.C. Each petition for inclusion must provide factual data showing:

1. Name;
2. Mail address;
3. Facility address;
4. County;
5. Standard Industrial Classification (SIC) code;
6. Description of operation;
7. Data showing the facility is owned or operated by an individual person, a corporate entity or a partnership entity employing

no more than 100 employees including full and part-time employees and permanent and temporary employees during any pay period of the past 12 calendar months preceding application;

8. Data showing the facility does not exceed the size standards, as expressed in dollars, established in 13 C.F.R. 121.601, hereby adopted and incorporated by reference; and

9. Data showing the facility does not emit more than 100 tons per year, in the aggregate, of all regulated air pollutants.

(c) The Small Business Assistance Program shall notify each facility responding pursuant to subparagraph 62-210.220(2)(a)2., F.A.C., or petitioning pursuant to paragraph 62-210.220(2)(b), F.A.C., that the responding facility does or does not conform to the definition of “small business stationary source” at Rule 62-210.200, F.A.C., or that the petitioning facility does or does not conform to the requirements of paragraph (b) of the definition of “small business stationary source” at Rule 62-210.200, F.A.C. The determination shall constitute agency action for purposes of Chapter 28-106, F.A.C. Any person who has provided comments to the Small Business Assistance Program in response to the published notice described at paragraph 62-210.220(2)(b), F.A.C., shall be provided written notice of the determination. The facility shall be considered an applicant for purposes of Chapter 28-106, F.A.C.

(d) The Department shall include on the list described at paragraph 62-210.220(1)(a), F.A.C., each facility that has submitted a petition pursuant to paragraph 62-210.220(2)(b), F.A.C., and which the Department has determined conforms to the definition of “small business stationary source” at Rule 62-210.200, F.A.C.

(e) The Department shall maintain the list described at paragraph 62-210.220(1)(a), F.A.C., annually. The Department shall delete from the list the name and address of any facility which has requested deletion or from which the Department’s notice has been returned as not deliverable.

Rulemaking Authority 403.8052 FS. Law Implemented 403.8052 FS. History—New 10-15-96, Amended 2-11-99.

62-210.300 Permits Required.

Unless exempted from permitting pursuant to this rule or Rule 62-4.040, F.A.C., the owner or operator of any facility or emissions unit which emits or can reasonably be expected to emit any air pollutant shall obtain appropriate authorization from the Department prior to undertaking any activity at the facility or emissions unit for which such authorization is required. The Department grants authorization to conduct such activities by individual air permit or by air general permit. Activities requiring authorization by individual air construction permit are addressed at subsection 62-210.300(1), F.A.C., and activities requiring authorization by individual air operation permit are addressed at subsection 62-210.300(2), F.A.C. Authorization by air general permit is addressed at subsection 62-210.300(4), F.A.C. All emission limitations, controls, and other requirements imposed by any individual air permit shall be at least as stringent as any limitations and requirements contained in or enforceable under the State Implementation Plan (SIP) or Designated Facility Plan. Except as provided at Rule 62-213.460, F.A.C., being authorized to construct, operate, or undertake any other activity by individual air permit or air general permit does not relieve the owner or operator of a facility or emissions unit from complying with any emission limiting standards or other requirements of the air pollution rules of the Department or any other such requirements under federal, state, or local law.

(1) Air Construction Permits.

(a) Unless exempt from permitting pursuant to paragraph 62-210.300(3)(a) or (b), F.A.C., or Rule 62-4.040, F.A.C., an air construction permit shall be obtained by the owner or operator of any proposed new, reconstructed, or modified facility or emissions unit, or any new pollution control equipment prior to the beginning of construction, reconstruction pursuant to 40 CFR 60.15 or 63.2, or modification of the facility or emissions unit or addition of the air pollution control equipment; or to establish a PAL; in accordance with all applicable provisions of this chapter, Chapter 62-212, F.A.C., and Chapter 62-4, F.A.C. Except as provided under Rule 62-213.415, F.A.C., the owner or operator of any facility seeking to create or change an air emissions bubble shall obtain an air construction permit in accordance with all the applicable provisions of this chapter, Chapters 62-212 and 62-4, F.A.C. The construction permit shall be issued for a period of time sufficient to allow construction, reconstruction or modification of the facility or emissions unit or addition of the air pollution control equipment; and operation while the owner or operator of the new, reconstructed or modified facility or emissions unit or the new pollution control equipment is conducting tests or otherwise demonstrating initial compliance with the conditions of the construction permit.

(b) Notwithstanding the expiration of an air construction permit, all limitations and requirements of such permit that are applicable to the design and operation of the permitted facility or emissions unit shall remain in effect until the facility or emissions unit is permanently shut down, except for any such limitation or requirement that is obsolete by its nature (such as a requirement for initial compliance testing) or any such limitation or requirement that is changed in accordance with the provisions of subparagraph

62-210.300(1)(b)1., F.A.C. Either the applicant or the Department can propose that certain conditions be considered obsolete. Any conditions or language in an air construction permit that are included for informational purposes only, if they are transferred to the air operation permit, shall be transferred for informational purposes only and shall not become enforceable conditions unless voluntarily agreed to by the permittee or otherwise required under Department rules.

1. Except for those limitations or requirements that are obsolete, all limitations and requirements of an air construction permit shall be included and identified in any air operation permit for the facility or emissions unit. The limitations and requirements included in the air operation permit can be changed, and thereby superseded, through the issuance of an air construction permit, federally enforceable state air operation permit, federally enforceable air general permit, or Title V air operation permit; provided, however, that:

a. Any change that would constitute an administrative correction may be made pursuant to Rule 62-210.360, F.A.C.;

b. Any change that would constitute a modification, as defined at Rule 62-210.200, F.A.C., shall be accomplished only through the issuance of an air construction permit; and

c. Any change in a permit limitation or requirement that originates from a permit issued by the Environmental Protection Agency pursuant to 40 C.F.R. 52.21, or by the Department pursuant to subparagraph 62-204.800(11)(d)2., Rule 62-212.400, Rule 62-212.500, F.A.C., or any former codification of Rule 62-212.400 or 62-212.500, F.A.C., shall be accomplished only through the issuance of a new or revised air construction permit under subparagraph 62-204.800(11)(d)2., Rule 62-212.400 or 62-212.500, F.A.C., as appropriate.

2. The force and effect of any change in a permit limitation or requirement made in accordance with the provisions of subparagraph 62-210.300(1)(b)1., F.A.C., shall be the same as if such change were made to the original air construction permit.

3. Nothing in paragraph 62-210.300(1)(b), F.A.C., shall be construed as to allow operation of a facility or emissions unit without a valid air operation permit.

(c) Notwithstanding the provisions of paragraph 62-210.200(1)(a), F.A.C., the owner or operator of any eligible facility who registers to use an air general permit under Rule 62-210.310 or 62-213.300, F.A.C., who is not denied use of the air general permit, and who constructs the facility in compliance with the terms and conditions of the air general permit shall not be required to obtain an air construction permit pursuant to this subsection, provided, however, that any proposed new major stationary source, major modification, or modification that would be a major modification but for the provisions of paragraph 62-212.400(2)(a), F.A.C., shall require authorization by air construction permit.

(2) Air Operation Permits. Upon expiration of the air operation permit for any existing facility or emissions unit; subsequent to any construction, reconstruction or modification of a facility or emissions unit authorized by an air construction permit, and demonstration of compliance with the conditions of such air construction permit; subsequent to the establishment of a PAL or air emissions bubble by air construction permit; or as otherwise provided in this chapter or Chapter 62-213, F.A.C.; the owner or operator of such facility or emissions unit shall obtain a renewal air operation permit, an initial air operation permit, or revision of an existing air operation permit, whichever is appropriate, in accordance with all applicable provisions of this chapter, Chapter 62-213 (if the facility is a Title V source), and Chapter 62-4, F.A.C.

(a) Minimum Requirements for All Air Operation Permits. At a minimum, a permit issued pursuant to this subsection shall:

1. Specify the manner, nature, volume and frequency of the emissions permitted, and the applicable emission limiting standards or performance standards, if any;

2. Require proper operation and maintenance of any pollution control equipment by qualified personnel, where applicable in accordance with the provisions of any operation and maintenance plan required by the air pollution rules of the Department.

3. Contain an effective date stated in the permit which shall not be earlier than the date final action is taken on the application and be issued for a period, beginning on the effective date, as provided below.

a. The operation permit for an emissions unit which is in compliance with all applicable rules and in operational condition, and which the owner or operator intends to continue operating, shall be issued or renewed for a five-year period.

b. Except as provided in sub-subparagraph 62-210.300(2)(a)3.d., F.A.C., the operation permit for an emissions unit which has been shut down for six months or more prior to the expiration date of the current operation permit, shall be renewed for a period not to exceed five years from the date of shutdown, even if the emissions unit is not maintained in operational condition, provided:

(I) The owner or operator of the emissions unit demonstrates to the Department that the emissions unit may need to be reactivated and used, or that it is the owner's or operator's intent to apply to the Department for a permit to construct a new emissions unit at the facility before the end of the extension period; and

(II) The owner or operator of the emissions unit agrees to and is legally prohibited from providing the allowable emission permitted by the renewed permit as an emissions offset to any other person under Rule 62-212.500, F.A.C.; and

(III) The emissions unit was operating in compliance with all applicable rules as of the time the source was shut down.

c. Except as provided in sub-subparagraph 62-210.300(2)(a)3.d., F.A.C., the operation permit for an emissions unit which has been shut down for five years or more prior to the expiration date of the current operation permit shall be renewed for a maximum period not to exceed ten years from the date of shutdown, even if the emissions unit is not maintained in operational condition, provided the conditions given in sub-subparagraph 62-210.300(2)(a)3.b., F.A.C., are met and the owner or operator demonstrates to the Department that failure to renew the permit would constitute a hardship, which may include economic hardship.

d. The operation permit for an electric utility generating unit on cold standby or long-term reserve shutdown shall be renewed for a five-year period, and additional five-year periods, even if the unit is not maintained in operational condition, provided the conditions given in sub-subparagraphs 62-210.300(2)(a)3.b.(I) through (III), F.A.C., are met.

4. In the case of an emissions unit permitted pursuant to sub-subparagraphs 62-210.300(2)(a)3.b., c., and d., F.A.C., include reasonable notification and compliance testing requirements for reactivation of such emissions unit and provide that the owner or operator demonstrate to the Department prior to reactivation that such reactivation would not constitute any modification or reconstruction pursuant to this chapter or any federal regulation adopted by reference at Rule 62-204.800, F.A.C.

(b) Additional Requirements for Federally Enforceable State Operation Permits (FESOPs) for Non-Title V Sources.

1. An operation permit for a non-Title V source, including a synthetic non-Title V source, shall be considered federally enforceable only if it is issued, renewed, or revised in accordance with the following provisions:

a. At the time of initial application for the permit, the applicant requests that the permit be made federally enforceable.

b. A notice of proposed agency action on the initial application, any renewal application involving material changes from the existing permit, and any application for permit revision is published in accordance with the provisions of subsections 62-210.350(1) and subsection (4), F.A.C., except as provided in subparagraph 62-210.300(2)(b)3., F.A.C.

c. The permit is a facility-wide permit.

d. The permit is conditioned such that the owner or operator is legally obligated to adhere to the terms and limitations of such permit, including any condition or limitation assumed by the owner or operator upon acceptance of such permit.

e. The permit is conditioned such that any emissions limitation, control requirement, or other requirement assumed by the owner or operator upon acceptance of such permit shall be quantifiable and enforceable as a practical matter.

2. Once a synthetic non-Title V source has been issued a federally enforceable state operation permit (FESOP), it shall remain subject to the requirements of paragraph 62-210.300(2)(b), F.A.C., unless:

a. The owner or operator accepts a higher limit and the facility becomes a Title V source; or

b. The owner or operator demonstrates to the Department that it no longer needs a federally enforceable operation permit to be classified as a non-Title V source (i.e., the facility is naturally "minor" without any federally enforceable limits) and specifically requests exemption from these requirements.

3. If all of the permitted emissions units within a facility have been issued one or more air construction permits which have undergone public notice in accordance with procedures at least as stringent as those provided in subsection 62-210.350(4), F.A.C., and the applicant requests that the conditions of such construction permit(s) be transferred without material change to a federally enforceable state operation permit (FESOP), the Department shall waive the requirements of sub-subparagraph 62-210.300(2)(b)1.b. and subparagraph 62-210.350(4)(a)3., F.A.C., for publication of a notice of proposed agency action; provided, however, that the remaining provisions of subsection 62-210.350(4), F.A.C., shall apply, including the requirement that notice be given to the U.S. Environmental Protection Agency and any local air pollution control program.

4. If an applicant requests that existing, multiple air operation permits for a facility be consolidated into a single federally enforceable state operation permit (FESOP), the Department shall reduce the permit processing fee required pursuant to Rule 62-4.050, F.A.C., by an amount equal to the sum of the processing fees paid for the existing permits prorated by the number of years remaining until expiration of each such permit.

(c) Notwithstanding the provisions of subsection 62-210.300(2), F.A.C., the owner or operator of any eligible facility who registers to use an air general permit under Rule 62-210.310, F.A.C., or Rule 62-213.300, F.A.C., who is not denied use of the air general permit, and who operates the facility in compliance with the terms and conditions of the air general permit shall not be required to obtain an air operation permit pursuant to this subsection or Rule 62-213.400, F.A.C.

(3) Exemptions from Permitting. Except as otherwise provided herein, an owner or operator shall not be required to obtain an

air construction permit or non-Title V air operation permit, or to use an air general permit pursuant to Rule 62-210.310, F.A.C., for any facility, emissions unit or pollutant-emitting activity that satisfies the applicable permitting exemption criteria of paragraph 62-210.300(3)(a) or (b), F.A.C., or has been exempted from permitting pursuant to Rule 62-4.040, F.A.C. Failure of a facility, emissions unit or activity to satisfy the exemption criteria of paragraph 62-210.300(3)(a) or (b), F.A.C., does not preclude such facility, emissions unit or activity from being considered for exemption pursuant to Rule 62-4.040, F.A.C. Notwithstanding the above, no emissions unit or activity shall be exempt from the requirement to obtain an air construction permit or non-Title V air operation permit, or to use an air general permit pursuant to Rule 62-210.310, F.A.C., if it would be subject to any unit-specific limitation or requirement, unless compliance with such limitation or requirement is specifically listed as a condition of exemption. Furthermore, no new, reconstructed, or modified emissions unit or activity shall be exempt from the requirement to obtain an air construction permit if its emissions would contribute to a major modification or to any modification that would be a major modification but for the use, in whole or in part, of the baseline actual-to-projected actual applicability test in Rule 62-212.400, F.A.C. An emissions unit or pollutant-emitting activity exempt from the requirement to obtain an air construction permit shall not be exempt from the permitting requirements of Chapter 62-213, F.A.C., if it is contained within a Title V source or if its emissions, in combination with the emissions of other emission units and activities at the facility, would cause the facility to be classified as a Title V source. Exemption from the requirement to obtain an air construction permit or non-Title V air operation permit, or to use an air general permit pursuant to Rule 62-210.310, F.A.C., does not relieve the owner or operator of a facility or emissions unit from complying with any limitation or requirement applicable to such facility or emissions unit.

(a) Categorical and Conditional Exemptions. Except as otherwise provided at subsection 62-210.300(3), F.A.C., above, the following facilities, emissions units, and pollutant-emitting activities shall be exempt from any requirement to obtain an air construction permit or non-Title V air operation permit, or to use an air general permit pursuant to Rule 62-210.310, F.A.C.

1. Home heating and comfort heating with a gross maximum heat output of less than one million Btu per hour.
2. Internal combustion engines in boats, aircraft and vehicles used for transportation of passengers or freight.
3. Incinerators in one or two family dwellings or in multi-family dwellings containing four or less family units, one of which is owner-occupied.
4. Noncommercial and nonindustrial vacuum cleaning systems used exclusively for residential housekeeping purposes.
5. Cold storage refrigeration equipment, except for any such equipment located at a Title V source using an ozone-depleting substance regulated under 40 C.F.R. Part 82.
6. Vacuum pumps in laboratory operations.
7. Equipment used for steam cleaning.
8. Belt or drum sanders having a total sanding surface of five square feet or less and other equipment used exclusively on wood or plastics or their products having a density of 20 pounds per cubic foot or more.
9. Equipment used exclusively for space heating, other than boilers.
10. Noncommercial smoke houses used exclusively for smoking food products.
11. Bakery ovens located at any retail bakery facility which derives at least fifty percent of its revenues from retail sales on premises. Also, bakery ovens located at any commercial bakery facility utilizing only non-conveyor belt ovens operating on a single baking cycle in which a determinate amount of product is cooked at one baking (i.e., batch ovens).
12. Laboratory equipment used exclusively for chemical or physical analyses.
13. Brazing, soldering or welding equipment.
14. Laundry dryers, extractors, or tumblers for fabrics cleaned with only water solutions of bleach or detergents.
15. Fire and safety equipment.
16. Petroleum lubrication systems.
17. Application of fungicide, herbicide, or pesticide.
18. Asbestos renovation and demolition activities.
19. Vehicle refueling operations and associated fuel storage.
20. Restaurants.
21. Burning of drugs seized by law enforcement agencies in boilers with a heat input of 250 million Btu per hour or more.
22. Phosphogypsum cooling ponds and inactive phosphogypsum stacks which have demonstrated compliance with the requirements of 40 CFR Part 61, Subpart R, adopted and incorporated by reference at Rule 62-204.800, F.A.C.

23. Degreasing units using heavier-than-air vapors exclusively, provided that such units shall not use any substance containing any hazardous air pollutant.

24. Non-halogenated solvent storage and cleaning operations, provided that such operations shall not use any solvent containing any hazardous air pollutant.

25. Petroleum dry cleaning facilities, provided the solvent consumption shall be less than 3,250 gallons per year.

26. Portable air curtain incinerators, provided the following conditions are met.

a. Except as provided at sub-subparagraph c., only land clearing debris and appropriate starting fuel shall be burned in the air curtain incinerator. The air curtain incinerator shall not be used to burn any material prohibited to be open-burned as set forth at subsection 62-256.300(3), F.A.C. Only kerosene, diesel fuel, drip torch fuel (as used to ignite prescribed fires), untreated wood, virgin oil, natural gas or liquefied petroleum gas shall be used to start the fire in the air curtain incinerator. The use of used oil, chemicals, gasoline, or tires to start the fire is prohibited.

b. The air curtain incinerator, alone or in combination with any other air curtain incinerator(s) claiming this exemption from air permitting, shall not be deployed at a single site for more than six (6) months in any consecutive twelve (12) months and, except as provided at sub-subparagraph c., shall not burn any material other than land clearing debris generated at the site or at any other site under control of the same person (or persons under common control). For purposes of this provision, a site is any and all locations on one (1) or more contiguous or adjacent properties which are under the control of the same person (or persons under common control), except that, in the case of a linear right-of-way, a site is any and all locations within any one-mile span of right-of-way. Any deployment of one (1) or more air curtain incinerators at a single site for more than six (6) months in any consecutive twelve (12) months, and, except as provided at sub-subparagraph c., any use of an air curtain incinerator at a site to burn material other than land clearing debris generated at the site or any other site under control of the same person (or persons under common control), shall require an appropriate air permit.

c. Notwithstanding the provisions of sub-subparagraphs a. and b., the air curtain incinerator may be used for up to six (6) months in any consecutive twelve (12) months at any location for the destruction of animal carcasses in accordance with the provisions of subsection 62-256.700(6), F.A.C., the burning of storm-generated debris in accordance with the provisions of subsection 62-256.700(8), F.A.C., or the destruction of insect or disease-infested vegetation in accordance with the provisions of subsection 62-256.700(9), F.A.C. When using an air curtain incinerator to burn animal carcasses, untreated wood may also be burned to maintain good combustion.

d. If the air curtain incinerator employs an earthen trench, the pit walls (width and length) shall be vertical, and maintained as such, so that combustion of the waste within the pit is maintained at an adequate temperature and with sufficient air recirculation to provide enough residence time and mixing for proper combustion and control of emissions. Pit width shall not exceed twelve (12) feet.

e. Material shall not be loaded into the air curtain incinerator such that it protrudes above the level of the air curtain in the pit.

f. Ash shall not be allowed to build up in the pit of the air curtain incinerator to higher than 1/3 the pit depth or to the point where the ash begins to impede combustion, whichever occurs first.

g. Visible emissions from the air curtain incinerator shall not exceed ten percent (10%) opacity, six (6) minute average, except for up to thirty (30) minutes during periods of startup when visible emissions up to thirty-five percent (35) opacity, six (6) minute average, shall be allowed. For purposes of this exemption, these visible emissions limitations shall not be considered unit-specific applicable requirements.

h. The air curtain incinerator shall be attended at all times while materials are being burned or flames are visible within the incinerator.

i. The air curtain incinerator shall be located at least 50 feet away from any wildlands, brush, combustible structure, or paved public roadway and 300 feet away from any occupied building.

j. If the air curtain incinerator is equipped with refractory-lined walls, charging shall begin no earlier than sunrise and must end no later than one hour after sunset. If the air curtain incinerator is not equipped with refractory-lined walls, charging shall begin no earlier than 8:00 a.m. Central time or 9:00 a.m. Eastern time and must end no later than one hour after sunset. After charging ceases, air flow shall be maintained until all material within the air curtain incinerator has been reduced to coals, and flames are no longer visible. A log shall be maintained onsite that documents daily beginning and ending times of charging.

k. Prior to any period of operation of the air curtain incinerator, the owner or operator shall contact the Division of Forestry regarding the planned burning activity.

l. If the owner of the air curtain incinerator, by lease or other means, grants authority to operate the incinerator to a person not in the employ of the owner, the owner shall provide such person with a copy of the conditions of this exemption.

m. If the air curtain incinerator is operated in compliance with all conditions of this exemption, it shall not be subject to the requirements of subsection 62-296.401(7), F.A.C.

27. Surface coating operations within a single facility, provided all the following conditions are met.

a. The surface coating operation shall use only coatings containing 5.0 percent or less VOC, by volume, or the total quantity of coatings containing greater than 5.0 percent VOC, by volume, used at the facility shall not exceed 6.0 gallons per day, averaged monthly, where the quantity of coatings used includes all solvents and thinners used in the process or for cleanup.

b. Such operations are not subject to any unit-specific limitation or requirement.

28. Volume reduction processes as defined in Rule 62-296.417, F.A.C., provided the owner or operator shall manage only spent mercury-containing lamps removed from the facility where the volume reduction process is located.

29. Mercury recovery processes as defined in Rule 62-296.417, F.A.C., provided the owner or operator shall manage only spent mercury-containing devices temporarily or permanently removed from service from the owner or operator's own facilities or installations.

30. Bulk gasoline plants, provided all the following conditions are met.

a. The facility receives and distributes only petroleum-based lubricants, gasoline, diesel fuel, mineral spirits and kerosene.

b. The total storage capacity for gasoline at the facility does not exceed 100,000 gallons.

c. The facility shall not distribute more than 1.3 million gallons of gasoline in any consecutive twelve (12) months.

d. The facility is not subject to Rule 62-296.418, F.A.C.

31. Relocatable wet screening-only operations, provided:

a. The screening operation is not connected to a nonmetallic mineral processing plant subject to 40 CFR Part 60, Subpart OOO, adopted and incorporated by reference at Rule 62-204.800, F.A.C.;

b. No hazardous waste, as defined in Section 403.703, F.S., shall be processed; and

c. The operation shall not operate at a single site for more than six (6) months in any consecutive twelve (12) months. For purposes of this provision, a site is any and all locations on one or more contiguous or adjacent properties which are under the control of the same person (or persons under common control).

32. Brownfield site remediation, as described at Rule 62-785.700, F.A.C., provided that the total volatile organic compounds in the air emissions from all onsite remediation equipment shall not exceed 13.7 pounds per day.

33. Fossil fuel steam generators, hot water generators, and other external combustion heating units with heat input capacity equal to or less than 10 million Btu per hour, provided all the following conditions are met with respect to each such unit.

a. The unit is not subject to the Acid Rain Program, CAIR Program, or any other unit-specific limitation or requirement.

b. The rated heat input capacity of the unit is equal to or less than 10 million Btu per hour and, collectively, the total rated heat input capacity of all units claiming this exemption at the same facility is less than 10 million Btu per hour.

c. The unit shall not burn used oil or any fuels other than natural gas or propane, except that fuel oil with a sulfur content not exceeding 1.0 percent by weight may be burned during periods of natural gas curtailment.

34. Fossil fuel steam generators, hot water generators, and other external combustion heating units with heat input capacity less than 10 million Btu per hour, provided all the following conditions are met with respect to each such unit.

a. The unit is not subject to any unit-specific limitation or requirement.

b. The rated heat input capacity of the unit is less than 100 million Btu per hour and, collectively, the total rated heat input capacity of all units claiming this exemption at the same facility is less than 250 million Btu per hour.

c. The unit shall not burn more than the maximum annual amount of a single fuel, as given in sub-subparagraph e., or equivalent maximum annual amounts of multiple fuels, as addressed in sub-subparagraph f.

d. Collectively, all units claiming this exemption at the same facility shall not burn more than the collective maximum annual amount of a single fuel, as given in sub-subparagraph g., or equivalent collective maximum annual amounts of multiple fuels, as addressed in sub-subparagraph h.

e. If burning only one (1) type of fuel, the annual amount of fuel burned by the unit shall not exceed 150 million standard cubic feet of natural gas, one million gallons of propane, one million gallons of fuel oil with a sulfur content not exceeding 0.05 percent, by weight, 290,000 gallons of fuel oil with a sulfur content not exceeding 0.5 percent, by weight, or 145,000 gallons of fuel oil with a sulfur content not exceeding 1.0 percent, by weight.

f. If burning more than one (1) type of fuel, the equivalent annual amount of each fuel burned by the unit shall not exceed the maximum annual amount of such fuel, as given in sub-subparagraph e., multiplied by a fuel percentage. The fuel percentage is the percentage ratio of the total annual amount of the fuel burned by the unit to the total annual amount of such fuel allowed to be burned by the unit pursuant to sub-subparagraph e. The sum of the fuel percentages for all fuels burned by the unit must be less than or equal to 100 percent.

g. If burning only one (1) type of fuel, the collective annual amount of fuel burned by all units claiming this exemption at the same facility shall not exceed 375 million standard cubic feet of natural gas, 2.5 million gallons of propane, 2.5 million gallons of fuel oil with a sulfur content not exceeding 0.05 percent, by weight, 290,000 gallons of fuel oil with a sulfur content not exceeding 0.5 percent, by weight, or 145,000 gallons of fuel oil with a sulfur content not exceeding 1.0 percent, by weight.

h. If burning more than one (1) type of fuel, the equivalent collective annual amount of each fuel burned by the units claiming this exemption at the same facility shall not exceed the collective maximum annual amount of such fuel, as given in sub-subparagraph g., multiplied by a fuel percentage. The fuel percentage is the percentage ratio of the total annual amount of the fuel burned by all units claiming this exemption at the same facility to the total annual amount of such fuel allowed to be burned by all units claiming this exemption at the same facility pursuant to sub-subparagraph g. The sum of the fuel percentages for all fuels burned by the units claiming this exemption at the same facility must be less than or equal to 100 percent.

35. Stationary Reciprocating Internal Combustion Engines, provided all the following conditions are met with respect to each such engine.

a. The engine is not subject to the Acid Rain Program, CAIR Program, or any other unit-specific limitation or requirement other than any such limitation or requirement that may apply pursuant to 40 C.F.R. Part 60, Subpart IIII or JJJJ, or 40 C.F.R. Part 63, Subpart ZZZZ, all adopted and incorporated by reference at Rule 62-204.800, F.A.C.

b. The engine shall not burn used oil or any fuels other than natural gas, propane, gasoline, and diesel fuel.

c. Collectively, all engines claiming this exemption at the same facility shall not burn more than the collective maximum annual amount of a single fuel, as given in sub-subparagraph d., or equivalent collective maximum annual amounts of multiple fuels, as addressed in sub-subparagraph e.

d. If burning only one type of fuel, the collective annual amount of fuel burned by all engines claiming this exemption at the same facility shall not exceed 5,400 gallons of gasoline, 64,000 gallons of diesel fuel, 288,000 gallons of propane, or 8.8 million standard cubic feet of natural gas.

e. If burning more than one type of fuel, the equivalent collective annual amount of each fuel burned by the engines claiming this exemption at the same facility shall not exceed the collective maximum annual amount of such fuel, as given in sub-subparagraph d., multiplied by a fuel percentage. The fuel percentage is the percentage ratio of the total amount of the fuel burned by all engines claiming this exemption at the same facility to the total amount of such fuel allowed to be burned by all engines claiming this exemption at the same facility pursuant to sub-subparagraph d. The sum of the fuel percentages for all fuels burned by the engines claiming this exemption at the same facility must be less than or equal to 100 percent.

f. If the engine is a stationary compression ignition internal combustion engine that is subject to 40 C.F.R. Part 60, Subpart IIII, adopted and incorporated by reference at Rule 62-204.800, F.A.C., or by virtue of modification or reconstruction becomes subject to such subpart, the owner or operator shall comply with all limitations and requirements of Subpart IIII that apply to the engine.

g. If the engine is a stationary spark ignition internal combustion engine that is subject to 40 C.F.R. Part 60, Subpart JJJJ, adopted and incorporated by reference at Rule 62-204.800, F.A.C., or by virtue of modification or reconstruction becomes subject to such subpart, the owner or operator shall comply with all limitations and requirements of Subpart JJJJ that apply to the engine.

h. If the engine is a stationary reciprocating internal combustion engine subject to 40 C.F.R. Part 63, Subpart ZZZZ, adopted and incorporated by reference at Rule 62-204.800, F.A.C., the owner or operator shall comply with all limitations and requirements of Subpart ZZZZ that apply to the engine. If emissions testing is required pursuant to Subpart ZZZZ, all notifications of upcoming tests and reports shall be submitted to the Department in accordance with the provisions of Subpart ZZZZ.

36. Printing operations, provided:

a. The facility is not subject to any unit-specific limitation or requirement;

b. The facility shall use less than 667 gallons of materials containing any hazardous air pollutants in any consecutive twelve (12) months; and

c. The facility shall:

(I) Operate only heatset offset lithographic printing lines and use less than 20,000 pounds, combined, of inks, cleaning solvents, fountain solution concentrate and fountain solution additives in any consecutive twelve (12) months;

(II) Operate only non-heatset offset lithographic printing lines and use less than 2,850 gallons, combined of cleaning solvents, fountain solution concentrate and fountain solution additives in any consecutive twelve (12) months;

(III) Operate only digital printing lines and use less than 2,425 gallons, combined, of solvent based inks, clean-up solutions, and other solvent-containing materials in any consecutive twelve (12) months;

(IV) Operate only screen or letterpress printing lines and use less than 2,850 gallons, combined, of solvent based inks, clean-up solutions, and other solvent-containing materials in any consecutive twelve (12) months;

(V) Operate only water-based or ultraviolet-cured-material flexographic or rotogravure printing lines and use less than 80,000 pounds, combined, of water-based inks, coatings, and adhesives in any consecutive twelve (12) months; or

(VI) Operate only solvent-based material flexographic or rotogravure printing lines and use less than 20,000 pounds, combined, of inks, dilution solvents, coatings, cleaning solutions, and adhesives in any consecutive twelve (12) months.

(b) Generic and Temporary Exemptions.

1. Generic Emissions Unit or Activity Exemption. Except as otherwise provided at subsection 62-210.300(3), F.A.C., above, an emissions unit or pollutant-emitting activity that is not entitled to a categorical or conditional exemption pursuant to paragraph 62-210.300(3)(a), F.A.C., shall be exempt from any requirement to obtain an air construction permit or non-Title V air operation permit, or to use an air general permit pursuant to Rule 62-210.310, F.A.C., if it meets all of the following criteria.

a. It would not be subject to any unit-specific limitation or requirement.

b. Its emissions, in combination with the emissions of other units and activities at the facility, would not cause the facility to emit or have the potential to emit any pollutant in such amount as to create a Title V source.

c. It would neither emit nor have the potential to emit 500 pounds per year or more of lead and lead compounds expressed as lead, 1,000 pounds per year or more of any hazardous air pollutant, 2,500 pounds per year or more of total hazardous air pollutants, or 5.0 tons per year or more of any other regulated air pollutant as defined at Rule 62-210.200, F.A.C.

d. In the case of a proposed new emissions unit at an existing facility, the emissions of such unit, in combination with the emissions of any other proposed new or modified units and activities at the facility, would not result in a modification subject to the preconstruction review requirements of subparagraph 62-204.800(11)(d)2., Rule 62-212.400 or 62-212.500, F.A.C.

e. In the case of a proposed new pollutant-emitting activity, such activity would not constitute a modification of any existing non-exempt emissions unit at a non-Title V source or any existing non-insignificant emissions unit at a Title V source.

2. Generic Facility Exemption. Except as otherwise provided at subsection 62-210.300(3), F.A.C., a facility that is not entitled to a categorical or conditional exemption pursuant to paragraph 62-210.300(3)(a), F.A.C., shall be exempt from any requirement to obtain an air construction permit or non-Title V air operation permit, or to use an air general permit pursuant to Rule 62-210.310, F.A.C., if all of the emissions units and pollutant-emitting activities within the facility, including any proposed new emissions units and activities, individually meet the exemption criteria of paragraph 62-210.300(3)(a), F.A.C., or subparagraph 62-210.300(3)(b)1., F.A.C., or if none of the emissions units and pollutant-emitting activities within the facility, including any proposed new emissions units and activities, is subject to any unit-specific limitation or requirement and the facility meets all of the following criteria.

a. The facility would neither emit nor have the potential to emit 1,000 pounds per year or more of lead and lead compounds expressed as lead 1.0 ton per year or more of any hazardous air pollutant 2.5 tons per year or more of total hazardous air pollutants 25 tons per year or more of carbon monoxide, nitrogen oxides and sulfur dioxide or 10 tons per year or more of any other regulated air pollutant as defined at Rule 62-210.200, F.A.C.

b. The facility would neither emit nor have the potential to emit any pollutant in such amount as to create a Title V source, nor would the facility be a Title V source for any other reason.

3. Temporary Exemption for Emissions Units at Certain Title V Sources. Except for an emissions unit that is subject to any applicable regulation or permitting requirement under Rule 62-212.400 or 62-212.500, F.A.C.; any emissions standard or other requirement adopted by reference prior to July 1, 1995, in Rule 62-204.800, F.A.C.; any requirement established pursuant to Rule 62-296.330, F.A.C.; or any Reasonably Available Control Technology (RACT) provisions under Rules 62-296.500 through 62-296.712, F.A.C.; an emissions unit that is described in a timely and complete permit application under Chapter 62-213, F.A.C., and not subject to an existing valid air permit, shall be exempt from the permitting requirements of this chapter, Chapter 62-4 and Rule 62-212.300, F.A.C., until a final determination on a permit application under Chapter 62-213, F.A.C., is made. In addition, no emissions unit shall be exempt under this paragraph if its emissions cause or contribute to a significant net emissions increase under

Rule 62-212.400 or 62-212.500, F.A.C., which would trigger preconstruction review, or if it is constructed or modified, as defined under Rule 62-210.200, F.A.C., subsequent to November 23, 1994. Any applicant exercising this exemption shall provide notification of such exemption to the Department, and further authorizes the Department to inspect these emissions units at the Department's discretion. Emissions units subject to existing valid permits shall continue to operate consistent with those permits as provided under subparagraph 62-213.420(1)(b)2., F.A.C. This exemption is available only to emissions units contained within either facilities that were Title V sources on or before October 25, 1995, and that commenced operation on or before that date, or facilities that became Title V sources by operation of law after October 25, 1995, and have timely applied for an initial Title V air operation permit.

4. Temporary Phosphogypsum Exemption. Until permitted pursuant to Chapter 62-213, F.A.C., phosphogypsum disposal areas are exempt from the requirement to obtain an air operation permit.

(c) Conditional Exemptions from Title V Air Permitting. Except as otherwise provided herein, the following facilities shall be exempt from the requirement to obtain a Title V air operation permit under the provisions of Chapter 62-213, F.A.C., provided the conditions of exemption for each such facility are met. Facilities exempt from Title V air permitting pursuant to subparagraph 62-210.300(3)(c)2., F.A.C., are not exempt from the requirement to obtain an air construction permit or non-Title V air operation permit. A facility shall not be entitled to an exemption from Title V air permitting under this rule if it is a Title V source pursuant to paragraph (f), (g), or (h) of the definition of "major source of air pollution" or the facility would be classified as a Title V source as a result of the combined potential to emit regulated pollutants of all emissions units at the facility.

1. Facilities authorized to operate under any of the air general permits provided at subsection 62-210.310(4), F.A.C.

2. Facilities comprising asphalt concrete plants, provided the following conditions are met.

a. The production rate of asphaltic concrete shall not exceed 500,000 tons in any consecutive twelve-month period.

b. Fuel oil consumption shall not exceed 1.2 million gallons in any consecutive twelve-month period.

c. Fuel oil shall not exceed 1.0 percent sulfur content, by weight. The owner shall maintain records to demonstrate that each shipment of fuel oil has 1.0 percent or less.

d. Particulate matter (PM) emissions shall not exceed 0.04 grains per dry standard cubic foot averaged over a three-hour period, if the facility is subject to 40 C.F.R. 60.90, Subpart I. If the facility is not subject to Subpart I, it shall not exceed the applicable particulate emission limiting standard pursuant to paragraph 62-296.320(4)(a), F.A.C., and its hours of operation shall not exceed 4,000 hours in any consecutive twelve-month period.

e. Fugitive PM emissions shall be controlled in accordance with the requirements of paragraph 62-296.320(4)(c), F.A.C.

f. Visible emissions (VE) shall not be equal to or greater than 20 percent opacity.

g. The owner or operator shall maintain records to document the monthly and the twelve-month rolling totals of tons of asphaltic concrete produced, the gallons of fuel oil consumed, and the hours of operation. Such records shall be retained for five years.

h. The owner or operator shall submit an Annual Operating Report for Air Pollutant Emitting Facility (DEP Form No. 62-210.900(5)) to the Department annually pursuant to subsection 62-210.370(3), F.A.C.

i. The owner or operator shall submit a stack test using EPA Reference Method 5 or 5A and a visible emission (VE) test using EPA Reference Method 9, incorporated and adopted by reference in Rule 62-204.800, F.A.C., that demonstrate compliance with the applicable PM and VE standards, respectively, to the Department by March 15, 1996, and annually thereafter during each federal fiscal year (October 1-September 30).

j. An asphalt plant claiming this exemption from Title V air permitting shall not collocate with, or relocate to, any Title V source unless the Title V permit specifically allows such facility to be collocated with or relocated to the Title V source and operated under the authority of the Title V permit while onsite at the Title V source. An asphalt plant cannot apply this exemption if it creates a Title V source in combination with any other collocated facilities, emissions units, or pollutant-emitting activities, including any such facility, emissions unit, or activity that is otherwise exempt from permitting.

k. The owner or operator of any facility claiming this exemption must have authorization to operate by a non-Title V air operation permit that implements the requirements of sub-subparagraphs 62-210.300(3)(c)2.a. through j., F.A.C.

(4) Authorization by Air General Permit. At the option of the owner or operator, certain facilities may use an air general permit pursuant to the procedures and conditions of Rule 62-210.310, F.A.C., Air General Permits, or Rule 62-213.300, F.A.C., Title V Air General Permits. The owner or operator of any eligible facility who registers to use an air general permit under either of these rules, and who has not been notified by the department of ineligibility to use the air general permit, shall not be required to obtain an air

construction permit pursuant to subsection 62-210.300(1), F.A.C., or an air operation permit pursuant to subsection 62-210.300(2), F.A.C., or Rule 62-213.400, F.A.C., as applicable.

(5) Notification of Startup. The owners or operator of any emissions unit or facility which has a valid air operation permit which has been shut down more than one year, shall notify the Department in writing of the intent to start up such emissions unit or facility, a minimum of 60 days prior to the intended startup date.

(a) The notification shall include information as to the startup date, anticipated emission rates or pollutants released, changes to processes or control devices which will result in changes to emission rates, and any other conditions which may differ from the valid outstanding operation permit.

(b) If, due to an emergency, a startup date is not known 60 days prior thereto, the owner shall notify the Department as soon as possible after the date of such startup is ascertained.

(6) Emissions Unit Reclassification.

(a) Any emissions unit whose operation permit has been revoked as provided for in Chapter 62-4, F.A.C., shall be deemed permanently shut down for purposes of Rule 62-212.500, F.A.C. Any emissions unit whose permit to operate has expired without timely renewal or transfer may be deemed permanently shut down, provided, however, that no such emissions unit shall be deemed permanently shut down if, within 20 days after receipt of written notice from the Department, the emissions unit owner or operator demonstrates that the permit expiration resulted from inadvertent failure to comply with the requirements of Rule 62-4.090, F.A.C., and that the owner or operator intends to continue the emissions unit in operation, and either submits an application for an air operation permit or complies with permit transfer requirements, if applicable.

(b) If the owner or operator of an emissions unit which is so permanently shut down, applies to the Department for a permit to reactivate or operate such emissions unit, the emissions unit will be reviewed and permitted as a new emissions unit.

(7) Transfer of Air Permits.

(a) An air permit is transferable only after submission of an Application for Transfer of Air Permit (DEP Form 62-210.900(7)) and Department approval in accordance with Rule 62-4.120, F.A.C. For Title V permit transfers only, a complete application for transfer of air permit shall include the requirements of 40 CFR 70.7(d)(1)(iv), adopted and incorporated by reference at Rule 62-204.800, F.A.C. Within 30 days after approval of the transfer of permit, the Department shall update the permit by an administrative permit correction pursuant to Rule 62-210.360, F.A.C.

(b) For an air general permit, the provisions of paragraph 62-210.300(7)(a) and Rule 62-4.120, F.A.C., do not apply. Thirty (30) days before using an air general permit, the new owner must submit a registration to the Department in accordance with subsection 62-210.300(2), F.A.C.

Rulemaking Authority 403.061 FS. Law Implemented 403.031, 403.061, 403.087, 403.814 FS. History—Formerly 17-2.210, Amended 11-28-93, Formerly 17-210.300, Amended 11-23-94, 4-2-95, 4-18-95, 10-16-95, 1-2-96, 3-13-96, 3-21-96, 5-13-96, 8-15-96, 10-7-96, 5-20-97, 11-13-97, 2-5-98, 2-11-99, 4-16-01, 6-21-01, 7-6-05, 2-2-06, 1-10-07, 5-9-07, 3-16-08, 10-12-08, 6-29-11.

62-210.310 Air General Permits.

(1) Air General Permits Established.

(a) The Department has established air general permits for various types of facilities at subsections 62-210.310(4) and (5), F.A.C.

1. The air general permits provided at subsection 62-210.310(4), F.A.C., are available to specific types of facilities that elect to comply with process limitations to escape being classified as Title V sources. A facility using one (1) of the air general permits at subsection 62-210.310(4), F.A.C., shall not be entitled to use more than one (1) such air general permit for any single facility.

2. The air general permits provided at subsection 62-210.310(5), F.A.C., are available to specific types of facilities that are subject to limitations or requirements under other state or federal rules. A facility must comply with such limitations and requirements, whether it elects to use an air general permit under this subsection, or obtain an air construction or air operation permit. A facility using one (1) of the air general permits at subsection 62-210.310(5), F.A.C., shall not be entitled to use more than one (1) such air general permit for any single facility, except where all air general permits used at the facility specifically allow the use of one another at the same facility.

(b) The owner or operator of a proposed new or existing facility who registers to use an air general permit in accordance with the procedures of this rule, and who has not been notified by the Department of ineligibility to use the air general permit, is

authorized to construct or operate the facility in accordance with the terms and conditions of the specific rule paragraph which constitutes the air general permit for the type of facility involved.

(2) General Procedures. This subsection sets forth general procedures for use of any of the air general permits provided at subsections 62-210.310(4) and (5), F.A.C.

(a) Determination of Eligibility. A facility is eligible to use an air general permit under this rule if it meets all specific eligibility criteria given in the applicable air general permit at subsection 62-210.310(4) or (5), F.A.C., and the following general criteria.

1. The facility shall not contain any emissions units or pollutant-emitting activities not covered by the applicable air general permit, except:

a. Units and activities that are exempt from permitting pursuant to subsection 62-210.300(3), F.A.C., or Rule 62-4.040, F.A.C.; and

b. Units and activities that are authorized by another air general permit where such other air general permit and the air general permit of interest specifically allow the use of one another at the same facility.

2. The facility as a whole, including any emissions units or pollutant-emitting activities that are exempt from air permitting and any units or activities that are authorized under another air general permit, shall not emit nor have the potential to emit ten (10) tons per year or more of any hazardous air pollutant, twenty-five (25) tons per year or more of any combination of hazardous air pollutants, or one hundred (100) tons per year or more of any other regulated air pollutant.

3. The facility shall not be collocated with, or relocated to, an existing Title V source unless the Title V permit allows such facility to be collocated with or relocated to the Title V source and operated under the authority of the Title V permit while onsite at the Title V source.

4. The owner or operator of any facility shall register to use the air general permit pursuant to paragraph 62-210.310(2)(b), F.A.C.

5. The owner or operator of any facility shall re-register to use the air general permit pursuant to paragraph 62-210.310(2)(b), F.A.C., in the following cases: impending expiration of the term for air general permit use; change of ownership of all or part of the facility; proposed new construction, modification, or other equipment change that requires registration pursuant to paragraph 62-210.310(2)(e), F.A.C.; and any other change not considered an administrative correction under paragraph 62-210.310(2)(d), F.A.C.

(b) Registration. The owner or operator who intends to construct or operate an eligible facility under the authority of an air general permit shall submit a registration to the Department. The registration shall be accompanied by the appropriate air general permit processing fee pursuant to Rule 62-4.050, F.A.C. The fee and any hard copy registrations shall be sent via mail delivery to the Department of Environmental Protection, Attn: FDEP Receipts, Post Office Box 3070, Tallahassee, Florida, 32315-3070; or via hand-delivery or courier to the Department of Environmental Protection, Attn: FDEP Receipts, 3800 Commonwealth Boulevard, MS-77, Tallahassee, Florida, 32399. The registration shall include the following information.

1. The specific air general permit to be used.

2. Whether the registration is an initial registration (registration of a facility that is not currently authorized to construct or operate under the terms and conditions of an air general permit) or a re-registration (registration of a facility that is currently authorized to operate under the terms and conditions of an air general permit).

3. For initial registrations, a statement that the owner or operator surrenders all existing air operation permits for the facility upon the effective date of the air general permit, and a list of the specific permit numbers of the permits to be surrendered, if any.

4. For re-registrations, the facility identification number (if known) and the reason for re-registration (one or more of the following: impending expiration of the term for air general permit use; change of ownership of all or part of the facility; proposed new construction, modification, or other equipment change that requires registration pursuant to paragraph 62-210.310(2)(e), F.A.C.; or any other change not considered an administrative correction under paragraph 62-210.310(2)(d), F.A.C.).

5. The following general facility information: facility owner/company name (name of corporation, agency, or individual owner who or which owns, leases, operates, controls, or supervises the facility); site name (name, if any, of the facility site); facility location (physical location of the facility, not necessarily the mailing address); and, for a proposed new facility, the estimated start-up date.

6. The following information about the facility contact (plant manager or person to be contacted regarding day-to-day operations at the facility): name and position title; contact numbers (all of the following that apply: telephone number, cell phone number, fax number, and e-mail address); and mailing address.

7. If the owner or operator requests that the Department send correspondence regarding the facility to any other person, the following information about each such person: name and position title; contact numbers (all of the following that apply: telephone number, cell phone number, fax number, and e-mail address); and mailing address.

8. A description of the operations at the facility in sufficient detail to demonstrate the facility's eligibility for use of the air general permit and to provide a basis for tracking any future equipment or process changes at the facility. Describe all air pollutant-emitting processes and equipment at the facility, and identify any air pollution control measures or equipment used.

9. Other information required to be included in the registration by the specific air general permit, pursuant to subsections 62-210.310(4) or (5), F.A.C.

(c) Use of Air General Permit.

1. Unless the owner or operator of a facility has been notified by the Department of ineligibility to use the air general permit, the owner or operator may use the air general permit for such facility thirty (30) days after giving notice to the Department. The first day of the thirty (30) day time frame, day one, is the date the Department receives the proper registration and processing fee. The last day of the thirty (30) day time frame, day thirty (30), is the date the owner or operator may use the air general permit, provided there is no agency action to notify the owner or operator of ineligibility to use the air general permit.

2. To avoid lapse of authority to operate, an owner or operator intending to use, or continue to use, an air general permit must submit the proper registration and processing fee at least thirty (30) days prior to expiration of the facility's existing air operation permit or air general permit.

(d) Administrative Corrections. Within thirty (30) days of any minor changes requiring corrections to information contained in the registration, the owner or operator shall notify the Department in writing. Such changes shall include:

1. Any change in the name, address, or phone number of the facility or authorized representative not associated with a change in ownership or with a physical relocation of the facility or any emissions units or operations comprising the facility; or

2. Any other similar minor administrative change at the facility.

(e) Equipment Changes. The owner or operator shall maintain records of all equipment changes. In the case of installation of new process or air pollution control equipment, alteration of existing process or control equipment without replacement, or replacement of existing process or control equipment with equipment that is substantially different in terms of capacity, control efficiency, method of operation, material processed, or intended use than that noted on the most recent registration, the owner or operator shall submit a new and complete air general permit registration for the facility with the appropriate fee pursuant to Rule 62-4.050, F.A.C. to the Department at least 30 days prior to the change; provided however, that any change that would constitute a new major stationary source, major modification, or modification that would be a major modification but for the provisions of paragraph 62-212.400(2)(a), F.A.C., shall require authorization by air construction permit.

(f) Enforcement of Ineligibility. If a facility using an air general permit at any time becomes ineligible for the use of the air general permit, or if any facility using an air general permit is determined to have been initially ineligible for use of the air general permit, it shall be subject to enforcement action for constructing or operating without an air permit under subsection 62-210.300(1) or (2), F.A.C., or Chapter 62-213, F.A.C., as appropriate.

(3) General Conditions. All terms, conditions, requirements, limitations, and restrictions set forth in this subsection are "general permit conditions" and are binding upon the owner or operator of any facility using an air general permit provided at subsection 62-210.310(4) or (5), F.A.C.

(a) The owner or operator's use of an air general permit is limited to five (5) years. Prior to the end of the five (5) year term, the owner or operator who intends to continue using the air general permit for the facility shall re-register with the Department pursuant to paragraph 62-210.310(2)(b), F.A.C. To avoid lapse of authority to operate, the owner or operator must submit the proper registration and processing fee at least thirty (30) days prior to expiration of the facility's existing air general permit. The air general permit re-registration shall contain all current information regarding the facility.

(b) Use of an air general permit is not transferable and does not follow a change in ownership of the facility. Prior to any sale, other change of ownership, or permanent shutdown of the facility, the owner or operator is encouraged to notify the Department of the pending action. The new owner or operator who intends to continue using the air general permit for the facility shall re-register with the Department pursuant to paragraph 62-210.310(2)(b), F.A.C.

(c) The air general permit is valid only for the specific type of facility and associated emissions units and pollutant-emitting activities indicated.

(d) The air general permit does not authorize any demolition or renovation of the facility which involves asbestos removal. The

air general permit does not constitute a waiver of any of the requirements of Chapter 62-257, F.A.C., or 40 CFR Part 61, Subpart M, National Emission Standard for Asbestos, adopted and incorporated by reference at Rule 62-204.800, F.A.C.

(e) The general permit does not authorize any open burning.

(f) The owner or operator shall not circumvent any air pollution control device or allow the emission of air pollutants without the proper operation of all applicable air pollution control devices.

(g) The owner or operator shall maintain the authorized facility in good condition. Throughout the term of air general permit use, the owner or operator shall ensure that the facility maintains its eligibility to use the air general permit and complies with all terms and conditions of the air general permit.

(h) The owner or operator shall allow a duly authorized representative of the Department access to the facility at reasonable times to inspect and test, upon presentation of credentials or other documents as may be required by law, to determine compliance with the air general permit and Department rules.

(i) If, for any reason, the owner or operator of any facility operating under an air general permit does not comply with or will be unable to comply with any condition or limitation of the air general permit, the owner or operator shall immediately provide the Department with the following information:

1. A description of and cause of noncompliance; and

2. The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance.

(j) Use of an air general permit does not relieve the owner or operator of the facility from liability and penalties when the construction or operation of the authorized facility causes harm or injury to human health or welfare; causes harm or injury to animal, plant or aquatic life; or causes harm or injury to property. It does not allow the owner or operator to cause pollution in contravention of Florida law.

(k) The air general permit conveys no title to land or water, nor does it constitute state recognition or acknowledgment of title.

(l) The air general permit does not convey any vested rights or exclusive privileges, nor does it authorize any injury to public or private property or any invasion of personal rights. It does not authorize any infringement of federal, state, or local laws or regulations.

(m) Use of the air general permit shall be effective until suspended, revoked, surrendered, expired, or nullified pursuant to this rule and Chapter 120, F.S.

(n) Use of the air general permit does not eliminate the necessity for the owner or operator to obtain any other federal, state or local permits that may be required, or relieve the owner or operator from the duty to comply with any federal, state or local requirements that may apply.

(4) Air General Permits for Facilities Claiming Conditional Exemption from Title V Air Permitting.

(a) Air General Permit for Facilities Comprising a Bulk Gasoline Plant.

1. A facility comprising a bulk gasoline plant shall be eligible to use this air general permit provided it meets the general eligibility criteria of paragraph 62-210.310(2)(a), F.A.C., and the following specific criteria.

a. The facility shall use no other air general permit.

b. The facility shall not be subject to any unit-specific limitation or requirement other than any applicable provisions of Rule 62-296.418, F.A.C.

2. A facility using this air general permit shall comply with the general conditions given at subsection 62-210.310(3), F.A.C., and the following specific conditions.

a. The facility shall receive and distribute only petroleum-based lubricants, gasoline, diesel fuel, mineral spirits and kerosene.

b. The total storage capacity for gasoline at the facility shall not exceed 150,000 gallons.

c. The facility shall not exceed a throughput rate (distribute) of 6.0 million gallons of gasoline in any consecutive twelve (12) months.

d. The owner or operator shall maintain records to document the throughput rate of gasoline on a monthly basis. The owner or operator shall retain these records, available for Department inspection, for a period of at least five (5) years.

e. The facility shall comply with all applicable provisions of Rule 62-296.418, F.A.C.

3. The registration for this air general permit shall include all the following information.

a. For initial registrations, an estimate of the facility's expected gasoline throughput rate (amount distributed) over a 12-month period.

b. For re-registrations, the highest 12-month gasoline throughput rate for the facility for the previous five years, and the 12-month period over which this usage occurred.

c. The county in which the facility is located.

d. The annual average daily throughput (gallons) of the facility.

e. The date the facility began (or is expected to begin) operation.

f. The capacity (gallons) of each gasoline storage tank at the facility.

g. For each gasoline storage tank, whether the tank is equipped for submerged filling (yes or no); whether the tank is equipped with a loading rack (yes or no); and whether the loading rack is equipped with a vapor collection and control system (yes or no).

h. A description of the loading racks and vapor collection and control system.

(b) Air General Permit for Facilities Comprising Reciprocating Internal Combustion Engines.

1. A facility comprising one (1) or more reciprocating internal combustion engines shall be eligible to use this air general permit provided it meets the general eligibility criteria of paragraph 62-210.310(2)(a), F.A.C., and the following specific criteria.

a. The facility shall use no other air general permit.

b. The facility shall not be subject to any unit-specific limitation or requirement other than any such limitation or requirement set forth in this air general permit.

2. A facility using this air general permit shall comply with the general conditions given at subsection 62-210.310(3), F.A.C., and the following specific conditions.

a. Total fuel consumption by all reciprocating internal combustion engines at the facility shall not exceed 20,000 gallons per year of gasoline, 250,000 gallons per year of diesel fuel, 1.15 million gallons per year of propane, 40 million standard cubic feet per year of natural gas, or an equivalent prorated amount if multiple fuels are used.

b. If multiple fuels are used, the equivalent prorated amount of each fuel burned shall not exceed the total amount of such fuel allowed to be burned, as given in sub-subparagraph a., multiplied by a fuel percentage. The fuel percentage is the percentage ratio of the amount of the fuel burned at the facility to the total amount of such fuel allowed to be burned at the facility pursuant to sub-subparagraph a. The sum of the fuel percentages for all fuels burned by the facility shall not exceed 100 percent.

c. The owner or operator shall maintain records to document the fuel consumption, by type, on an annual basis. The owner or operator shall retain these records, available for Department inspection, for a period of at least five (5) years.

d. If the stationary compression ignition internal combustion engine is subject to 40 C.F.R. Part 60, Subpart IIII, adopted and incorporated by reference at Rule 62-204.800, F.A.C., or by modification or reconstruction becomes subject to such subpart, the owner or operator shall comply with all limitations and requirements of Subpart IIII that apply to the engine.

e. If the stationary spark ignition internal combustion engine is subject to 40 C.F.R. Part 60, Subpart JJJJ, adopted and incorporated by reference at Rule 62-204.800, F.A.C., or by modification or reconstruction becomes subject to such subpart, the owner or operator shall comply with all limitations and requirements of Subpart JJJJ that apply to the engine.

f. If the stationary reciprocating internal combustion engine is subject to 40 C.F.R. Part 63, Subpart ZZZZ, adopted and incorporated by reference at Rule 62-204.800, F.A.C., the owner or operator shall comply with all limitations and requirements of Subpart ZZZZ that apply to the engine. If emissions testing is required pursuant to Subpart ZZZZ, all notifications of upcoming tests and reports shall be submitted to the Department in accordance with the provisions of Subpart ZZZZ.

3. The registration for this air general permit shall include all the following information.

a. For initial registrations, an estimate of the total amount of fuel expected to be consumed over a 12-month period.

b. For re-registrations, the highest 12-month total fuel consumption amount for the last five years, and the 12-month period over which this consumption occurred.

c. For each compression ignition internal combustion engine subject to 40 C.F.R. Part 60, Subpart IIII, adopted and incorporated by reference at Rule 62-204.800, F.A.C., the engine manufacturer; model number; whether it is an emergency engine as per the definition at 40 C.F.R. Part 60, Subpart IIII, adopted and incorporated by reference at Rule 62-204.800, F.A.C. (yes or no); whether there is a manufacturer certification for the engine (yes or no); and the displacement (liters per cylinder).

d. For each spark ignition internal combustion engine subject to 40 C.F.R. Part 60, Subpart JJJJ, adopted and incorporated by reference at Rule 62-204.800, F.A.C., the engine manufacturer; model number; whether it is an emergency engine as per the definition at 40 C.F.R. Part 60, Subpart JJJJ, adopted and incorporated by reference at Rule 62-204.800, F.A.C. (yes or no); whether there is a manufacturer certification for the engine (yes or no); and the rated capacity (horsepower).

e. For each compression ignition internal combustion engine subject to 40 C.F.R. Part 63, Subpart ZZZZ, adopted and incorporated by reference at Rule 62-204.800, F.A.C., but not subject to 40 C.F.R. Part 60, Subpart IIII, adopted and incorporated by

reference at Rule 62-204.800, F.A.C., the engine manufacturer; model number; whether it is an emergency engine or limited use engine as per the definitions at 40 C.F.R. Part 63, Subpart ZZZZ, adopted and incorporated by reference at Rule 62-204.800, F.A.C. (yes or no); engine displacement (liters per cylinder); and rated capacity (horsepower).

f. For each spark ignition internal combustion engine subject to 40 C.F.R. Part 63, Subpart ZZZZ, adopted and incorporated by reference at Rule 62-204.800, F.A.C., but not subject to 40 C.F.R. Part 60, Subpart JJJJ, adopted and incorporated by reference at Rule 62-204.800, F.A.C., the engine manufacturer; model number; whether it is an emergency engine or limited use engine as per the definitions at 40 C.F.R. Part 63, Subpart ZZZZ, adopted and incorporated by reference at Rule 62-204.800, F.A.C. (yes or no); engine type (two stroke lean burn, four stroke lean burn, or four stroke rich burn); and rated capacity (horsepower).

(c) Air General Permit for Facilities Comprising Surface Coating Operations.

1. A facility comprising one (1) or more surface coating operations shall be eligible to use this air general permit provided it meets the general eligibility criteria of paragraph 62-210.310(2)(a), F.A.C., and the following specific criteria.

a. The facility shall use no other air general permit.

b. The facility shall not be subject to any unit-specific limitation or requirement other than any such limitation or requirement set forth in this air general permit.

2. A facility using this air general permit shall comply with the general conditions given at subsection 62-210.310(3), F.A.C., and the following specific conditions.

a. The total quantity of volatile organic compounds in all coatings used shall not exceed forty-four (44) pounds per day, averaged monthly, where coatings used shall include all solvents and thinners used in the process or for cleanup.

b. The owner or operator shall maintain records to document the VOC content and the quantity of coatings used. The owner or operator shall retain these records, available for Department inspection, for a period of at least five (5) years.

3. The registration for this air general permit shall include all the following information.

a. For initial registrations, an estimate of the average quantity of volatile organic compounds in all coatings (solvents and thinners) expected to be used on a daily basis.

b. For re-registrations, the highest monthly average of the daily quantity of volatile organic compounds in all coatings (solvents and thinners) used in the last five years, and the month and year during which this usage occurred.

(d) Air General Permit for Facilities Comprising Reinforced Polyester Resin Operations.

1. A facility comprising one or more reinforced polyester resin operations shall be eligible to use this air general permit provided it meets the general eligibility criteria of paragraph 62-210.310(2)(a), F.A.C., and the following specific criteria.

a. The facility shall use no other air general permit.

b. The facility shall not be subject to any unit-specific limitation or requirement other than any such limitation or requirement set forth in this air general permit.

2. A facility using this air general permit shall comply with the general conditions given at subsection 62-210.310(3), F.A.C., and the following specific conditions.

a. The combined quantity of styrene-containing resin and gelcoat used shall not exceed 76,000 pounds (thirty-eight (38) tons) in any consecutive twelve (12) months.

b. The facility shall comply with the objectionable odor prohibition of subsection 62-296.320(2), F.A.C.

c. The owner or operator shall maintain records to document the quantity of resin and gelcoat used on a monthly basis. The owner or operator shall retain these records, available for Department inspection, for a period of at least five (5) years.

3. The registration for this air general permit shall include all the following information.

a. For initial registrations, an estimate of the total quantity, in pounds, of styrene-containing materials (resin and gelcoat) expected to be used over a 12-month period.

b. For re-registrations, the highest 12-month total quantity, in pounds, of styrene-containing materials (resin and gelcoat) used in the last five years, and the 12-month period over which this usage occurred.

(e) Air General Permit for Facilities Comprising Cast Polymer Operations.

1. A facility comprising one (1) or more cast polymer operations shall be eligible to use this air general permit provided it meets the general eligibility criteria of paragraph 62-210.310(2)(a), F.A.C., and the following specific criteria.

a. The facility shall use no other air general permit.

b. The facility shall not be subject to any unit-specific limitation or requirement other than any such limitation or requirement set forth in this air general permit.

2. A facility using this air general permit shall comply with the general conditions given at subsection 62-210.310(3), F.A.C., and the following specific conditions.

a. The combined quantity of styrene-containing resin and gel coat used shall not exceed 284,000 pounds (142 tons) in any consecutive twelve (12) months.

b. The facility shall comply with the objectionable odor prohibition of subsection 62-296.320(2), F.A.C.

c. The owner or operator shall maintain records to document the quantity of resin and gel coat used on a monthly basis. The owner or operator shall retain these records, available for Department inspection, for a period of at least five (5) years.

3. The registration for this air general permit shall include all the following information.

a. For initial registrations, an estimate, in pounds, of the total quantity of styrene-containing materials (resin and gelcoat) expected to be used over a 12-month period.

b. For re-registrations, the highest 12-month total quantity, in pounds, of styrene-containing materials (resin and gelcoat) used in the last five years, and the 12-month period over which this usage occurred.

(f) Air General Permit for Facilities Comprising Printing Operations.

1. A facility comprising one (1) or more printing operations shall be eligible to use this air general permit provided it meets the general eligibility criteria of paragraph 62-210.310(2)(a), F.A.C., and the following specific criteria.

a. The facility shall use no other air general permit.

b. The facility shall not be subject to any unit-specific limitation or requirement other than any such limitation or requirement set forth in this air general permit.

2. A facility using this air general permit shall comply with the general conditions given at subsection 62-210.310(3), F.A.C., and the following specific conditions, provided, however, that the facility shall comply with the limitations of either sub-subparagraph 62-210.310(4)(f)2.a. or b., F.A.C. The facility may change method of compliance between sub-subparagraphs 62-210.310(4)(f)2.a. and b., F.A.C., provided the owner or operator maintains records to demonstrate compliance with the appropriate requirement at the time of change and thereafter.

a. The facility shall not emit eighty (80) tons or more of volatile organic compounds, eight (8) tons or more of any individual hazardous air pollutant, or twenty (20) tons or more of any combination of hazardous air pollutants in any consecutive twelve (12) months. The facility shall not rely upon add-on controls to meet these limitations. The owner or operator shall keep records of material usage and calculate, using a mass balance approach, for each calendar month and each consecutive twelve (12) months, the emissions of volatile organic compounds, individual hazardous air pollutants and total combined hazardous air pollutants. The owner or operator shall retain these records, available for Department inspection, for a period of at least five (5) years; or

b. The facility shall use less than 1,333 gallons of materials containing any hazardous air pollutants and not exceed the following material usage limitations in any consecutive twelve (12) months. The owner or operator shall keep records of material usage for each calendar month and each consecutive twelve (12) months to demonstrate compliance with such limitations. The owner or operator shall retain these records, available for Department inspection, for a period of at least five (5) years. Specifically, the facility shall:

(I) Operate only heatset offset lithographic printing lines and use less than 100,000 pounds, combined, of inks, cleaning solvents, fountain solution concentrate and fountain solution additives;

(II) Operate only non-heatset offset lithographic printing lines and use less than 14,250 gallons, combined, of cleaning solvents, fountain solution concentrate and fountain solution additives;

(III) Operate only digital printing lines and use less than 12,100 gallons, combined, of solvent based inks, clean-up solutions and other solvent-containing materials;

(IV) Operate only screen or letterpress printing lines and use less than 14,250 gallons, combined, of solvent based inks, clean-up solutions and other solvent-containing materials;

(V) Operate only water-based or ultraviolet-cured material flexographic or rotogravure printing lines and use less than 400,000 pounds, combined, of water-based inks, coatings and adhesives;

(VI) Operate only solvent-based material flexographic or rotogravure printing lines and use less than 100,000 pounds, combined, of inks, dilution solvents, coatings, cleaning solutions and adhesives; or

(VII) Operate any combination of heatset lithographic, non-heatset lithographic, digital, screen or letterpress, rotogravure or flexographic printing lines and use no more than the most stringent of the material usage limitations contained in sub-subparagraphs 62-210.310(4)(f)2.b.(I) through (VI), F.A.C., for the type of printing lines at the facility. For purposes of determining which limit is the most stringent, the pounds of materials used for heatset offset lithographic lines and flexographic lines shall be converted to the equivalent gallons by dividing by 8.5 pounds per gallon and shall be compared with the limits for non-heatset offset

lithographic, digital, screen and letterpress lines, as applicable, for the type of printing lines at the facility. The most stringent limit shall apply to the total of all solvent-containing material used.

c. The facility shall comply with the objectionable odor prohibition of subsection 62-296.320(2), F.A.C.

3. The registration for this air general permit shall include all the following information.

a. For initial registrations, the method (mass balance or material usage rates) expected to be used to demonstrate compliance with subparagraph 62-210.310(4)(f)2., F.A.C., and the estimated amount of materials containing hazardous air pollutants and solvent-containing materials expected to be used over a 12-month period.

b. For re-registrations of facilities where compliance is demonstrated through mass balance, the calculations to show compliance with sub-subparagraph 62-210.310(4)(f)2.a., F.A.C.

c. For re-registrations of facilities where compliance is demonstrated through material usage rates, the highest 12-month total quantity of materials containing hazardous air pollutants and the highest 12-month total quantity of solvent-containing materials used in the last five years to show compliance with sub-subparagraph 62-210.310(4)(f)2.b., F.A.C.

d. For re-registrations of facilities where compliance is demonstrated through both mass balance and material usage rates, the information specified above in sub-subparagraphs 62-210.310(4)(f)3.a. and 62-210.320(4)(f)3.b., F.A.C.

e. A description of the number and types of printing processes, presses, and ink systems being used at the facility (one or more of the following: heatset offset lithographic; screen or letterpress; flexographic; non-heatset offset lithographic; water based; rotogravure; digital; or ultraviolet cured).

(5) Air General Permits for Miscellaneous Facilities.

(a) Air General Permit for Facilities Comprising Volume Reduction, Mercury Recovery, and Mercury Reclamation Processes.

1. For purposes of this air general permit, the terms “volume reduction process,” “mercury recovery process,” and “mercury reclamation process” have the meanings given at Rule 62-296.417, F.A.C.

2. A facility comprising one (1) or more volume reduction, mercury recovery, and mercury reclamation processes shall be eligible to use this air general permit provided it meets the general eligibility criteria of paragraph 62-210.310(2)(a), F.A.C.

3. A facility using this air general permit shall comply with the general conditions given at subsection 62-210.310(3), F.A.C., and all applicable provisions of Rule 62-296.417, F.A.C.

4. The registration for this air general permit shall include all the following information.

a. The type of process (one or more of the following: volume reduction, mercury recovery, or mercury reclamation).

b. For facilities with dual air handling systems pursuant to paragraph 62-296.417(1)(c), F.A.C., a description of the air pollution control equipment on the primary and secondary air handling systems; the number, type, and capacity of the filters; the make and model numbers of the air pollution control equipment on the primary and secondary air handling systems; and the type of adsorbent used, the number and location of filters, and the filter capacity and replacement frequency.

c. For facilities with a single air handling system with redundant mercury controls pursuant to paragraph 62-296.417(1)(d), F.A.C., a description of the redundant air pollution control equipment; the number, type, and capacity of filters; the make and model numbers of the air pollution control equipment; and the type of adsorbent used, the number and location of filters, and the filter capacity and replacement frequency.

(b) Air General Permit for Facilities Comprising Concrete Batching Plants.

1. For purposes of this air general permit, the term “concrete batching plant” shall have the meaning given at Rule 62-296.414, F.A.C., and the term “site” shall mean one or more contiguous or adjacent properties under control of the same person (or persons under common control).

2. A facility comprising one (1) or more stationary or relocatable concrete batching plants shall be eligible to use this air general permit if it meets the general eligibility criteria of paragraph 62-210.310(2)(a), F.A.C.

3. A facility using this air general permit shall comply with the general conditions given at subsection 62-210.310(3), F.A.C., and the following specific conditions.

a. The facility shall comply with all applicable provisions of Rule 62-296.414, F.A.C.

b. The owner or operator of any equipment used to mix cement and soil for onsite soil augmentation or stabilization shall notify the Department by telephone, e-mail, fax, or written communication at least one (1) business day prior to changing location and transmit (by e-mail, fax, post, or courier) a Facility Relocation Notification Form (DEP Form No. 62-210.900(6)) to the Department no later than five (5) business days following relocation. The owner or operator of any other relocatable concrete batching plant

proposing to change location shall transmit a Facility Relocation Notification Form to the Department at least five (5) business days prior to relocation.

4. A facility using this air general permit may collocate with other facilities that separately registered for, and are also using, the concrete batching plant air general permit, and with facilities using the nonmetallic mineral processing plant air general permit at paragraph 62-210.310(5)(e), F.A.C., even if under the control of different persons, provided the following conditions are met.

a. The collocation site does not contain any emissions units and pollutant-emitting activities other than concrete batching plants using air general permits, nonmetallic mineral processing plants using air general permits, and nonmetallic mineral processing plants or other emissions units and pollutant-emitting activities exempted from permitting pursuant to subsection 62-210.300(3), F.A.C., or Rule 62-4.040, F.A.C.

b. The total fuel consumption by all emissions units at the collocation site shall not exceed 275,000 gallons of diesel fuel, 23,000 gallons per year of gasoline, 44 million standard cubic feet per year of natural gas, or 1.3 million gallons per year of propane, or an equivalent prorated amount if multiple fuels are used.

c. If multiple fuels are used, the equivalent prorated amount of each fuel burned shall not exceed the total amount of such fuel allowed to be burned, as given in sub-subparagraph b., multiplied by a fuel percentage. The fuel percentage is the percentage ratio of the amount of the fuel burned at the facility to the total amount of such fuel allowed to be burned at the facility pursuant to sub-subparagraph b. The sum of the fuel percentages for all fuels burned by the facility shall not exceed one hundred percent (100%).

d. The owners or operators of all collocated concrete batching plants and nonmetallic mineral processing plants shall maintain records to account for site-wide fuel consumption for each calendar month and each consecutive twelve (12) months. The owners or operators shall retain these records, available for Department inspection, for a period of at least five (5) years.

5. Under the authority of this air general permit, a relocatable concrete batching plant may perform a non-routine task, such as making concrete for a construction project, at a facility with authorization by individual air construction or non-Title V air operation permit, without revision to the facility's individual air permit. Any such concrete batching plant shall remain at the individually permitted facility for no more than six (6) months from the day it relocates to such facility. The owner or operator of such concrete batching plant shall keep records to indicate how long the plant has been at the permitted facility.

6. The registration for this air general permit shall include all the following information.

a. The type of facility (stationary or relocatable).

b. The precautions to be used to prevent unconfined emissions of particulate matter from roads, parking areas, stock piles, and yards (one or more of the following: pave roads; pave parking areas; pave yards; maintain roads/parking/yards; use water application; use dust suppressant; remove particulate matter; reduce stock pile height; or install wind breaks).

c. The precautions to be used to prevent unconfined emissions of particulate matter from drop points to trucks (one or more of the following: spray bar; chute; enclosure; or partial enclosure).

d. For each silo, weigh hopper, batcher, and other enclosed storage and conveying equipment that is limited to a visible emissions of 5 percent opacity pursuant to subsection 62-296.414(1), F.A.C., the process equipment type (silo, weigh hopper, batcher, or other); an identifier specific to each piece of equipment (location, numeric designation, capacity, product, or other); control device (baghouse, vent filter, or other); and control device manufacturer and model number.

(c) Air General Permit for Facilities Comprising Human Crematories.

1. A facility comprising one (1) or more human crematories shall be eligible to use this air general permit provided it meets the general eligibility criteria of paragraph 62-210.310(2)(a), F.A.C.

2. A facility using this air general permit shall comply with the general conditions given at subsection 62-210.310(3), F.A.C., and the following specific conditions.

a. The facility shall comply with all applicable provisions of subsection 62-296.401(5), F.A.C.

b. The owner or operator may use a human crematory air general permit and an animal crematory air general permit at the same facility, provided all human crematory units operate under a single human crematory air general permit and all animal crematory units operate under a single animal crematory air general permit.

3. The registration for this air general permit shall include all the following information.

a. For an initial registration for a proposed new human crematory unit, design calculations to confirm a sufficient volume in the secondary chamber combustion zone to provide for at least a 1.0 second gas residence time at 1800 degrees F.

b. For each crematory unit, the manufacturer, model number, serial number, and rated capacity.

(d) Air General Permit for Facilities Comprising Animal Crematories.

1. A facility comprising one (1) or more animal crematories shall be eligible to use this air general permit provided it meets the general eligibility criteria of paragraph 62-210.310(2)(a), F.A.C., and no animal crematory unit at the facility exceeds a design capacity of 500 pounds per hour cremated.

2. A facility using this air general permit shall comply with the general conditions given at subsection 62-210.310(3), F.A.C., and the following specific conditions.

a. The facility shall comply with all applicable provisions of subsection 62-296.401(6), F.A.C.

b. The owner or operator may use an animal crematory air general permit and a human crematory air general permit at the same facility, provided all animal crematory units operate under a single animal crematory air general permit and all human crematory units operate under a single human crematory air general permit.

3. The registration for this air general permit shall include all the following information.

a. For an initial registration for a proposed new animal crematory unit, design calculations to confirm a sufficient volume in the secondary chamber combustion zone to provide for at least a 1.0 second gas residence time at 1800 degrees F.

b. For each crematory unit, the manufacturer, model number, serial number, and rated capacity.

(e) Air General Permit for Facilities Comprising Nonmetallic Mineral Processing Plants (Crushing Operations).

1. For purposes of this air general permit, the definitions at 40 CFR Part 60, Subpart OOO, adopted and incorporated by reference at Rule 62-204.800, F.A.C., shall apply, and the term "site" shall mean one or more contiguous or adjacent properties under control of the same person (or persons under common control). A facility need not be subject to 40 CFR Part 60, Subpart OOO, to be eligible for use of this air general permit. If a facility using this air general permit later becomes subject to 40 CFR Part 60, Subpart OOO, the owner or operator shall re-register with the Department.

2. A stationary or relocatable facility comprising one (1) or more nonmetallic mineral processing plants shall be eligible to use this air general permit provided it meets the general eligibility criteria of paragraph 62-210.310(2)(a), F.A.C.

3. A facility using this air general permit shall comply with the general conditions given at subsection 62-210.310(3), F.A.C., and the following specific conditions.

a. The total fuel consumption by the facility shall not exceed 23,000 gallons per year of gasoline, 275,000 gallons per year of diesel fuel, 1.3 million gallons per year of propane, 44 million standard cubic feet per year of natural gas, or an equivalent prorated amount if multiple fuels are used.

b. If multiple fuels are used, the equivalent prorated amount of each fuel burned shall not exceed the total amount of such fuel allowed to be burned, as given in sub-subparagraph b., multiplied by a fuel percentage. The fuel percentage is the percentage ratio of the amount of the fuel burned at the facility to the total amount of such fuel allowed to be burned at the facility pursuant to sub-subparagraph b. The sum of the fuel percentages for all fuels burned by the facility shall not exceed 100 percent.

c. Pursuant to Rule 62-296.320, F.A.C., the following reasonable precautions shall be employed to control unconfined emissions of particulate matter.

(I) Unconfined emissions from all relocatable nonmetallic mineral processing plants, except those located at mines or quarries and processing only material from onsite natural deposits, and all stationary nonmetallic mineral processing plants that process dry material shall be controlled by using a water suppression system with spray bars located wherever unconfined emissions occur at the feeder(s), the entrance and exit of the crusher(s), the classifier screens, and the conveyor drop points.

(II) Unconfined emissions generated by vehicular traffic or wind shall be controlled by applying water (by water trucks equipped with spray bars) or effective dust suppressant(s) on a regular basis to all stockpiles, roadways and work yards where the nonmetallic mineral processing plant is located.

d. Visible emissions from any crusher, grinding mill, screening operation, bucket elevator, transfer point on belt conveyors, bagging operation, storage bin, enclosed truck or railcar loading station, or any other affected emission point at a nonmetallic mineral processing plant not subject to 40 CFR Part 60, Subpart OOO, shall be less than twenty percent (20%) opacity, pursuant to Rule 62-296.320, F.A.C.

e. Nonmetallic mineral processing plants subject to 40 CFR Part 60, Subpart OOO, shall comply with all applicable standards, limitations, and requirements of Subpart OOO. Such facilities shall conduct initial performance tests for particulate matter and visible emissions in accordance with all requirements of Subpart OOO and 40 CFR Part 60, Subpart A, adopted and incorporated by reference at Rule 62-204.800, F.A.C. Thereafter, such facilities shall conduct performance tests for visible emissions annually. The annual visible emissions performance tests shall be conducted in accordance with the test methods and procedures set forth at

Subpart OOO. All notifications of upcoming visible emissions tests and all test results shall be submitted to the Department in accordance with the provisions of Rule 62-297.310, F.A.C.

f. The owner or operator of any relocatable nonmetallic mineral processing plant proposing to change location shall notify the Department by telephone, e-mail, fax, or written communication at least one (1) business day prior to changing location and transmit (by e-mail, fax, post, or courier) a Facility Relocation Notification Form (DEP Form No. 62-210.900(6)) to the Department no later than five (5) business days following relocation.

4. A facility using this air general permit may collocate with other facilities that separately registered for, and are also using, the nonmetallic mineral processing plant air general permit, and with facilities using the concrete batching plant air general permit at paragraph 62-210.310(5)(b), F.A.C., even if under the control of different persons, provided the following conditions are met.

a. The collocation site shall not contain any emissions units and pollutant-emitting activities other than concrete batching plants using air general permits, nonmetallic mineral processing plants using air general permits, and nonmetallic mineral processing plants or other emissions units and pollutant-emitting activities exempted from permitting pursuant to subsection 62-210.300(3), F.A.C., or Rule 62-4.040, F.A.C.

b. The fuel usage limitations of sub-subparagraphs 62-210.310(5)(e)3.b. and c., F.A.C., shall apply to the collocation site. The owners or operators of all collocated concrete batching plants and nonmetallic mineral processing plants shall maintain records to account for site-wide fuel consumption for each calendar month and each consecutive twelve (12) months. The owners or operators shall retain these records, available for Department inspection, for a period of at least five (5) years.

5. Under the authority of this air general permit, a relocatable nonmetallic mineral processing plant may perform a non-routine task, such as crushing concrete for a demolition project, at a facility with authorization by individual air construction or non-Title V air operation permit, without revision to the facility's individual air permit. Any such nonmetallic mineral processing plant shall not be deployed at a single site for more than six (6) months in any consecutive twelve (12) months. The owner or operator of such nonmetallic mineral processing plant shall keep records to indicate how long the plant has been at the permitted facility. No nonmetallic mineral processing plant using this air general permit shall perform a task routinely done at the individually permitted facility, such as crushing recycled asphalt pavement (rap) at an asphalt plant, unless operation of the nonmetallic mineral processing plant is authorized by the air construction permit or non-Title V air operation permit, as applicable, for the permitted facility.

6. The registration for this air general permit shall include all the following information.

a. The type of facility (stationary or relocatable).

b. The precautions to be used to prevent unconfined emissions of particulate matter from roads, parking areas, stock piles, and yards (one or more of the following: pave roads; pave parking areas; pave yards; maintain roads/parking/yards; use water application; use dust suppressant; remove particulate matter; reduce stock pile height; or install wind breaks).

c. The location of spray bars (one or more of the following: feeders; entrance to crushing operation; exit of crushing operation; classifier screens; or conveyor drop points).

d. For each emission unit, component description (primary crusher, secondary crusher, screener, conveyor, reciprocating internal combustion engine, or other fuel burning equipment), manufacturer, date of manufacture, model number, serial number, and rated capacity (tons per hour material throughput or horsepower).

(f) Air General Permit for Facilities Comprising Perchloroethylene Dry Cleaning Systems.

1. For the purposes of this air general permit, the definitions at 40 C.F.R. Part 63, Subparts A and M, adopted and incorporated by reference at Rule 62-204.800, F.A.C., shall apply.

2. A facility comprising one or more perchloroethylene dry cleaning systems shall be eligible to use this air general permit provided it meets the general eligibility criteria of paragraph 62-210.310(2)(a), F.A.C.

3. A facility using this air general permit shall comply with the general conditions given at subsection 62-210.310(3), F.A.C., and with all requirements of 40 C.F.R. Part 63, Subparts A and M, adopted and incorporated by reference at Rule 62-204.800, F.A.C., as applicable, except as follows.

a. In lieu of the provisions of 40 C.F.R. § 63.6(e)(3) and 40 C.F.R. § 63.10(d)(5), the owner or operator shall maintain onsite a startup, shutdown, malfunction plan for the facility that describes, in detail, procedures for operating and maintaining the equipment during periods of startup, shutdown, and malfunction. The plan may be in the form of an equipment operation manual and shall also specify corrective action for malfunctioning process and air pollution control equipment.

b. During periods of startup, shutdown, and malfunction, the owner or operator shall operate and maintain equipment in accordance with the procedures specified in the plan. Records of compliance with the plan shall be kept onsite for a minimum of five

years and shall contain a certification statement signed by the owner or operator that the documentation is true, accurate, and complete, based upon information and belief formed after reasonable inquiry.

c. If any action is taken which is inconsistent with the plan, the owner or operator shall record and report the actions taken to the Department during facility inspections. The record shall explain the circumstances of the event, the reason for not following the startup, shutdown, and malfunction plan, and whether any excess emissions or parameter monitoring exceedances are believed to have occurred. Taking actions inconsistent with those in the plan constitutes a violation of a general permit condition.

4. The registration for this air general permit shall include all the following information.

a. The number of dry-to-dry machines on-site, and for each on-site dry-to-dry machine, the date the machine was installed, whether the machine is new or existing as defined at 40 C.F.R. Part 63, Subpart M, whether the control device is refrigerated condenser or carbon adsorber, and the date the control device was installed.

b. Whether the facility is a co-residential dry cleaning facility as defined at 40 C.F.R. Part 63, Subpart M.

c. For each dry-to-dry machine at a co-residential dry cleaning facility, whether the machine is a perchloroethylene dry cleaning machine (yes or no), and whether the machine has a vapor barrier enclosure (yes or no).

d. Gallons of perchloroethylene used within the most recent 12 months.

e. The horsepower and fuel type (propane, no. 2 fuel oil, no. 4 fuel oil, natural gas, electric, or other) for all steam and hot water generating units (boilers) on-site, or a statement that there are no boilers on-site.

(g) Air General Permit for Facilities Comprising Ethylene Oxide Sterilizers.

1. For the purposes of this air general permit, the definitions at 40 C.F.R. Part 63, Subparts A and O, as applicable, adopted and incorporated by reference at Rule 62-204.800, F.A.C., shall apply.

2. A facility comprising one or more ethylene oxide sterilizers shall be eligible to use this air general permit provided it meets the general eligibility criteria of paragraph 62-210.310(2)(a), F.A.C.

3. A facility using this air general permit shall comply with the requirements of 40 C.F.R. Part 63, Subparts A, and O, adopted and incorporated by reference in Rule 62-204.800, F.A.C., as applicable, and the general conditions given at subsection 62-210.310(3), F.A.C.

4. The registration for this air general shall include all the following information.

a. The number of ethylene oxide sterilization units on-site.

b. For each unit on-site, the following information: vent type (sterilization chamber, chamber exhaust, or aeration room); date initially purchased from manufacturer; status (new or existing as defined at 40 C.F.R. Part 63, Subpart O); control device required (yes or no); and date control installed, if applicable.

c. The total amount of ethylene oxide purchased in the most recent 12 months, in tons.

d. Indicate all control technologies that are required for sterilization units pursuant to this air general permit (one or more of the following: acid-water scrubber, catalytic oxidation unit, thermal oxidation unit, other, or none required).

(h) Air General Permit for Facilities Comprising Halogenated Solvent Degreasers.

1. For the purposes of this air general permit, the definitions at 40 C.F.R. Part 63, Subparts A and T, adopted and incorporated by reference at Rule 62-204.800, F.A.C., shall apply.

2. A facility comprising one or more halogenated solvent degreasers shall be eligible to use this air general permit provided it meets the general eligibility criteria of paragraph 62-210.310(2)(a), F.A.C.

3. A facility using this air general permit shall comply with the requirements of 40 C.F.R. Part 63, Subparts A and T, adopted and incorporated by reference in Rule 62-204.800, F.A.C., as applicable, and the general conditions given at subsection 62-210.310(3), F.A.C.

4. The registration for this air general shall include all the following information.

a. For each halogenated solvent degreaser, the type of machine (batch vapor solvent; batch cold; or in-line); the date initially purchased from the manufacturer; whether the machine is new or existing as defined at 40 C.F.R. Part 63, Subpart T; and the date the control device was installed, if applicable.

b. The total amount of halogenated solvents used in the most recent 12 months, in gallons.

c. The halogenated solvents used at the facility (one or more of the following: perchloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride, or chloroform).

d. The method of compliance (complying with an alternative solvent emission limit; implementing a control device combination/work practice standards; meeting an idling emission limit/work practice standards; or meeting the requirements for batch cold cleaning machines).

e. If implementing a control device combination, the controls that apply to the facility (one or more of the following: 1.0 freeboard ratio; carbon adsorber; dwell time; reduced room draft; working mode cover; super-heated vapor; or freeboard refrigeration device).

(i) Air General Permit for Facilities Comprising Chromium Electroplaters and Anodizers.

1. For the purposes of this air general permit, the definitions at 40 C.F.R. Part 63, Subparts A and N, adopted and incorporated by reference at Rule 62-204.800, F.A.C., shall apply.

2. A facility comprising one or more chromium electroplaters and anodizers shall be eligible to use this air general permit provided it meets the general eligibility criteria of paragraph 62-210.310(2)(a), F.A.C.

3. A facility using this air general permit shall comply with the requirements of 40 C.F.R. Part 63, Subparts A and N, adopted and incorporated by reference in Rule 62-204.800, F.A.C., as applicable, and the general conditions given at subsection 62-210.310(3), F.A.C.

4. The registration for this air general shall include all the following information.

a. For each hard electroplating machine, whether the machine is existing or new as defined at 40 C.F.R. Part 63, Subpart N; date of purchase; date of control device installation; type of control device (packed-bed scrubber, composite mesh pad, packed-bed scrubber and composite mesh pad, fume suppressant, fume suppressant with a wetting agent, fiber-bed mist eliminator, or wetting agent); and applicable standard (0.03 mg/dscm, 0.015 mg/dscm, or an alternative standard for multiple tanks under common control).

b. Whether the facility's cumulative potential rectifier capacity is greater than 60 million ampere-hours per year (yes or no).

c. For each decorative electroplating or anodizing machine, whether the machine is existing or new as defined at 40 C.F.R. Part 63, Subpart N; date of purchase; date of control device installation; type of control device (packed-bed scrubber, composite mesh pad, packed-bed scrubber and composite mesh pad, fume suppressant, fume suppressant with a wetting agent, fiber-bed mist eliminator, or wetting agent); and applicable standard (0.01 mg/dscm, 45 dynes/cm, records of bath components for trivalent chromium tanks, or alternative standard for multiple tanks under common control).

d. The compliance demonstration method (initial performance test, or use of a wetting agent to reduce emissions so as to meet the existing surface tension limit).

(j) Air General Permit for Facilities Comprising Asbestos Manufacturers and Fabricators.

1. For the purposes of this air general permit, the definitions at 40 C.F.R. Part 61, Subparts A and M, adopted and incorporated by reference at Rule 62-204.800, F.A.C., shall apply.

2. A facility comprising one or more asbestos manufacturers or fabricators shall be eligible to use this air general permit provided it meets the general eligibility criteria of paragraph 62-210.310(2)(a), F.A.C.

3. A facility using this air general permit shall comply with the requirements of 40 C.F.R. Part 61, Subparts A and M adopted and incorporated by reference in Rule 62-204.800, F.A.C., as applicable, and the general conditions given at subsection 62-210.310(3), F.A.C.

4. The registration for this air general shall indicate whether the facility is classified as asbestos manufacturing, asbestos fabrication, or both.

(k) Air General Permit for Facilities Comprising Secondary Aluminum Sweat Furnaces.

1. For the purposes of this air general permit, the definitions at 40 C.F.R. Part 63, Subparts A and RRR, adopted and incorporated by reference at Rule 62-204.800, F.A.C., shall apply.

2. A facility comprising one or more secondary aluminum sweat furnaces shall be eligible to use this air general permit provided it meets the general eligibility criteria of paragraph 62-210.310(2)(a), F.A.C.

3. A facility using this air general permit shall comply with the requirements of the general conditions given at subsection 62-210.310(3), F.A.C., and 40 C.F.R. Part 63, Subparts A and RRR, adopted and incorporated by reference in Rule 62-204.800, F.A.C., as applicable, except that:

a. In lieu of conducting a performance test to demonstrate compliance with the emission standard of 40 C.F.R. § 63.1505(f)(2), the owner or operator shall comply with the residence time and operating temperature requirements of 40 C.F.R. § 63.1505(f)(1); and

b. In lieu of submitting a written operation, maintenance, and monitoring plan to the Department, the owner or operator shall prepare and implement a plan that meets the criteria of 40 C.F.R. § 63.1510(b), operate the sweat furnaces(s) in compliance with the operation, maintenance and monitoring plan at all times, and maintain the plan on-site and available for inspection by the Department.

4. The registration for this air general shall include all the following information.

a. The number of secondary aluminum sweat furnaces, scrap shredders, degreasers, paint shops, boilers, and emergency generators on-site.

b. A description of any other process operations at the site that may emit air pollutants.

Rulemaking Authority 403.061 FS. Law Implemented 403.031, 403.061, 403.087, 403.814 FS. History--New 1-10-07, Amended 5-9-07, 10-12-08, 6-29-11.

62-210.340 Citrus Juice Processing Facilities.

Rulemaking Authority 403.08725 FS. Law Implemented 403.08725 FS. History--New 12-17-02, Amended 11-1-04, Repealed 2-16-12.

62-210.350 Public Notice and Comment.

(1) Public Notice of Proposed Agency Action.

(a) A notice of proposed agency action on permit application, where the proposed agency action is to issue the permit, shall be published by any applicant for:

1. An air construction permit;

2. An air operation permit, permit renewal or permit revision subject to paragraph 62-210.300(2)(b), F.A.C., (i.e., a FESOP), except as provided in sub-subparagraph 62-210.300(2)(b)1.b., F.A.C.; or

3. An air operation permit, permit renewal, or permit revision subject to Chapter 62-213, F.A.C., except Title V air general permits and those permit revisions meeting the requirements of subsection 62-213.412(1), F.A.C.

(b) The notice required by paragraph 62-210.350(1)(a), F.A.C., shall be published in accordance with all otherwise applicable provisions of Rule 62-110.106, F.A.C. A public notice under subparagraph 62-210.350(1)(a)1., F.A.C., for an air construction permit may be combined with any required public notice under sub-subparagraph 62-210.350(1)(a)2. or 3., F.A.C., for air operation permits. If such notices are combined, the public notice must comply with the requirements for both notices.

(c) Except as otherwise provided at subsections 62-210.350(2), (5), and (6), F.A.C., each notice of intent to issue an air construction permit shall provide a 14-day period for submittal of public comments.

(2) Additional Public Notice Requirements for Emissions Units Subject to Prevention of Significant Deterioration or Nonattainment-Area Preconstruction Review.

(a) Before taking final agency action on a construction permit application for any proposed new or modified facility or emissions unit subject to the preconstruction review requirements of Rule 62-212.400 or 62-212.500, F.A.C., the Department shall comply with all applicable provisions of Rule 62-110.106, F.A.C., and provide an opportunity for public comment which shall include as a minimum the following:

1. A complete file available for public inspection in at least one location in the district affected which includes the information submitted by the owner or operator, exclusive of confidential records under Section 403.111, Florida Statutes, and the Department's analysis of the effect of the proposed construction or modification on ambient air quality, including the Department's preliminary determination of whether the permit should be approved or disapproved;

2. A 30-day period for submittal of public comments; and

3. A notice, by advertisement in a newspaper of general circulation in the county affected, specifying the nature and location of the proposed facility or emissions unit, whether BACT or LAER has been determined, the degree of PSD increment consumption expected, if applicable, and the location of the information specified in subparagraph 1. above; and notifying the public of the opportunity for submitting comments and requesting a public hearing.

(b) The notice provided for in subparagraph 62-210.350(2)(a)3., F.A.C., shall be prepared by the Department and published by the applicant in accordance with all applicable provisions of Rule 62-110.106, F.A.C., except that the applicant shall cause the notice to be published no later than thirty (30) days prior to final agency action.

(c) A copy of the notice provided for in subparagraph 62-210.350(2)(a)3., F.A.C., shall also be sent by the Department to the Regional Office of the U.S. Environmental Protection Agency and to all other state and local officials or agencies having cognizance

over the location of such new or modified facility or emissions unit, including local air pollution control agencies, chief executives of city or county government, regional land use planning agencies, and any other state, Federal Land Manager, or Indian Governing Body whose lands may be affected by emissions from the new or modified facility or emissions unit.

(d) A copy of the notice provided for in subparagraph 62-210.350(2)(a)3., F.A.C., shall be displayed in the appropriate district, branch and local program offices.

(e) An opportunity for public hearing shall be provided in accordance with Chapter 120, F.S., and Rule 62-110.106, F.A.C.

(f) Any public comments received shall be made available for public inspection in the location where the information specified in subparagraph 62-210.350(2)(a)1., F.A.C., is available and shall be considered by the Department in making a final determination to approve or deny the permit.

(g) The final determination shall be made available for public inspection at the same location where the information specified in subparagraph 62-210.350(2)(a)1., F.A.C., was made available.

(h) For a proposed new or modified emissions unit which would be located within 100 kilometers of any Federal Class I area or whose emissions may affect any Federal Class I area, and which would be subject to the preconstruction review requirements of Rule 62-212.400 or 62-212.500, F.A.C.:

1. The Department shall mail or transmit to the Administrator a copy of the initial application for an air construction permit and notice of every action related to the consideration of the permit application.

2. The Department shall mail or transmit to the Federal Land Manager of each affected Class I area a copy of any written notice of intent to apply for an air construction permit; the initial application for an air construction permit, including all required analyses and demonstrations; any subsequently submitted information related to the application; the preliminary determination and notice of proposed agency action on the permit application; and any petition for an administrative hearing regarding the application or the Department's proposed action. Each such document shall be mailed or transmitted to the Federal Land Manager within fourteen (14) days after its receipt by the Department.

(3) Additional Public Notice Requirements for Facilities Subject to Operation Permits for Title V Sources.

(a) Before taking final agency action to issue a new, renewed, or revised air operation permit subject to Chapter 62-213, F.A.C., the Department shall comply with all applicable provisions of Rule 62-110.106, F.A.C., and provide an opportunity for public comment which shall include as a minimum the following:

1. A complete file available for public inspection in at least one location in the district affected which includes the information submitted by the owner or operator, exclusive of confidential records under Section 403.111, F.S.; and

2. A 30-day period for submittal of public comments.

(b) The notice provided for in paragraph 62-210.350(3)(a), F.A.C., shall be prepared by the Department and published by the applicant in accordance with all applicable provisions of Rule 62-110.106, F.A.C., except that the applicant shall cause the notice to be published no later than thirty (30) days prior to final agency action. If written comments received during the 30-day comment period on a draft permit result in the Department's issuance of a revised draft permit in accordance with subsection 62-213.430(1), F.A.C., the Department shall require the applicant to publish another public notice in accordance with paragraph 62-210.350(1)(a), F.A.C.

(c) The notice shall identify:

1. The facility;

2. The name and address of the office at which processing of the permit occurs;

3. The activity or activities involved in the permit action;

4. The emissions change involved in any permit revision;

5. The name, address, and telephone number of a Department representative from whom interested persons may obtain additional information, including copies of the permit draft, the application, and all relevant supporting materials, including any permit application, compliance plan, permit, monitoring report, and compliance statement required pursuant to Chapter 62-213, F.A.C., (except for information entitled to confidential treatment pursuant to Section 403.111, F.S.), and all other materials available to the Department that are relevant to the permit decision;

6. A brief description of the comment procedures required by subsection 62-210.350(3), F.A.C.;

7. The time and place of any hearing that may be held, including a statement of procedure to request a hearing (unless a hearing has already been scheduled); and

8. The procedures by which persons may petition the Administrator to object to the issuance of the proposed permit after

expiration of the Administrator's 45-day review period.

(4) Additional Public Notice Requirements for Facilities Subject to Federally Enforceable State Operation Permits (FESOPs) for Non-Title V Sources.

(a) Before taking final agency action to issue a new, renewed (if materially changed), or revised air operation permit pursuant to paragraph 62-210.300(2)(b), F.A.C., the Department shall comply with all applicable provisions of Rule 62-110.106, F.A.C., and provide an opportunity for public comment which shall include as a minimum the following:

1. A complete file available for public inspection in at least one location in the district affected which includes the information submitted by the owner or operator, exclusive of confidential records under Section 403.111, F.S.;

2. A 14-day period for submittal of public comments; and

3. A notice, by advertisement in a newspaper of general circulation in the county affected, containing the information specified in paragraph 62-210.350(4)(c), F.A.C., except as provided in subparagraph 62-210.300(2)(b)3., F.A.C.

(b) The notice provided for in paragraph 62-210.350(4)(a), F.A.C., shall be prepared by the Department and published by the applicant in accordance with all applicable provisions of Rule 62-110.106, F.A.C., except that the applicant shall cause the notice to be published no later than fourteen (14) days prior to final agency action.

(c) The notice shall identify:

1. The facility;

2. The name and address of the office at which processing of the permit occurs;

3. The activity or activities involved in the permit action;

4. The emissions change involved in any permit revision;

5. The name, address, and telephone number of a Department representative from whom interested persons may obtain additional information, including copies of the permit draft, the application, and all relevant supporting materials, including any permit application (except for information entitled to confidential treatment pursuant to Section 403.111, F.S.), and all other materials available to the Department that are relevant to the permit decision;

6. A brief description of the comment procedures required by subsection 62-210.350(4), F.A.C.; and

7. The time and place of any hearing that may be held, including a statement of procedure to request a hearing (unless a hearing has already been scheduled).

(d) A copy of the notice provided for in subparagraph 62-210.350(4)(a)3., F.A.C., along with the Department's proposed permit shall be sent by the Department to the Regional Office of the U.S. Environmental Protection Agency, if requested by the regional office, and to any approved local air pollution control program having cognizance over the county in which the facility is located.

(e) A copy of the notice provided for in subparagraph 62-210.350(4)(a)3., F.A.C., shall be displayed in the appropriate district, branch, and local program offices.

(f) Any public comments received shall be made available for public inspection in the location where the information specified in subparagraph 62-210.350(4)(a)1., F.A.C., is available and shall be considered by the Department in making a final determination to approve or deny the permit.

(g) The final permit shall be made available for public inspection at the same location where the information specified in subparagraph 62-210.350(4)(a)1., F.A.C., was made available and shall be sent by the Department to the Regional Office of the U.S. Environmental Protection Agency, if requested by the regional office, and to any local air pollution control program having geographical jurisdiction over the county in which the facility is located.

(5) Additional Public Notice Requirements for Emissions Units Subject to the Requirements for Control Technology Determinations for Major Sources in Accordance with Clean Air Act section 112(g).

(a) Before taking final agency action on any air construction permit application for a proposed new or reconstructed facility or emissions unit subject to the preconstruction review requirements of subparagraph 62-204.800(11)(d)2., F.A.C., the Department shall comply with all applicable provisions of Rule 62-110.106, F.A.C., and provide an opportunity for public comment which shall include at a minimum the following:

1. A complete file available for public inspection in at least one location in the district affected which includes the information submitted by the owner or operator, exclusive of confidential records under Section 403.111, F.S., including the Department's proposed MACT determination and preliminary determination of whether the permit should be approved or disapproved;

2. A 30-day period for submittal of public comments; and

3. A notice, by advertisement in a newspaper of general circulation in the county affected, specifying the nature and location of

the proposed facility or emissions unit, and the location of the information specified in paragraph 1. above; and notifying the public of the opportunity for submitting comments and requesting a public hearing.

(b) The notice provided for in subparagraph 62-210.350(5)(a)3., F.A.C., shall be prepared by the Department and published by the applicant in accordance with all applicable provisions of Rule 62-110.106, F.A.C., except that the applicant shall cause the notice to be published no later than thirty (30) days prior to final agency action.

(c) A copy of the notice provided for in subparagraph 62-210.350(5)(a)3., F.A.C., along with the Department's proposed permit shall be sent by the Department to the Regional Office of the U.S. Environmental Protection Agency and to any approved local air pollution control program having cognizance over the county in which the facility is located.

(d) A copy of the notice provided for in subparagraph 62-210.350(5)(a)3., F.A.C., shall be displayed in the appropriate district, branch, and local program offices.

(e) Any public comments received shall be made available for public inspection in the location where the information specified in subparagraph 62-210.350(5)(a)1., F.A.C., is available and shall be considered by the Department in making a final determination to approve or deny the permit.

(f) The final permit shall be made available for public inspection at the same location where the information specified in subparagraph 62-210.350(5)(a)1., F.A.C., was made available and shall be sent by the Department to the Regional Office of the U.S. Environmental Protection Agency and to any local air pollution control program having geographical jurisdiction over the county in which the facility is located.

(6) Additional Public Notice Requirements for Actuals Plantwide Applicability Limits (PALs).

(a) Before taking final agency action on any air construction permit application to establish, renew, or revise a PAL, the Department shall comply with all applicable provisions of Rule 62-110.106, F.A.C., and provide an opportunity for public comment which shall include at a minimum the following:

1. A complete file available for public inspection in at least one location in the district affected which includes the information submitted by the owner or operator, exclusive of confidential records under Section 403.111, F.S., including the Department's preliminary determination of whether the permit should be approved or disapproved;

2. A 30-day period for submittal of public comments; and

3. A notice, by advertisement in a newspaper of general circulation in the county affected, specifying the nature and location of the proposed PAL, and the location of the information specified in subparagraph 1. above; and notifying the public of the opportunity for submitting comments.

(b) The notice provided for in subparagraph 62-210.350(6)(a)3., F.A.C., shall be prepared by the Department and published by the applicant in accordance with all applicable provisions of Rule 62-110.106, F.A.C., except that the applicant shall cause the notice to be published no later than thirty (30) days prior to final agency action.

(c) A copy of the notice provided for in subparagraph 62-210.350(6)(a)3., F.A.C., along with the Department's proposed permit shall be sent by the Department to the Regional Office of the U.S. Environmental Protection Agency and to any approved local air pollution control program having cognizance over the county in which the facility is located.

Rulemaking Authority 403.061 FS. Law Implemented 403.031, 403.061, 403.087, 403.815 FS. History—Formerly 17-2.220, Amended 11-28-93, Formerly 17-210.350, Amended 11-23-94, 1-2-96, 11-13-97, 2-11-99, 2-2-06, 10-12-08.

62-210.360 Administrative Permit Corrections and Amendments.

(1) A facility owner shall notify the Department in writing of minor corrections or amendments to information contained in a permit. Such minor corrections or amendments shall include:

(a) Typographical errors noted in the permit;

(b) Name, address or phone number change from that in the permit;

(c) A change requiring more frequent monitoring or reporting by the permittee;

(d) A change in ownership or operational control of a facility, subject to the following provisions:

1. The Department determines that no other change in the permit is necessary;

2. The permittee and proposed new permittee have submitted an Application for Transfer of Air Permit, and the Department has approved the transfer pursuant to subsection 62-210.300(7), F.A.C.; and

3. The new permittee has notified the Department of the effective date of sale or legal transfer.

(e) Changes listed at 40 C.F.R. 72.83(a)(1), (2), (6), (9) and (10), adopted and incorporated by reference at Rule 62-204.800,

F.A.C., and changes made pursuant to subsections 62-214.340(1) and (2), F.A.C., to Title V sources subject to emissions limitations or reductions pursuant to 42 USC ss. 7651-7651o;

(f) Changes listed at 40 C.F.R. 72.83(a)(11) and (12), adopted and incorporated by reference at Rule 62-204.800, F.A.C., to Title V sources subject to emissions limitations or reductions pursuant to 42 USC ss. 7651-7651o, provided the notification is accompanied by a copy of any EPA determination concerning the similarity of the change to those listed at paragraph 62-210.360(1)(e), F.A.C.; and

(g) Any other similar minor administrative change at the source.

(2) Upon receipt of any such notification, the Department shall within 60 days correct or amend the permit and provide a copy of the correction or amendment to the owner.

(3) After first notifying the owner, the Department shall correct any permit in which it discovers errors of the types listed at paragraphs 62-210.360(1)(a) and (b), F.A.C., and provide a corrected copy to the owner.

(4) For Title V source permits corrected or amended by the Department a copy of the correction or amendment shall be provided to any approved local air program in the county where the facility or any part of the facility is located.

Rulemaking Authority 403.061 FS. Law Implemented 403.031, 403.061, 403.087, 403.0872 FS. History—New 11-28-93, Formerly 17-210.360, Amended 11-23-94, 2-11-99, 4-16-01, 6-2-02, 3-16-08.

62-210.370 Emissions Computation and Reporting.

(1) Applicability. This rule sets forth required methodologies to be used by the owner or operator of a facility for computing actual emissions, baseline actual emissions, and net emissions increase, as defined at Rule 62-210.200, F.A.C., and for computing emissions for purposes of the reporting requirements of subsection 62-210.370(3), paragraph 62-212.300(1)(e) and Rule 62-213.205, F.A.C., or of any permit condition that requires emissions be computed in accordance with this rule. This rule is not intended to establish methodologies for determining compliance with the emission limitations of any air permit.

(2) Computation of Emissions. For any of the purposes set forth in subsection 62-210.370(1), F.A.C., the owner or operator of a facility shall compute emissions in accordance with the requirements set forth in this subsection.

(a) Basic Approach. The owner or operator shall employ, on a pollutant-specific basis, the most accurate of the approaches set forth below to compute the emissions of a pollutant from an emissions unit; provided, however, that nothing in this rule shall be construed to require installation and operation of any continuous emissions monitoring system (CEMS), continuous parameter monitoring system (CPMS), or predictive emissions monitoring system (PEMS) not otherwise required by rule or permit, nor shall anything in this rule be construed to require performance of any stack testing not otherwise required by rule or permit.

1. If the emissions unit is equipped with a CEMS meeting the requirements of paragraph 62-210.370(2)(b), F.A.C., the owner or operator shall use such CEMS to compute the emissions of the pollutant, unless the owner or operator demonstrates to the department that an alternative approach is more accurate because the CEMS represents still-emerging technology.

2. If a CEMS is not available or does not meet the requirements of paragraph 62-210.370(2)(b), F.A.C., but emissions of the pollutant can be computed pursuant to the mass balance methodology of paragraph 62-210.370(2)(c), F.A.C., the owner or operator shall use such methodology, unless the owner or operator demonstrates to the department that an alternative approach is more accurate.

3. If a CEMS is not available or does not meet the requirements of paragraph 62-210.370(2)(b), F.A.C., and emissions cannot be computed pursuant to the mass balance methodology, the owner or operator shall use an emission factor meeting the requirements of paragraph 62-210.370(2)(d), F.A.C., unless the owner or operator demonstrates to the department that an alternative approach is more accurate.

(b) Continuous Emissions Monitoring System (CEMS).

1. An owner or operator may use a CEMS to compute emissions of a pollutant for purposes of this rule provided:

a. The CEMS complies with the applicable certification and quality assurance requirements of 40 CFR Part 60, Appendices B and F, or, for an acid rain unit, the certification and quality assurance requirements of 40 CFR Part 75, all adopted by reference at Rule 62-204.800, F.A.C.; or

b. The owner or operator demonstrates that the CEMS otherwise represents the most accurate means of computing emissions for purposes of this rule.

2. Stack gas volumetric flow rates used with the CEMS to compute emissions shall be obtained by the most accurate of the following methods as demonstrated by the owner or operator:

a. A calibrated flowmeter that records data on a continuous basis, if available; or
b. The average flow rate of all valid stack tests conducted during a five-year period encompassing the period over which the emissions are being computed, provided all stack tests used shall represent the same operational and physical configuration of the unit.

3. The owner or operator may use CEMS data in combination with an appropriate f-factor, heat input data, and any other necessary parameters to compute emissions if such method is demonstrated by the owner or operator to be more accurate than using a stack gas volumetric flow rate as set forth at subparagraph 62-210.370(2)(b)2., F.A.C., above.

(c) Mass Balance Calculations.

1. An owner or operator may use mass balance calculations to compute emissions of a pollutant for purposes of this rule provided the owner or operator:

a. Demonstrates a means of validating the content of the pollutant that is contained in or created by all materials or fuels used in or at the emissions unit; and

b. Assumes that the emissions unit emits all of the pollutant that is contained in or created by any material or fuel used in or at the emissions unit if it cannot otherwise be accounted for in the process or in the capture and destruction of the pollutant by the unit's air pollution control equipment.

2. Where the vendor of a raw material or fuel which is used in or at the emissions unit publishes a range of pollutant content from such material or fuel, the owner or operator shall use the highest value of the range to compute the emissions, unless the owner or operator demonstrates using site-specific data that another content within the range is more accurate.

3. In the case of an emissions unit using coatings or solvents, the owner or operator shall document, through purchase receipts, records and sales receipts, the beginning and ending VOC inventories, the amount of VOC purchased during the computational period, and the amount of VOC disposed of in the liquid phase during such period.

(d) Emission Factors.

1. An owner or operator may use an emission factor to compute emissions of a pollutant for purposes of this rule provided the emission factor is based on site-specific data such as stack test data, where available, unless the owner or operator demonstrates to the department that an alternative emission factor is more accurate. An owner or operator using site-specific data to derive an emission factor, or set of factors, shall meet the following requirements.

a. If stack test data are used, the emission factor shall be based on the average emissions per unit of input, output, or gas volume, whichever is appropriate, of all valid stack tests conducted during at least a five-year period encompassing the period over which the emissions are being computed, provided all stack tests used shall represent the same operational and physical configuration of the unit.

b. Multiple emission factors shall be used as necessary to account for variations in emission rate associated with variations in the emissions unit's operating rate or operating conditions during the period over which emissions are computed.

c. The owner or operator shall compute emissions by multiplying the appropriate emission factor by the appropriate input, output or gas volume value for the period over which the emissions are computed. The owner or operator shall not compute emissions by converting an emission factor to pounds per hour and then multiplying by hours of operation, unless the owner or operator demonstrates that such computation is the most accurate method available.

2. If site-specific data are not available to derive an emission factor, the owner or operator may use a published emission factor directly applicable to the process for which emissions are computed. If no directly-applicable emission factor is available, the owner or operator may use a factor based on a similar, but different, process.

(e) Accounting for Emissions During Periods of Missing Data from CEMS, PEMS, or CPMS. In computing the emissions of a pollutant, the owner or operator shall account for the emissions during periods of missing data from CEMS, PEMS, or CPMS using other site-specific data to generate a reasonable estimate of such emissions.

(f) Accounting for Emissions During Periods of Startup and Shutdown. In computing the emissions of a pollutant, the owner or operator shall account for the emissions during periods of startup and shutdown of the emissions unit.

(g) Fugitive Emissions. In computing the emissions of a pollutant from a facility or emissions unit, the owner or operator shall account for the fugitive emissions of the pollutant, to the extent quantifiable, associated with such facility or emissions unit.

(h) Recordkeeping. The owner or operator shall retain a copy of all records used to compute emissions pursuant to this rule for a period of five years from the date on which such emissions information is submitted to the department for any regulatory purpose.

(3) Annual Operating Report (AOR) for Air Pollutant Emitting Facility.

(a) The Annual Operating Report for Air Pollutant Emitting Facility [Including Title V Source Emissions Fee Calculation] (DEP Form No. 62-210.900(5)) shall be completed each year for the following facilities:

1. All Title V sources.

2. All synthetic non-Title V sources.

3. All facilities with the potential to emit ten (10) tons per year or more of volatile organic compounds or twenty-five (25) tons per year or more of nitrogen oxides and located in an ozone nonattainment area or ozone air quality maintenance area.

4. All facilities for which an annual operating report is required by rule or permit.

(b) Notwithstanding paragraph 62-210.370(3)(a), F.A.C., no annual operating report shall be required for any facility operating under an air general permit.

(c) By April 1 of the year following each calendar year, an annual operating report shall be submitted to the appropriate Department of Environmental Protection (DEP) division, district or DEP-approved local air pollution control program office. However, if the annual operating report is submitted using the DEP's electronic annual operating report software, there is no requirement to submit DEP Form No. 62-210.900(5) to any DEP or local air program office. Each Title V Source shall submit the annual operating report using the DEP's electronic annual operating report software, unless the Title V source claims a technical or financial hardship. A technical or financial hardship is claimed by submitting DEP Form No. 62-210.900(5) to the DEP Division of Air Resource Management at:

AOR and Major Air Pollution Source Annual Emissions Fee

P.O. Box 3070

Tallahassee, Florida 32315-3070.

(See <http://www.dep.state.fl.us/air/emission/eaor/> for information regarding annual operating reports.)

(d) Emissions shall be computed in accordance with the provisions of subsection 62-210.370(2), F.A.C., for purposes of the annual operating report.

(4) Facility Relocation. Unless otherwise provided by rule or more stringent permit condition, the owner or operator of a relocatable facility must submit a Facility Relocation Notification Form (DEP Form No. 62-210.900(6)) to the Department at least thirty (30) days prior to the relocation. A separate form shall be submitted for each facility in the case of the relocation of multiple facilities which are jointly owned or operated.

Rulemaking Authority 403.061 FS. Law Implemented 20.255(8), 403.031, 403.061, 403.087, 403.0872 FS. History--New 2-9-93, Formerly 17-210.370, Amended 11-23-94, 3-21-96, 2-11-99, 6-21-01, 2-2-06, 7-3-08, Amended 12-31-13, 8-25-14.

62-210.550 Stack Height Policy.

(1) General. The degree of emission limitation required of any emissions unit for control of any air pollutant on a continuous basis shall not be affected by so much of any emissions unit's stack height that exceeds good engineering practice, as provided in subsection 62-210.550(3), F.A.C., or by any other dispersion technique, as provided in subsection 62-210.550(2), F.A.C. This provision shall not apply to those stacks in existence, or dispersion techniques implemented, on or before December 31, 1970, except where pollutants are being emitted from such stacks or using such dispersion techniques by emissions units, as defined in section 111(a)(3) of the Clean Air Act, which were constructed, or reconstructed, or for which modifications under Rules 62-212.400, 62-212.500, 17-2.17 (repealed), 17-2.500 (transferred), or 17-2.510 (transferred), F.A.C., or 40 C.F.R. 52.21, were carried out after December 31, 1970. Also, this provision shall not restrict in any manner the actual stack height of any emissions unit.

(2) Dispersion Technique.

(a) "Dispersion technique" means any technique which attempts to affect the concentration of a pollutant in the ambient air by:

1. Using that portion of a stack which exceeds good engineering practice stack height;

2. Varying the rate of emission of a pollutant according to atmospheric conditions or ambient concentrations of that pollutant; or

3. Increasing final exhaust gas plume rise by manipulating source process parameters, exhaust gas parameters, stack parameters (other than stack height), or combining exhaust gases from several existing stacks into one stack; or other selective handling of exhaust gas streams so as to increase the exhaust gas plume rise.

(b) The preceding sentence does not include:

1. The reheating of a gas stream, following use of a pollution control system, for the purpose of returning the gas to the temperature at which it was originally discharged from the facility generating the gas stream;

2. The merging of exhaust gas streams where:

a. The owner or operator demonstrates that the facility was originally designed and constructed with such merged gas streams;

b. After July 8, 1985, such merging is part of a change in operation at the facility that includes the installation of pollution controls and is accompanied by a net reduction in the allowable emissions of a pollutant. This exclusion from the definition of “dispersion techniques” shall apply only to the emission limitation for the pollutant affected by such change in operation; or

c. Before July 8, 1985, such merging was part of a change in operation at the facility that included the installation of emissions control equipment or was carried out for sound economic or engineering reasons. Where there was an increase in the emission limitation or, in the event that no emission limitation was in existence prior to the merging, an increase in the quantity of pollutants actually emitted prior to the merging, the Department shall presume that merging was significantly motivated by an intent to gain emissions credit for greater dispersion. Absent a demonstration by the owner or operator that merging was not significantly motivated by such intent, the Department shall deny credit for the effects of such merging in calculating the allowable emissions for the emissions unit; or

3. Smoke management in agricultural or silvicultural prescribed burning programs;

4. Episodic restrictions on residential woodburning and open burning; or

5. Techniques under subparagraph 62-210.550(2)(a)3., F.A.C., which increase final exhaust gas plume rise where the resulting allowable emissions of sulfur dioxide from the facility do not exceed 5,000 tons per year.

(3) Good Engineering Practice.

(a) “Good engineering practice” (GEP) stack height means the greater of:

1. 65 meters, measured from the ground-level elevation at the base of the stack;

2. The stack height as determined below:

a. For stacks in existence on January 12, 1979, and for which the owner or operator had obtained all applicable permits or approvals required under 40 C.F.R. Parts 51 and 52, $H_g = 2.5H$, provided the owner or operator produces evidence that this equation was actually relied on in establishing an emission limitation;

b. For all other stacks,

$H_g = H + 1.5L$, where

H_g = good engineering practice stack height, measured from the ground-level elevation at the base of the stack,

H = height of nearby structure(s) measured from the ground-level elevation at the base of the stack,

L = lesser dimension, height or projected width, of nearby structure(s) provided that the EPA, Department, or local air program may require the use of a field study or fluid model to verify GEP stack height for the emissions unit; or

3. The height demonstrated by a fluid model or a field study approved by the EPA, Department, or local air program which ensures that the emissions from a stack do not result in excessive concentrations of any air pollutant as a result of atmospheric downwash, wakes, or eddy effects created by the emissions unit itself, nearby structures, or nearby terrain features. If this height exceeds the height allowed by subparagraph 62-210.550(3)(a)1. or 2., F.A.C., the Department shall notify the public of the availability of the demonstration study and provide an opportunity for a public hearing on it.

(b) “Nearby” as used in paragraph 62-210.500(3)(a), F.A.C., is defined for a specific structure or terrain feature and:

1. For purposes of applying subparagraph 62-210.550(3)(a)2., F.A.C., means that distance up to five times the lesser of the height or the width dimension of a structure, but not greater than 0.8 km (1/2 mile), and

2. For conducting demonstrations under subparagraph 62-210.550(3)(a)3., F.A.C., means not greater than 0.8 km (1/2 mile), except that the portion of a terrain feature may be considered to be nearby which falls within a distance of up to 10 times the maximum height (Ht) of the feature, not to exceed two miles if such feature achieves a height (ht) 0.8 km from the stack that is at least 40 percent of the GEP stack height determined by the formula provided in sub-subparagraph 62-210.550(3)(a)2.b., F.A.C., or 26 meters, whichever is greater, as measured from the ground-level elevation at the base of the stack. The height of the structure or terrain feature is measured from the ground-level elevation at the base of the stack.

(c) “Excessive concentration” is defined for the purpose of determining good engineering practice stack height under subparagraph 62-210.550(3)(a)3., F.A.C., and means:

1. For emissions units seeking credit for stack height exceeding that established under subparagraph 62-210.550(3)(a)2., F.A.C., a maximum ground-level concentration due to emissions from a stack due in whole or part to downwash, wakes, and eddy effects produced by nearby structures or nearby terrain features which individually is at least 40 percent in excess of the maximum concentration experienced in the absence of such downwash, wakes, or eddy effects and which contributes to a total concentration due to emissions from all emissions units that is greater than an ambient air quality standard. For emissions units subject to the

prevention of significant deterioration program (40 C.F.R. 52.21 or Rule 62-212.400, F.A.C.), an excessive concentration alternatively means a maximum ground-level concentration due to emissions from a stack due in whole or part to downwash, wakes, or eddy effects produced by nearby structures or nearby terrain features which individually is at least 40 percent in excess of the maximum concentration experienced in the absence of such downwash, wakes, or eddy effects and greater than a prevention of significant deterioration increment. The allowable emission rate to be used in making demonstrations under this part shall be prescribed by the new source performance standard (40 C.F.R. 60) that is applicable to the source category unless the owner or operator demonstrates that this emission rate is infeasible. Where such demonstrations are approved by the Department, an alternative emission rate shall be established in consultation with the owner or operator;

2. For emissions units seeking credit after October 11, 1983, for increases in existing stack heights up to the heights established under subparagraph 62-210.550(3)(a)2., F.A.C., either:

a. A maximum ground-level concentration due in whole or part to downwash, wakes, or eddy effects as provided in subparagraph 62-210.550(3)(c)1., F.A.C., except that the emission rate specified by the State Implementation Plan (or, in the absence of such a limit, the actual emission rate) shall be used; or

b. The actual presence of a local nuisance caused by the existing stack, as determined by the Department; and

3. For emissions units seeking credit after January 12, 1979, for a stack height determined under subparagraph 62-210.550(3)(a)2., F.A.C., where the Department requires the use of a field study or fluid model to verify GEP stack height; for emissions units seeking stack height credit after November 9, 1984, based on the aerodynamic influence of cooling towers; and for emissions units seeking stack height credit after December 31, 1970, based on the aerodynamic influence of structures not adequately represented by the equations in subparagraph 62-210.550(3)(a)2., F.A.C.: a maximum ground-level concentration due in whole or part to downwash, wakes, or eddy effects that is at least 40 percent in excess of the maximum concentration experienced in the absence of such downwash, wakes, or eddy effects.

Rulemaking Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061, 403.087 FS. History—Formerly 17-2.270, 17-210.550, Amended 11-23-94.

62-210.650 Circumvention.

No person shall circumvent any air pollution control device, or allow the emission of air pollutants without the applicable air pollution control device operating properly.

Rulemaking Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061, 403.087 FS. History—Formerly 17-2.240, 17-210.650.

62-210.700 Excess Emissions.

(1) Excess emissions resulting from startup, shutdown or malfunction of any emissions unit shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration.

(2) Excess emissions from existing fossil fuel steam generators resulting from startup or shutdown shall be permitted provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions shall be minimized.

(3) Excess emissions from existing fossil fuel steam generators resulting from boiler cleaning (soot blowing) and load change shall be permitted provided the duration of such excess emissions shall not exceed 3 hours in any 24-hour period and visible emissions shall not exceed Number 3 of the Ringelmann Chart (60 percent opacity), and providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized.

A load change occurs when the operational capacity of a unit is in the 10 percent to 100 percent capacity range, other than startup or shutdown, which exceeds 10 percent of the unit’s rated capacity and which occurs at a rate of 0.5 percent per minute or more.

Visible emissions above 60 percent opacity shall be allowed for not more than 4, six (6)-minute periods, during the 3-hour period of excess emissions allowed by this subparagraph, for boiler cleaning and load changes, at units which have installed and are operating, or have committed to install or operate, continuous opacity monitors.

Particulate matter emissions shall not exceed an average of 0.3 lbs. per million BTU heat input during the 3-hour period of excess emissions allowed by this subparagraph.

(4) Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown, or malfunction shall be prohibited.

(5) Considering operational variations in types of industrial equipment operations affected by this rule, the Department may

adjust maximum and minimum factors to provide reasonable and practical regulatory controls consistent with the public interest.

(6) In case of excess emissions resulting from malfunctions, each owner or operator shall notify the Department or the appropriate Local Program in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department.

Rulemaking Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061, 403.087 FS. History—Formerly 17-2.250, 17-210.700, Amended 11-23-94.

62-210.900 Forms and Instructions.

The forms used by the Department in the stationary source control program are adopted and incorporated by reference in this section. The forms are listed by rule number, which is also the form number, with the subject, title and effective date. Copies of forms may be obtained by writing to the Department of Environmental Protection, Division of Air Resource Management, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, or by accessing the Division's website at www.dep.state.fl.us/air. The requirement of subsection 62-4.050(2), F.A.C., to file application forms in quadruplicate is waived if an air permit application is submitted using the Department's electronic application form.

- (1) Application for Air Permit – Long Form, Form and Instructions (DEP Form No. 62-210.900(1), Effective 3-11-10).
- (a) Acid Rain Part Application, Form and Instructions (DEP Form No. 62-210.900(1)(a), Effective 3-16-08).
- 1. Phase II NO_x Averaging Plan, Form (DEP Form No. 62-210.900(1)(a)1., Effective 3-16-08).
- 2. Acid Rain New Unit Exemption, Form and Instructions (DEP Form No. 62-210.900(1)(a)2., Effective 3-16-08).
- 3. Phase II NO_x Compliance Plan, Form and Instructions (DEP Form No. 62-210.900(1)(a)3., Effective 3-11-10).
- (b) Clean Air Interstate Rule (CAIR) Part, Form and Instructions (DEP Form No. 62-210.900(1)(b), Effective 3-16-08).
- (c) Acid Rain and CAIR Retired Unit Exemption, Form and Instructions (DEP Form No. 62-210.900(1)(c), Effective 3-11-10).
- (2) Application for Title V Air Permit Renewal. (Reserved)
- (3) Application for Air Permit – Non-Title V Source, Form and Instructions (Effective 2-11-99).
- (4) Application for Non-Title V Air Permit Renewal, Form and Instructions (Effective 2-11-99).
- (5) Annual Operating Report for Air Pollutant Emitting Facility [Including Title V Source Emission Fee Calculation], Form and Instructions (DEP Form No. 62-210.900(5), Effective August 2014, <http://www.flrules.org/Gateway/reference.asp?No=Ref-04466>).
- (6) Facility Relocation Notification Form (Effective 6-21-01).
- (7) Application for Transfer of Air Permit – Title V and Non-Title V Source (DEP Form No. 62-210.900(7), Effective 10-12-08).

Rulemaking Authority 403.061 FS. Law Implemented 403.061, 403.087, 403.0872, 403.815 FS. History—New 2-9-93, Amended 7-20-94, Formerly 17-210.900, Amended 11-23-94, 7-6-95, 3-21-96, 1-6-98, 2-11-99, 4-16-01, 6-21-01, 6-16-03, 2-2-06, 3-16-08, 7-3-08, 10-12-08, 3-11-10, 12-31-13, 8-25-14.

62-210.920 Registration Forms for Air General Permits.

Rulemaking Authority 403.061 FS. Law Implemented 403.031, 403.061, 403.087, 403.814 FS. History—New 10-16-95, Amended 1-2-96, 3-21-96, 5-13-96, 8-15-96, 11-13-97, 5-25-98, 2-11-99, 6-21-01, 1-10-07, 5-9-07, Repealed 6-29-11.

Chapter 62-212, F.A.C.

Stationary Sources - Preconstruction Review

CHAPTER 62-212
STATIONARY SOURCES – PRECONSTRUCTION REVIEW

62-212.100 Purpose and Scope (Repealed)
62-212.300 General Preconstruction Review Requirements
62-212.400 Prevention of Significant Deterioration (PSD)
62-212.500 Preconstruction Review for Nonattainment Areas
62-212.600 Sulfur Storage and Handling Facilities (Repealed)
62-212.710 Air Emissions Bubble (Repealed)
62-212.720 Actuals Plantwide Applicability Limits (PALs).

62-212.100 Purpose and Scope.

Rulemaking Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061, 403.087, 403.0875 FS. History—New 2-2-93, Formerly 17-212.100, Amended 11-23-94, 3-13-96, 5-20-97, Repealed 2-16-12.

62-212.300 General Preconstruction Review Requirements.

This rule shall apply to the proposed construction or modification of all emissions units and facilities for which an air construction permit is required pursuant to subsection 62-210.300(1), F.A.C.

(1) General Prohibitions.

(a) The owner or operator of any emissions unit or facility shall not undertake any activity listed at paragraph 62-210.300(1)(a), F.A.C., without first obtaining an air construction permit from the Department.

(b) Except as provided in Rule 62-212.500, F.A.C., the Department shall not permit the construction or modification of any emissions unit or facility that would cause or contribute to a violation of any ambient air quality standard. The Department shall not permit the construction or modification of any emissions unit which would be located in a nonattainment area or area of influence if the proposed construction or modification would interfere with reasonable further progress toward attaining the ambient air quality standards.

(c) The Department shall not permit the construction or modification of any emissions unit or facility that would cause or contribute to an ambient concentration at any point within a baseline area that exceeds either the appropriate baseline concentration for the point plus the appropriate maximum allowable increase or the appropriate ambient air quality standard, whichever is less.

(d) The Department shall not establish, renew, or change any plantwide applicability limits at any existing major stationary source except through the air construction permit process and the public participation process required at Rule 62-212.720, F.A.C.

(e) If the Department issues any construction permit which avoids the requirements of subsections 62-212.400(4) through (12), F.A.C., based in whole or in part on projected actual emissions calculations, the permit shall contain the following monitoring, reporting and recordkeeping provisions:

1. The permittee shall monitor the emissions of any PSD pollutant that the Department identifies could increase as a result of the construction or modification and that is emitted by any emissions unit that could be affected; and, using the most reliable information available, calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of 5 years following resumption of regular operations after the change, or for a period of 10 years following resumption of regular operations if the change increases the design capacity of that emissions unit or its potential to emit that PSD pollutant. Emissions shall be computed in accordance with Rule 62-210.370, F.A.C.

2. The permittee shall report to the Department within 60 days after the end of each year during which records must be generated under subparagraph 62-212.300(1)(e)1., F.A.C., setting out the unit's annual emissions during the calendar year that preceded submission of the report. The report shall contain the following:

- a. The name, address and telephone number of the owner or operator of the major stationary source;
- b. The annual emissions as calculated pursuant to subparagraph 62-212.300(1)(e)1., F.A.C.;
- c. If the emissions differ from the preconstruction projection, an explanation as to why there is a difference; and
- d. Any other information that the owner or operator wishes to include in the report.

3. The information required to be documented and maintained pursuant to subparagraphs 62-212.300(1)(e)1. and 2., F.A.C., shall be submitted to the Department, which shall make it available for review to the general public.

(f) The Department shall account for condensable PM₁₀ and condensable PM_{2.5} in applicability determinations and in

establishing emissions limitations for PM₁₀ and PM_{2.5} in permits issued pursuant to Rule 62-212.400 or 62-212.500, F.A.C., and in permits issued to establish limitations to avoid applicability of Rule 62-212.400 or 62-212.500, F.A.C.

(2) Applicability. The requirements of subparagraph 62-204.800(11)(d)2. and Rules 62-212.400, 62-212.500, and 62-212.600, F.A.C., shall apply in addition to any other preconstruction review requirements under Rule 62-212.300, F.A.C.

(3) Permitting Requirements.

(a) Each applicant for an air construction permit for an emissions unit subject to this rule shall provide the Department, at a minimum, the following information:

1. The nature and amounts of emissions from the emissions unit, including baseline actual emissions and projected actual emissions, and any netting calculations, if applicable, when used to determine PSD applicability pursuant to paragraph 62-212.400(2)(a), F.A.C., and when used to establish a PAL pursuant to Rule 62-212.720, F.A.C. When used to determine PSD applicability pursuant to subparagraph 62-212.400(2)(a)1. or 3., F.A.C., the applicant shall also provide a record of the amount of excluded emissions, and an explanation as to why these emissions were excluded, for any projected actual emissions calculations that exclude that portion of the unit's emissions following the project that an existing unit could have accommodated during the consecutive 24-month period used to establish the baseline actual emissions and that are also unrelated to the particular project including any increased utilization due to product demand growth.

2. The location, design, construction, and operation of the emissions unit to the extent necessary to allow the Department to determine whether construction or modification of the emissions unit would result in violations of any applicable provisions of Chapter 403, Florida Statutes, or Department air pollution rules, or whether the construction or modification would interfere with the attainment and maintenance of any state or national ambient air quality standard.

(b) Each applicant for an air construction permit for an emissions unit subject to subparagraph 62-204.800(11)(d)2., F.A.C., shall provide the Department with the information required by 40 C.F.R. 63.43(e), adopted by reference in Rule 62-204.800, F.A.C.

(c) The Department shall include conditions in each permit issued to insure that the provisions of this rule are not violated.

Rulemaking Authority 403.061 FS. Law Implemented 403.031, 403.061, 403.087 FS. History—Formerly 17-2.520, 17-212.300, Amended 11-23-94, 1-1-96, 10-28-97, 2-2-06, 10-6-08, 6-29-09, 3-28-12.

62-212.400 Prevention of Significant Deterioration (PSD).

(1) General Provisions.

(a) No person shall construct any new major stationary source or undertake any major modification except in compliance with the provisions of this rule and, where applicable, Rule 62-212.500, F.A.C. Emissions of an affected pollutant from a new major stationary source or major modification which is located in or proposed to be located in any nonattainment area are not subject to this rule.

(b) The Department shall include conditions in each permit issued to insure that the provisions of this rule are not violated.

(c) For purposes of this rule, the term "Administrator," wherever it appears in any provision of 40 CFR 52.21 cited herein, shall mean "Department."

(2) Applicability.

(a) The requirements of subsections 62-212.400(4) through (12), F.A.C., apply to the construction of any new major stationary source or the major modification of any existing major stationary source. The Department shall determine whether a major modification will occur for each PSD pollutant as follows:

1. Baseline Actual-to-Projected Actual Applicability Test for Modifications at Existing Emissions Units. A significant emissions increase of a PSD pollutant will occur if the difference, or the sum of the differences if more than one emissions unit is involved, between the projected actual emissions and the baseline actual emissions equals or exceeds the significant emissions rate for that pollutant. If a combination of new and existing emissions units is involved, then the major modification shall be determined by the hybrid test for multiple types of emissions units pursuant to subparagraph 62-212.400(2)(a)3., F.A.C.

2. Baseline Actual-to-Potential Applicability Test for Construction of New Emissions Units. A significant emissions increase of a PSD pollutant will occur if the difference, or the sum of the differences if more than one emissions unit is involved, between the potential to emit from each new emissions unit following completion of the construction and the baseline actual emissions of these units before the construction equals or exceeds the significant emissions rate for that pollutant. If a combination of new and existing emissions units is involved, then the major modification shall be determined by the hybrid test for multiple types of emissions units pursuant to subparagraph 62-212.400(2)(a)3., F.A.C.

3. Hybrid Test for Multiple Types of Emissions Units. A significant emissions increase of a PSD pollutant will occur if the sum of the emissions increases for all emissions units, using the method specified above for each type of emissions unit equals or exceeds the significant emissions rate for that pollutant.

(b) Any owner or operator of any existing major stationary source seeking to establish or change a plantwide applicability limitation (PAL) for a PSD pollutant shall comply with the requirements under Rule 62-212.720, F.A.C.

(3) Exemptions.

(a) The requirements of subsections 62-212.400(4) through (12), F.A.C., shall not apply to a major stationary source or major modification if the source or modification would be a nonprofit health or nonprofit educational institution, or a major modification would occur at such an institution.

(b) The requirements of subsections 62-212.400(4) through (12), F.A.C., shall not apply to a major stationary source or major modification if the source or modification would be a major stationary source or major modification only if fugitive emissions, to the extent quantifiable, are considered in calculating the potential to emit of the stationary source or modification and the source does not belong to any of the following categories:

1. Coal cleaning plants (with thermal dryers);
2. Kraft pulp mills;
3. Portland cement plants;
4. Primary zinc smelters;
5. Iron and steel mills;
6. Primary aluminum ore reduction plants;
7. Primary copper smelters;
8. Municipal incinerators capable of charging more than 250 tons of refuse per day;
9. Hydrofluoric, sulfuric, or nitric acid plants;
10. Petroleum refineries;
11. Lime plants;
12. Phosphate rock processing plants;
13. Coke oven batteries;
14. Sulfur recovery plants;
15. Carbon black plants (furnace process);
16. Primary lead smelters;
17. Fuel conversion plants;
18. Sintering plants;
19. Secondary metal production plants;
20. Chemical process plants (the term "chemical process plants" shall not include ethanol production facilities that produce ethanol by natural fermentation included in North American Industry Classification System (NAICS) codes 325193 or 312140);
21. Fossil-fuel boilers (or combination thereof) totaling more than 250 million British thermal units per hour heat input;
22. Petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels;
23. Taconite ore processing plants;
24. Glass fiber processing plants;
25. Charcoal production plants;
26. Fossil fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input;
27. Any other stationary source category which, as of August 7, 1980, is being regulated under section 111 or 112 of the Act.

(c) The requirements of subsections 62-212.400(5), (7), and (8), F.A.C., shall not apply to a major stationary source or major modification with respect to a particular pollutant, if the applicant demonstrates that the allowable emissions of that pollutant from the source, or the net emissions increase of that pollutant from the modification:

1. Would impact no Class I area and no area where an applicable increment is known to be violated, and
2. Would not exceed two years in duration.

(d) The requirements of subsections 62-212.400(5), (7), and (8), F.A.C., as they relate to any maximum allowable increase for a Class II area shall not apply to a major modification at a stationary source that was in existence on March 1, 1978, if the net increase in allowable emissions of each PSD pollutant from the modification after the application of best available control technology would

be less than 50 tons per year.

(e) The requirements of subsection 62-212.400(7), F.A.C., as they relate to monitoring for a particular pollutant shall not apply if:

1. The emissions increase of the pollutant from the new major stationary source or the net emissions increase of the pollutant from the major modification would cause, in any area, air quality impacts less than the amounts listed at 40 CFR 52.21 (i)(5), adopted and incorporated by reference at Rule 62-204.800, F.A.C., specifically the following amounts:

- a. Carbon monoxide – 575 micrograms per cubic meter, 8-hour average;
- b. Nitrogen dioxide – 14 micrograms per cubic meter, annual average;
- c. $PM_{2.5}$ – 4 micrograms per cubic meter, 24-hour average;
- d. PM_{10} – 10 micrograms per cubic meter, 24-hour average;
- e. Sulfur dioxide – 13 micrograms per cubic meter, 24-hour average;
- f. Ozone – No de minimis air quality level is provided for ozone. However, any net increase of 100 tons per year or more of volatile organic compounds or nitrogen oxides subject to PSD would be required to perform an ambient impact analysis including the gathering of ambient air quality data;
- g. Lead – 0.1 micrograms per cubic meter, 3-month average;
- h. Fluorides – 0.25 micrograms per cubic meter, 24-hour average;
- i. Total reduced sulfur – 10 micrograms per cubic meter, 1-hour average;
- j. Hydrogen sulfide – 0.2 micrograms per cubic meter, 1-hour average;
- k. Reduced sulfur compounds – 10 micrograms per cubic meter, 1-hour average; and
- l. Any concentration previously listed at the table at Rule 62-212.400-3, F.A.C.; specifically, Mercury – 0.25 micrograms per cubic meter, 24-hour average; or

2. The concentrations of the pollutant in the area that the source or modification would affect are less than the concentrations listed in subparagraph 62-212.400(3)(e)1., F.A.C., above, or the pollutant is not listed above.

(4) Source Information. The owner or operator of a proposed source or modification shall submit all information necessary to perform any analysis or make any determination required under this section. Such information shall include:

- (a) A description of the nature, location, design capacity, and typical operating schedule of the source or modification, including specifications and drawings showing its design and plant layout;
- (b) A detailed schedule for construction of the source or modification;
- (c) A detailed description as to what system of continuous emission reduction is planned for the source or modification, emission estimates, and any other information necessary to determine best available control technology (BACT) including a proposed BACT;
- (d) The air quality impact of the source or modification, including meteorological and topographical data necessary to estimate such impact and an analysis of "good engineering practice" stack height; and
- (e) The air quality impacts, and the nature and extent of any or all general commercial, residential, industrial, and other growth which has occurred since August 7, 1977, in the area the source or modification would affect.

(5) Source Impact Analysis.

(a) Required Demonstration. The owner or operator of the proposed major stationary source or major modification shall demonstrate that allowable emission increases from the proposed major stationary source or major modification, in conjunction with all other applicable emissions increases or reductions (including secondary emissions), would not cause or contribute to air pollution in violation of:

1. Any ambient air quality standard in any air quality control region; or
 2. Any applicable maximum allowable increase over the baseline concentration in any area.
- (b) Significant Impact Levels. For purposes of $PM_{2.5}$, the demonstration required in paragraph 62-212.400(5)(a), F.A.C., is deemed to have been made if the emissions increase from the new major stationary source alone or from the major modification alone would cause, in all areas, air quality impacts less than the following amounts:
1. Annual averaging time – 0.06 micrograms per cubic meter in a Class I area, and 0.3 micrograms per cubic meter in all other areas.
 2. 24-hour averaging time – 0.07 micrograms per cubic meter in a Class I area, and 1.2 micrograms per cubic meter in all other areas.

(6) Air Quality Models. Air quality models shall meet the requirements provided in 40 CFR 52.21(l), adopted by reference in Rule 62-204.800, F.A.C.

(7) Air Quality Analysis. The owner or operator of a major stationary source or major modification shall provide any required monitoring and analysis as required in 40 CFR 52.21(m), adopted by reference in Rule 62-204.800, F.A.C.

(8) Additional Impact Analyses.

(a) The owner or operator shall provide an analysis of the impairment to visibility, soils and vegetation that would occur as a result of the source or modification and general commercial, residential, industrial and other growth associated with the source or modification. The owner or operator need not provide an analysis of the impact on vegetation having no significant commercial or recreational value.

(b) The owner or operator shall provide an analysis of the air quality impact projected for the area as a result of general commercial, residential, industrial and other growth associated with the source or modification.

(c) Visibility Monitoring. The owner or operator shall provide visibility monitoring as required in 40 CFR 52.21(o)(3), adopted by reference in Rule 62-204.800, F.A.C.

(9) Sources Impacting Federal Class I Areas. Sources impacting Federal Class I areas are subject to the additional requirements provided in 40 CFR 52.21(p), adopted by reference in Rule 62-204.800, F.A.C.

(10) Control Technology Review. The Department shall not issue any permit unless it determines that:

(a) The owner or operator of a major stationary source or major modification shall meet each applicable emissions limitation under the State Implementation Plan and each applicable emissions standard and standard of performance under 40 CFR Parts 60, 61, and 63.

(b) The owner or operator of a new major stationary source shall apply best available control technology for each PSD pollutant that the source would have the potential to emit in significant amounts.

(c) The owner or operator of a major modification shall apply best available control technology for each PSD pollutant which would result in a significant net emissions increase at the source. (This requirement applies to each proposed emissions unit at which a net emissions increase in the pollutant would occur as a result of a physical change or change in the method of operation in the unit.)

(d) The owner or operator of a phased construction project shall adhere to the procedures provided in 40 CFR 52.21(j)(4), adopted by reference in Rule 62-204.800, F.A.C.

(11) Public Participation. No permit shall be issued until the applicant and Department have complied with all applicable public notice and participation provisions of Rules 62-210.350 and 62-110.106, F.A.C.

(12) Source Obligation.

(a) Authorization to construct shall expire if construction is not commenced within 18 months after receipt of the permit, if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time. This provision does not apply to the time period between construction of the approved phases of a phased construction project except that each phase must commence construction within 18 months of the commencement date established by the Department in the permit.

(b) At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by virtue of a relaxation in any enforceable limitation which was established after August 7, 1980, on the capacity of the source or modification otherwise to emit a pollutant, such as a restriction on hours of operation, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification.

(c) At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by exceeding its projected actual emissions, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification.

(13) Innovative Control Technology. The Department shall allow use of innovative control technology only as provided in 40 CFR 52.21(v), incorporated by reference at Rule 62-204.800, F.A.C.

Rulemaking Authority 403.061 FS. Law Implemented 403.031, 403.061, 403.087 FS. History—Formerly 17-2.500, Amended 2-2-93, Formerly 17-212.400, Amended 11-23-94, 1-1-96, 3-13-96, 2-5-98, 8-15-99, 2-2-06, 7-16-07, 10-6-08, 12-4-11, 3-28-12.

62-212.500 Preconstruction Review for Nonattainment Areas.

(1) General Prohibitions.

(a) Except as provided in this rule, the Department shall not permit the construction or modification of any emissions unit or facility that would cause or contribute to a violation of any ambient air quality standard. The Department shall ensure that the combined impact of new emissions, emissions offsets, temporary emissions and existing emissions within any nonattainment area or area of influence shall not interfere with reasonable further progress (RFP) toward attainment of ambient air quality standards.

(b) In an area designated nonattainment pursuant to subsection 62-204.340(2), F.A.C., without an approved State Implementation Plan (SIP) which defines RFP, the Department shall require sufficient emissions offsets to provide a significant net air quality improvement in the affected area pursuant to subparagraph 62-212.500(4)(d)2., F.A.C.

(c) The Department shall include conditions in each permit issued to insure that the provisions of this rule are not violated.

(2) Applicability.

(a) Project Exemptions.

1. Pollution Control Project Exemption. A pollution control project that is being added, replaced, or used at an existing electric utility steam generating unit and that meets the requirements of 40 CFR 52.24(f)(5)(iii)(h) shall not be subject to the preconstruction review requirements of this rule.

2. Temporary Clean Coal Technology Demonstration Project Exemption. The installation, operation, cessation, or removal of a temporary clean coal technology demonstration that meets the requirements of 40 CFR 52.24(f)(5)(iii)(i) shall not be subject to the preconstruction review requirements of this rule.

(b) Fugitive Emissions Exemption. A proposed new facility or modification shall not be subject to the requirements of subsection 62-212.500(4), F.A.C., if:

1. The affected facility would not belong to any of the facility categories listed in the definition of “Major Stationary Source” in Rule 62-210.200, F.A.C., or any other facility category which, as of August 7, 1980, is being regulated under 40 C.F.R. 60 or 40 C.F.R. 61; and

2. The facility or modification would be subject to the provisions of subsection 62-212.500(4), F.A.C., only if fugitive emissions, to the extent quantifiable, are considered in determining whether the affected facility would be subject to the provisions of subsection 62-212.500(4), F.A.C., pursuant to subparagraph 62-212.500(2)(d)2., F.A.C., if it is or were itself a proposed new facility.

(c) Alternative Fuel or Raw Material Exemption. A modification that is to occur for any of the following reasons shall not be subject to the provisions of subsection 62-212.500(4), F.A.C.:

1. Use of an alternative fuel or raw material by reason of any order under Sections 2(a) and (b) of the Energy Supply and Environmental Coordination Act of 1974, or the Power Plant and Industrial Fuel Use Act of 1978, or by reason of a natural gas curtailment plan pursuant to the Federal Power Act; or

2. Use of an alternative fuel by reason of an order or rule under Section 125 of the Act; or

3. Use of an alternative fuel at a steam generating unit to the extent that the fuel is generated from municipal solid waste; or

4. Use of an alternative fuel or raw material which the facility was capable of accommodating before December 21, 1976 unless such change would be prohibited under any federally enforceable permit condition which was established after December 21, 1976; or

5. Use of an alternative fuel or raw material which the facility is approved to use under any permit issued under Rule 17-2.510 (transferred), 17-2.17 (repealed), or 62-212.500, F.A.C.

(d) New and Modified Facilities.

1. New Minor Facilities. A proposed new minor facility shall not be subject to the provisions of subsection 62-212.500(4), F.A.C.

2. New Major Facilities. Unless exempted under paragraph 62-212.500(2)(a) or (b), F.A.C., a proposed new major facility shall be subject to the provisions of subsection 62-212.500(4), F.A.C., if:

a. For the affected pollutant, except lead, the sum of the quantifiable fugitive emissions and the potential emissions of all emissions units at the facility which have the same “Major Group” Standard Industrial Classification (SIC) Code would be equal to or greater than 100 tons per year; or

b. For lead or lead compounds, measured as elemental lead, the sum of the quantifiable fugitive emissions and the potential emissions of all emissions units at the facility which have the same “Major Group” Standard Industrial Classification (SIC) Code

would be equal to or greater than 5 tons per year.

3. Modifications to Minor Facilities. Unless exempted under paragraph 62-212.500(2)(a), (b) or (c), F.A.C., a proposed modification to a minor facility shall be subject to the provisions of Rule 62-212.500(4), F.A.C., only if the modification would be a physical change which in and of itself would constitute a new major facility subject to the provisions of subsection 62-212.500(4), F.A.C., pursuant to subparagraph 62-212.500(2)(d)2., F.A.C.

4. Modifications to Major Facilities. Unless exempted under paragraph 62-212.500(2)(a), (b) or (c), F.A.C., a proposed modification to a major facility shall be subject to the provisions of:

a. Subsection 62-212.500(4), F.A.C., if the facility to be modified would be subject to those provisions pursuant to Rule 62-212.500(2)(d)2., F.A.C., if it were itself a proposed new facility and the modification would result in a significant net emissions increase (as set forth in subparagraph 62-212.500(2)(e)2., F.A.C.) of the affected pollutant; or

b. Subparagraph 62-212.500(2)(d)3., F.A.C., if the facility to be modified would not be subject to the provisions of subsection 62-212.500(4), F.A.C., pursuant to subparagraph 62-212.500(2)(d)2., F.A.C., if it were itself a proposed new facility.

5. Relaxations of Restrictions on Pollutant Emitting Capacity. If a previously permitted facility or modification becomes a facility or modification which would be subject to the provisions of subsection 62-212.500(4), F.A.C., if it were a proposed new facility or modification, solely by virtue of a relaxation in any federally enforceable limitation on the capacity of the facility or modification to emit a pollutant (such as a restriction on hours of operation), which limitation was established after August 7, 1980, then at the time of such relaxation, the provisions of subsection 62-212.500(4), F.A.C., shall apply to the facility or modification as though construction had not yet commenced on it.

(e) Emissions Changes.

1. Net Emissions Increase. A modification to a facility results in a net emissions increase when, for the affected pollutant, the sum of all the contemporaneous, creditable increases and decreases in the actual emissions of the facility, including the increase in emissions of the modification itself, and any increases or decreases in quantifiable fugitive emissions, is greater than zero.

2. Significant Net Emissions Increase. A significant net emissions increase of the affected pollutant is a net emissions increase equal to or greater than the applicable significant emissions rate.

3. Contemporaneous Emissions Changes. An increase or decrease in the actual emissions, or in the quantifiable fugitive emissions, of a facility is contemporaneous with a particular modification if it occurs within the period beginning five years prior to the date on which the owner or operator of the facility submits a complete application for a permit to modify the facility, and ending on the date on which the owner or operator of the modified facility projects the new or modified facility to begin operation. The date on which any increase in the actual emissions, or in the quantifiable fugitive emissions, of the facility occurs is the date on which the owner or operator of the facility begins, or projects to begin, operation of the emissions unit(s) resulting in the increase. The date on which any decrease in the actual emissions, or in the quantifiable fugitive emissions, of the facility occurs is the date on which the owner or operator of the facility completes, or is committed to complete through a federally enforceable permit condition, a physical change in or change in the method of operation of the facility resulting in the decrease.

4. Creditable Emissions Changes. An increase or decrease in the actual emissions, or in the quantifiable fugitive emissions, of a facility is creditable if the Department has not relied on it in demonstrating attainment, defining reasonable further progress, or issuing a permit under the provisions of this rule, which permit is in effect when the increase in emissions of the modification occurs. In addition, a decrease in the actual emissions, or in the quantifiable fugitive emissions, of a facility is creditable only if:

a. The old level of actual emissions, the old level of federally enforceable allowance emissions, or the old level of allowable emissions under Rule 62-296.500 through 62-296.516, 62-296.570, 62-296.600 through 62-296.605, or 62-296.700 through 62-296.712, F.A.C., whichever is lower, exceeds the new level of actual emissions;

b. It is federally enforceable on and after the date that the owner or operator obtains from the Department a permit for the modification; and

c. It has approximately the same qualitative significance for public health and welfare as that attributed to the increase in emissions of the modification.

(f) Pollutants Subject to Nonattainment-Area Preconstruction Review. Except for the statewide compliance provisions of paragraph 62-212.500(4)(c), F.A.C., the provisions of this rule apply only to the emissions of the affected pollutant. For ozone nonattainment areas classified as marginal or higher, the provisions of Rule 62-212.500, F.A.C., apply individually to the emissions of both volatile organic compounds (VOC) and nitrogen oxides (NOx).

1. Nonattainment Areas. The provisions of this rule apply to all new or modified emissions units or facilities which are located

in or are proposed to be located in any nonattainment area, and which emit or may emit the affected air pollutant, unless specifically exempted by a provision of this rule.

2. Areas of Influence of Nonattainment Areas. The provisions of this rule apply to any new or modified emissions unit or facility which is located in or is proposed to be located in the area of influence of any nonattainment area, and which emits or may emit the affected air pollutant, as though it were physically located in the nonattainment area, except as provided under subparagraph 62-212.500(2)(a)2.a. or b., below.

a. All VOC and NOx emissions units which are located within the area of influence of an ozone nonattainment area are exempt from the provisions of Rule 62-212.500, F.A.C., and shall be permitted in accordance with Rule 62-212.400, or 62-212.300, F.A.C.

b. All other new or modified emissions units or facilities located in or proposed to be located in an area of influence which would be subject to the provisions of Rule 62-212.500, F.A.C., if they were to be located within the nonattainment area, shall be subject to those provisions unless the owner or operator demonstrates to the Department that the maximum allowable emissions or the significant net increase in emissions of the proposed new or modified facility (not taking into account any emission offsets) will not have a significant impact within the nonattainment area.

(3) Limited Exemptions and Special Provisions.

(a) Temporary Emissions. A proposed temporary new or modified emissions unit or facility subject to the provisions of subsection 62-212.500(4), F.A.C., shall be exempt from the requirements of paragraphs 62-212.500(4)(c) and .500(4)(d), F.A.C., provided that:

1. Total operating time of the emissions unit or facility shall not exceed two years; and

2. The owner or operator has provided the Department with reasonable assurance that the emissions will not interfere with attainment of ambient air quality standards.

(b) Relocatable Facilities. A relocatable facility may be permitted in accordance with paragraph 62-212.500(3)(a), F.A.C., and be permitted to relocate within the nonattainment area or area of influence by amendment to the facility's operating permit provided that:

1. The owner or operator obtains an amendment to the operating permit prior to moving to the new location, identifying the new location and duration of operation at the new location; and

2. The federally enforceable allowable emissions would not be increased at the new location.

(c) Resource Recovery Projects. A resource recovery facility which processes municipal solid waste for the purpose of extracting, converting to energy, or otherwise separating and preparing solid waste for reuse, and which utilizes solid waste to provide more than 50 percent of the heat input needed to operate the facility shall be exempt from the provisions of subparagraph 62-212.500(8)(d)1., F.A.C., provided that:

1. The applicant demonstrates to the Department that the applicant has made its best effort to obtain the full emission offsets required and such efforts were unsuccessful; and

2. The applicant commits to continuing to seek the required emission offsets and to apply them when they become available; and

3. The applicant has secured all available offsets.

(d) Voluntary Fuel Conversions. (Reserved)

(e) (Reserved)

(f) Open Burning. Open burning in or near a nonattainment area shall be permitted in accordance with the provisions of Rule 62-256, F.A.C., Open Burning and Frost Protection Fires.

(4) Preconstruction Review Requirements. Except as provided in subsections 62-212.500(1) through (3), F.A.C., the Department shall not issue a permit to construct a new facility or to make a modification to a facility in a nonattainment area or an area of influence unless the following requirements have been met:

(a) LAER Requirement. The owner or operator of the proposed new or modified facility may limit the emissions of the affected air pollutant from the facility or modification through the application and employment of LAER. The procedure for determining LAER is set forth in subsection 62-212.500(7), F.A.C.

(b) Statewide Compliance Requirement for Multiple Facility Ownership. The owner or operator of the proposed new or modified facility shall demonstrate to the Department that all major facilities owned or operated by such person(s) or by any entity controlling, controlled by, or under common control with such person within the State of Florida have all required air permits and are in compliance with all applicable emission limitations or other permit conditions, or are on a schedule approved by the

Department for compliance with such requirements.

(c) Emissions Offset Requirements. The Department shall not issue any permit to construct any new facility or to make any modification to a facility unless sufficient, creditable emission offsets are obtained in accordance with subsection 62-212.500(5), F.A.C.

(d) Net Air Quality Improvement Requirement.

1. Nonattainment Areas with Approved SIP.

a. The committed VOC or NOx offsets must exceed the increase of VOC or NOx emissions, respectively, from the proposed new facility or modification by a ratio of at least 1.1:1 for marginal ozone nonattainment areas and 1.15:1 for moderate ozone nonattainment areas. For transitional ozone nonattainment areas, the committed VOC offsets must equal or exceed the increase of VOC emissions from the proposed new facility or modification, and NOx offsets are not required.

b. All VOC or NOx offsets that meet the requirements of subsection 62-212.500(4), F.A.C., shall be considered to be consistent with the achievement of reasonable further progress.

c. The applicant must demonstrate that the committed offsets for emissions units of PM10 , sulfur dioxide, carbon monoxide, or lead would equal or exceed the increase of emissions from the proposed new facility or modification and would provide a net air quality improvement in accordance with paragraph 62-212.500(6)(a), F.A.C.

2. Nonattainment Areas without Approved SIP.

a. The committed VOC or NOx offsets must exceed the increase of VOC or NOx emissions, respectively, from the proposed new facility or modification by a ratio of at least 1.1:1 for marginal ozone nonattainment areas and 1.15:1 for moderate ozone nonattainment areas. For transitional ozone nonattainment areas, the committed VOC offsets must equal or exceed the increase of VOC emissions from the proposed new facility or modification, and NOx offsets are not required.

b. All VOC or NOx offsets that meet the requirements of subsection 62-212.500(4), F.A.C., shall be considered to be consistent with the achievement of reasonable further progress.

c. The applicant must demonstrate that the committed offsets for emissions units of PM10 , sulfur dioxide, carbon monoxide, or lead would exceed the increase of emissions from the new facility or modification and would provide a significant net air quality improvement in accordance with paragraph 62-212.500(6)(b), F.A.C.

(e) Visibility Protection for Class I Areas.

1. Visibility Analysis and Monitoring. If the proposed new or modified facility would be subject to the preconstruction review requirements of Rule 62-212.400, F.A.C., for the affected pollutant but for the designation of the location of the facility as a nonattainment area, the following provisions apply:

a. The owner or operator of the proposed new or modified facility shall provide the Department with an analysis of the impairment to visibility, if any, which would occur in any Federal Class I area within 100 kilometers of the facility or modification, with the exception of the Bradwell Bay National Wilderness Area, as a result of emissions from the facility or modification. (Federal Class I areas are designated in paragraph 62-204.360(4)(b), F.A.C.)

b. The analysis required under sub-subparagraph 62-212.500(4)(e)1.a., F.A.C., shall be carried out using EPA-approved methods, if available.

c. The Department may require the owner or operator of a proposed facility or modification subject to the provisions of sub-subparagraph 62-212.500(4)(e)1.a., F.A.C., to include as part of the required analysis such visibility monitoring data as are available from Federal or State visibility monitoring programs in the affected Class I area. If such data are not available or are demonstrated to be inadequate for a visibility analysis, the Department may require the applicant to collect up to one year of preconstruction visibility monitoring data and such postconstruction visibility monitoring data as are necessary to analyze the effect that emissions from the facility or modification may have, or are having, on visibility in the affected Class I area.

2. Federal Land Manager Participation.

a. The Federal Land Manager of any lands contained in a Class I area which may be affected by emissions from the proposed facility or modification, with the exception of the Bradwell Bay National Wilderness Area, may demonstrate to the Department that the emissions from the proposed facility or modification would have an adverse impact on visibility in the Federal Class I area.

b. If this demonstration is received by the Department within thirty (30) days after the Department has mailed or transmitted to the Federal Land Manager a complete application pursuant to paragraph 62-210.350(2)(b), F.A.C., it shall be considered in the Department's preliminary determination and proposed agency action on the permit application. If this demonstration is received within the public comment period on the Department's proposed agency action, it shall be considered in the Department's final

determination and final agency action on the permit application.

c. If the Department finds that the Federal Land Manager's analysis does not demonstrate to the Department's satisfaction that an adverse impact on visibility would occur in the Class I area, a written explanation of the reasons for such finding shall be included in the Department's preliminary or final determination as provided in sub-subparagraph 62-212.500(4)(e)2.b., F.A.C. In making the decision to issue or deny the permit, the Department may take into account the Federal Land Manager's demonstration, the costs of compliance, the time necessary for compliance, the energy and non-air quality environmental impacts of compliance and the useful life of the emissions unit. The Department shall not issue permits over the Federal Land Manager's demonstration of adverse impact to those emissions units whose emissions will be consistent with making reasonable progress toward the national goal of preventing any future, and remedying any existing, impairment of visibility in visibility protection areas, which impairment results from manmade air pollution.

(f) Stack Height Policy Requirement. The owner or operator of the proposed new or modified facility shall provide to the Department a good-engineering-practice stack height, or other dispersion techniques, analysis to demonstrate compliance with Rule 62-212.550, F.A.C.

(g) Alternative Analysis Requirement. The owner or operator of the proposed new or modified facility shall provide an analysis of alternative sites, sizes, production processes, and environmental control techniques. The owner or operator shall demonstrate to the Department that the benefits of the proposed new or modified facility outweigh the environmental and social costs imposed as a result of its location, construction, or modification.

(5) Emission Offsets.

(a) Emission Offsets Required. If a proposed new facility or modification is subject to the requirements of subsection 62-212.500(4), F.A.C., the owner or operator of such facility shall obtain sufficient, creditable emission offsets. Emission offsets shall be considered sufficient if they provide for a net air quality improvement in accordance with paragraph 62-212.500(4)(d), F.A.C. The creditability of emission offsets is determined by applying the criteria set forth below in paragraph 62-212.500(5)(b), F.A.C.

(b) Creditable Emission Offsets.

1. Emissions of an air pollutant shall only be offset by emissions of the same air pollutant.

2. An emissions offset shall be computed on a mass emission basis and shall not exceed the base emission limit of the emissions unit providing the offset.

3. An emission offset may be obtained by the curtailment of production or operation hours of an offsetting emissions unit provided such curtailment is included as an enforceable provision in the operating permit that is issued to the offsetting emissions unit.

4. Emission offsets for PM10 , sulfur dioxide, carbon monoxide, or lead shall be provided only by emissions units located within the nonattainment area or area of influence within which the proposed new or modified emissions unit would be located.

5. Emission offsets for VOC or NOx shall be provided by emissions units located within the ozone nonattainment area in which the proposed new or modified emissions unit would be located or within another ozone nonattainment area provided:

a. The other area has an equal or higher nonattainment classification than the area in which the proposed new or modified emissions unit would be located; and

b. Emissions from such other area contribute to violations of the ozone ambient air quality standard in the nonattainment area in which the proposed new or modified emissions unit would be located.

6. For an existing fuel combustion emissions unit, credit shall be based on the emissions for the type of fuel being burned at the time the application to construct is filed for the emissions unit to which an emission offset will be provided. If the existing emissions unit commits to switch to a cleaner fuel to provide the offset, emission offset credit based on the difference in actual emissions for the fuels involved shall not be creditable unless the existing emissions unit's permit is conditioned to require the use of a specified alternative control measure which would achieve the same degree of emissions reduction should the emissions unit switch back to a dirtier fuel at some later date.

7. Emissions reductions achieved by shutting down an existing emissions unit or permanently curtailing production or operating hours below base emission limit levels may be creditable for offsets. Curtailments in production or operating hours occurring prior to the date the new emissions unit application is filed may be used for emission offset credit where an applicant can establish that the emissions unit shut down or curtailed production after December 31, 1990, and the proposed new emissions unit is a replacement for the shutdown or curtailment.

8. All emission reductions providing offset credit shall be federally enforceable.

9. An emission offset shall be creditable only to the extent that the Department has not relied on it in issuing any permit under Rule 17-2.510 (transferred), 17-2.520 (transferred), 17-2.17 (repealed), 62-212.300, 62-212.400, or 62-212.500, F.A.C., or in demonstrating attainment or reasonable further progress.

(c) Base Emission Limit Adjustments. Any emissions unit which has its permit modified to provide offsets to another emissions unit or facility shall have its base emission limit reduced accordingly.

(6) Net Air Quality Improvement.

(a) Net Air Quality Improvement. A net air quality improvement shall be presumed if:

1. Over an acceptable uniform grid of receptor points, considering only the impacts of the proposed new or modified facility, the emissions unit(s) providing the emissions offset and all other emissions units contributing to the availability of new emissions unit allowance, the sum of the maximum increases subtracted from the sum of the absolute values of the maximum decreases in the predicted ambient concentration of the affected pollutant within the nonattainment area, divided by the total number of receptor points within the nonattainment area, would be greater than zero annual average; and

2. No increase in ambient concentration resulting from the combined impacts of the emissions units considered in subparagraph 62-212.500(7)(a)1., F.A.C., would exceed the numerical value of any Class II maximum allowable increase established under Rule 62-204.260, F.A.C., provided that such values that have an averaging time of less than one year may be exceeded once per year at any receptor point.

(b) Significant Net Air Quality Improvement. A significant net air quality improvement shall be presumed if:

1. Over an acceptable uniform grid of receptor points, considering only the impacts of the proposed new or modified facility and the emissions unit(s) providing the emissions offset, the sum of the maximum increases subtracted from the sum of the absolute values of the maximum decreases in the predicted ambient concentration of the affected pollutant within the nonattainment area, divided by the total number of receptor points within the nonattainment area, would be greater than one microgram per cubic meter annual average; and

2. No increase in ambient concentration resulting from the combined impacts of the emissions units considered in subparagraph 62-212.500(7)(b)1., F.A.C., would exceed the numerical value of any Class II maximum allowable increase established under Rule 62-204.260, F.A.C., provided that such values that have an averaging time of less than one year may be exceeded once per year at any receptor point.

(7) Lowest Achievable Emission Rate (LAER).

(a) Basis of Determination. Except as provided in subsections 62-212.500(1) through (4), F.A.C., any person who proposes to construct a new emissions unit or to make a modification in a nonattainment area or area of influence shall, in its construction permit application, apply to the Department for a determination of the Lowest Achievable Emission Rate (LAER) that is applicable to the affected pollutant emission that would result from the operation of the proposed new or modified emissions unit. In such application, the applicant shall recommend a determination of LAER setting forth the basis for such determination. In making the LAER determination, the Department shall give consideration to and make a determination that reflects:

1. Any information published by the U.S. Environmental Protection Agency pursuant to Section 108 of the Clean Air Act, as required by Section 178 of the Act concerning determinations of LAER.

2. The most stringent emissions limitation which is contained in the implementation plan of any state for such class or category of emissions unit, unless the owner or operator of the proposed emissions unit demonstrates that such limitation is not achievable, or the most stringent emissions limitation which is achieved in practice by such class or category of emissions unit, whichever is more stringent.

3. All scientific, engineering, technical material, or other relevant information available to the Department.

(b) Limitation Regarding Environmental Protection Agency Standards of Performance for New Stationary Sources. In no event shall the determination of LAER allow the proposed new or modified emissions unit to emit any affected pollutant in excess of the amount allowable under any applicable Environmental Protection Agency Standard of Performance for New Stationary Sources, promulgated pursuant to 40 CFR Part 60, and adopted and incorporated by reference in Rule 62-204.800, F.A.C.

(c) Phased Construction Projects. For phased construction projects, the determination of LAER shall be reviewed and modified as necessary, through the permitting process, at the latest reasonable time not later than 18 months prior to commencement of construction of each independent phase of the project. At that time, the owner or operator of the facility shall be required to demonstrate the adequacy of any previous Department demonstration of LAER or propose a revision to such previous determination.

(8) Construction/Operation Permit Requirement.

(a) Permit Application Information Required. At a minimum, the owner or operator of the facility or modification shall provide the following information to the Department:

1. A description of the nature, location, design capacity and typical operating schedule of the facility or modification, including specifications and drawings showing its design and plant layout;

2. A detailed schedule for construction of the facility or modification;

3. A detailed description of the system of continuous emissions reductions proposed by the facility as LAER, emissions estimates, and any other information as necessary to determine that LAER would be applied to the facility or modification;

4. Information relating to the air quality impact of the facility or modification, including meteorological and topographical data necessary to estimate such impact.

(b) Permit Offset Identification.

1. If the proposed new facility or modification is required to have emission offsets, any construction or operation permit issued for such facility or modification shall specifically identify and quantify the amount of offset required and identify the emissions unit(s) providing the required emissions offset. Such identification shall include ownership, unit designation, location, effective date of offset, and other permit identification data.

2. Before any permit is issued for the new or modified facility, the operation permit of each offsetting emissions unit shall be revised to specifically identify and quantify the new maximum allowable emission limits for each such emissions unit, the amount of offset provided, and the facility or modification to which such emissions offset is provided. The identification of the facility or modification to which an emissions offset is provided shall include ownership, unit designation, location, effective date of offset, and other permit identification data.

(c) Construction Permits. Any construction permit issued pursuant to this rule shall contain all conditions and provisions necessary to insure that the construction and operation of the facility or modification shall be in accordance with the requirements of this rule.

(d) Operation Permits.

1. All required emission offsets shall have occurred prior to the issuance of any operation permit.

2. Any operation permit issued for a facility or modification shall include all operating conditions and provisions required under Rule 17-2.17 (repealed) or paragraph 62-212.500(8)(c), F.A.C., and set forth in the original or amended construction permit. This provision shall apply as long as the nonattainment area for which the original or amended construction permit was issued is designated as a nonattainment area under subsection 62-204.340(2), F.A.C., or as an air quality maintenance area under subsection 62-204.340(4), F.A.C.

Rulemaking Authority 403.061 FS. Law Implemented 403.031, 403.061, 403.087 FS. History—Formerly 17-2.510, Amended 2-2-93, Formerly 17-212.500, Amended 11-23-94, 1-1-96, 3-13-96, 2-2-06.

62-212.600 Sulfur Storage and Handling Facilities.

Rulemaking Authority 403.061 FS. Law Implemented 403.031, 403.061, 403.087 FS. History—Formerly 17-2.540, 17-212.600, Amended 11-23-94, 1-1-96, 3-13-96, 8-17-00, Repealed 2-16-12.

62-212.710 Air Emissions Bubble.

Rulemaking Authority 403.061 FS. Law Implemented 403.08735 FS. History—New 5-20-97, Repealed 2-16-12.

62-212.720 Actuals Plantwide Applicability Limits (PALs).

(1) PAL Permits. Any existing facility intending to use any Plantwide Applicability Limit (PAL) shall first obtain a PAL permit issued in accordance with the requirements of this section. For purposes of this rule an existing facility shall mean a facility that contains one or more existing emissions units, as defined at Rule 62-210.200, F.A.C. PAL permits shall be based on “actuals PAL” emissions as that term is described at 40 CFR 52.21(aa)(2), adopted by reference in Rule 62-204.800, F.A.C. PAL permits shall be considered construction permits for purposes of Rule Chapters 62-4, 62-210, 62-212, 62-213 and 62-110, F.A.C., but PAL permits shall not authorize any physical change that constitutes a modification under Rule 62-210.200 F.A.C., or any modification or reconstruction under 40 CFR Part 60, 61 or 63, adopted by reference at Rule 62-204.800, F.A.C., to any existing emissions unit, or

any addition of any new emissions unit to the facility with the PAL permit. The Department shall authorize such modification or addition through separate normal construction permit processes. If the addition or modification will likely cause an increase in emissions above that authorized in the PAL permit, the Department shall authorize such an increase only through the PAL permit revision requirements of this rule, but the applicant may submit a single application for the construction permit and for any necessary PAL permit revision and, if practicable, the Department shall require a single public notice for both permitting actions. Each PAL shall be pollutant-specific but a single PAL permit may include multiple PALs. All PAL permit applications shall include information regarding all emissions which the facility has the potential to emit, including startup, shut down and malfunction emissions, for each pollutant for which a PAL is sought, and all PAL permits shall include in the limitation(s) all PAL pollutant emissions which the facility has the potential to emit, including emissions from startup, shut down and malfunctions. Fugitive emissions shall be included in the application and in the PAL to the extent quantifiable.

(2) Definitions. The definitions of 40 CFR 52.21(aa)(2), adopted by reference in Rule 62-204.800, F.A.C., shall apply to PAL permitting processes and PAL permits except the "PAL permit" shall mean the permit specified in subsection 62-212.720(1), F.A.C., and except that "significant" and "emissions unit" shall mean "significant emissions rate" and "emissions unit" as defined in Rule 62-210.200, F.A.C. For purposes of this rule, the term "Administrator," wherever it appears in any provision of 40 CFR 52.21 cited herein, shall mean "Department."

(3) Application. Application for any PAL permit shall be made on the forms established for permit applications at Rule 62-210.900, F.A.C. In addition to the information required by Rule Chapters 62-4 and 62-210, F.A.C., and any other information required by this chapter, all applications for PAL permits shall provide the information described at 40 CFR 52.21 (aa)(3), adopted by reference at Rule 62-204.800, F.A.C.

(4) Permit Processing. The Department shall establish the PAL using the processes described at 40 CFR 52.21 (aa)(4) and (6), adopted by reference at Rule 62-204.800, F.A.C. No PAL permit shall be issued until all processes have been completed and the public participation requirements of 40 CFR 52.21(aa)(5), adopted by reference at Rule 62-204.800, F.A.C., and Rule 62-210.350, F.A.C., have been accomplished. The Department shall also consider all other applicable requirements, as defined at Rule 62-210.200, F.A.C., and the requirements of Rule Chapter 62-4, F.A.C., in establishing a PAL.

(5) Permit Content. All PAL permits shall include the provisions described at 40 CFR 52.21(aa)(7), adopted by reference in Rule 62-204.800, F.A.C., in addition to any other permit terms the Department deems necessary to provide reasonable assurances of compliance with Department rule and permit requirements. The excess emissions provisions of subsections 62-210.700(1)-(5), F.A.C., shall not apply to PAL permits, and the permit shall contain a statement specifying that these rule provisions do not apply. Excess emissions are not allowed. The notification requirements of subsection 62-210.700(6), F.A.C., shall still apply. The Department shall also establish monitoring requirements in accordance with 40 CFR 52.21(aa)(12), adopted by reference in Rule 62-204.800, F.A.C., and shall include such monitoring, and the recordkeeping and reporting requirements of 40 CFR 52.21(aa)(13) and (14), adopted by reference in Rule 62-204.800, F.A.C., in the PAL permit.

(6) PAL Permit Revision, Renewal, Expiration. PAL permits shall be issued for a term of ten years. Any revision to any PAL permit shall be accomplished in accordance with the permitting provisions of this rule and the provisions of 40 CFR 52.21(aa)(8), adopted by reference in Rule 62-204.800, F.A.C. All renewals of PAL permits shall be accomplished in accordance with the requirements of this rule and the provisions of 40 CFR 52.21(aa)(11), adopted by reference in Rule 62-204.800, F.A.C. Any PAL permit that is not renewed in strict accordance with the provisions of 40 CFR 52.21(aa)(10), adopted by reference in Rule 62-204.800, F.A.C., shall expire. All expirations of PAL permits shall be governed by the provisions of 40 CFR 52.21(aa)(9), adopted by reference in Rule 62-204.800, F.A.C.

(7) Notwithstanding any other provision of this rule, any emissions unit subject to any emissions limit or other requirement established under any provision of Title 40 of the Code of Federal Regulations, adopted by reference at Rule 62-204.800, F.A.C., or under any applicable requirement as defined at Rule 62-210.200, F.A.C., shall continue to comply with such requirement except that the provisions of paragraph 62-212.400(12)(b), F.A.C., shall not apply to emissions units at a facility with a PAL permit.

Chapter 62-213, F.A.C.

Operation Permits for Major Sources of Air Pollution

CHAPTER 62-213
OPERATION PERMITS FOR MAJOR SOURCES OF AIR POLLUTION

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62-213.100 Purpose and Scope.

Rulemaking Authority 403.061, 403.0872 FS. Law Implemented 403.061, 403.0872 FS. History—New 11-28-93, Formerly 17-213.010, Amended 3-13-96, Repealed 2-16-12.

62-213.202 Responsible Official.

(1) Each Title V source must identify a responsible official on each application for Title V permit, permit revision, and permit renewal. For sources with only one responsible official, this is how the Title V source designates the responsible official.

(2) Each Title V source may designate more than one responsible official, provided a primary responsible official is designated as responsible for the certifications of all other designated responsible officials. Any action taken by the primary responsible official shall take precedence over any action taken by any other designated responsible official.

(3) Any facility initially designating more than one responsible official or changing the list of responsible officials must submit a Responsible Official Notification Form (DEP Form No. 62-213.900(3), adopted and incorporated by reference at Rule 62-213.900, F.A.C.) designating all responsible officials for a Title V source, stating which responsible official is the primary responsible official, and providing an effective date for any changes to the list of responsible officials. Each individual listed on the Responsible Official Notification Form must meet the definition of responsible official given at Rule 62-210.200, F.A.C.

(4) A Title V source with only one responsible official shall submit DEP Form No. 62-213.900(3), adopted and incorporated by reference at Rule 62-213.900, F.A.C., for a change in responsible official.

(5) No person shall take any action as a responsible official at a Title V source unless designated a responsible official as required by this rule, except that the existing responsible official of any Title V source which had a change in responsible official during the term of the permit and before the effective date of this rule may continue to act as a responsible official until the first submittal of DEP Form No. 62-213.900(3), adopted and incorporated by reference at Rule 62-213.900, F.A.C., or the next application for Title V permit, permit revision or permit renewal, whichever comes first.

Rulemaking Authority 403.061, 403.087, 403.0872 FS. Law Implemented 403.061, 403.0872 FS. History—New 6-2-02, Amended 6-29-11.

62-213.205 Annual Emissions Fee.

Each Title V source permitted to operate in this state must pay between January 15 and April 1 of each year, upon written notice as provided in the Title V permit, an annual emissions fee in an amount determined as set forth in subsection 62-213.205(1), F.A.C.

(1) Emissions Fee Calculation and Payment. Each Title V source must calculate the annual fee, based upon the source's previous year's emissions, by multiplying the applicable annual emissions fee factor times the tons of each regulated air pollutant actually emitted, as calculated in accordance with the department's emissions computation and reporting rules. The annual fee shall

only apply to those regulated pollutants, except carbon monoxide and greenhouse gases, for which an allowable numeric emission-limiting standard is specified in the source's most recent construction permit or operation permit. The emissions fee factor is \$30. Provided, however, that:

(a) For emissions occurring in calendar year 2013, the emissions fee factor is \$27.

(b) The amount of each regulated air pollutant in excess of 4,000 tons per year allowed to be emitted, in total, by any Title V source will not be included in the calculation of the fee. Any Title V source which does not emit any regulated air pollutant in excess of 4,000 tons per year may request a one-time credit not to exceed 25 percent of its first annual emissions fee for the prorated portion of the existing air operation permit application fees remaining upon commencement of its annual emissions fees.

(c) If the Department has not received the fee by March 1 of the year following the calendar year for which the fee is calculated, the Department will send the primary responsible official of the Title V source a written warning of the consequences for failing to pay the fee by April 1. If the fee is not postmarked or electronically submitted by April 1 of the year due, the Department shall impose, in addition to the fee, a penalty of 50 percent of the amount of the fee unpaid plus interest on such amount computed in accordance with Section 220.807, F.S. If the Department determines that a submitted fee was inaccurately calculated, the Department shall either refund to the permittee any amount overpaid or notify the permittee of any amount underpaid. The Department shall not impose a penalty or interest on any amount underpaid, provided that the permittee has timely remitted payment of at least 90 percent of the amount determined to be due and remits full payment within 60 days after receipt of notice of the amount underpaid. The Department shall waive the collection of underpayment and shall not refund overpayment of the fee, if the amount is less than one percent of the fee due, up to \$50.00. The Department shall make every effort to provide a timely assessment of the adequacy of the submitted fee. Failure to pay timely any required annual emissions fee, penalty, or interest constitutes grounds for permit revocation pursuant to Rule 62-4.100, F.A.C.

(d) Notwithstanding any other provisions of this rule, the annual emissions fee for any Title V source, other than a Title V source authorized to operate under a Title V air general permit, shall not be less than \$250.

(e) Any documentation of actual hours of operation, actual material or heat input, actual production amount, or actual emissions used to calculate the annual emissions fee shall be retained by the owner for a minimum of five years and shall be made available to the Department upon request.

(f) For an Acid Rain Part processed separately from a Title V permit, the Title V permit together with the Acid Rain Part shall be the most recent operation permit for Title V fee purposes. An Acid Rain Part processed separately from a Title V permit is not a separate permit and shall not be used as the most recent operation permit for Title V fee purposes.

(2) Permit Fees Waived. No permit application processing fee, renewal fee, modification fee or amendment fee is required for an operation permit for a Title V source.

Rulemaking Authority 403.061, 403.087 FS. Law Implemented 403.087, 403.0872 FS. History—New 12-21-92, Amended 11-25-93, Formerly 17-213.200, Amended 11-23-94, 1-1-96, 3-13-96, 6-25-96, 2-11-99, 1-3-01, 4-16-01, 6-2-02, 1-9-08, 3-16-08, 3-11-10, 4-1-13, 12-31-13.

62-213.300 Title V Air General Permits.

(1) Applicability. The following facilities are eligible to operate under the terms of a Title V air general permit pursuant to the procedures and conditions of this rule.

(a) Perchloroethylene Dry Cleaning Facilities. The Title V air general permit for perchloroethylene dry cleaning facilities is no longer effective. The owner or operator of a perchloroethylene dry cleaning facility operating under the authority of this Title V air general permit is automatically authorized to operate under the authority of the air general permit for perchloroethylene dry cleaning facilities at paragraph 62-210.310(5)(f), F.A.C., until the date the authorization to operate under the Title V air general permit would have expired.

(b) Ethylene Oxide Sterilization Facilities. The Title V air general permit for ethylene oxide sterilization facilities is no longer effective. The owner or operator of a ethylene oxide sterilization facility operating under the authority of this Title V air general permit is automatically authorized to operate under the authority of the air general permit for ethylene oxide sterilization facilities at paragraph 62-210.310(5)(g), F.A.C., until the date the authorization to operate under the Title V air general permit would have expired.

(c) Halogenated Solvent Degreasing Facilities. The Title V air general permit for halogenated solvent degreasing facilities is no longer effective. The owner or operator of a halogenated solvent degreasing facility operating under the authority of this Title V air general permit is automatically authorized to operate under the authority of the air general permit for halogenated solvent degreasing

facilities at paragraph 62-210.310(5)(h), F.A.C., until the date the authorization to operate under the Title V air general permit would have expired.

(d) Chromium Electroplating and Anodizing Facilities. The Title V air general permit for chromium electroplating and anodizing facilities is no longer effective. The owner or operator of a chromium electroplating and anodizing facility operating under the authority of this Title V air general permit is automatically authorized to operate under the authority of the air general permit for chromium electroplating and anodizing facilities at paragraph 62-210.310(5)(i), F.A.C., until the date the authorization to operate under the Title V air general permit would have expired.

(e) Asbestos Manufacturing and Fabrication Facilities. The Title V air general permit for asbestos manufacturing and fabrication facilities is no longer effective. The owner or operator of a asbestos manufacturing and fabrication facility operating under the authority of this Title V air general permit is automatically authorized to operate under the authority of the air general permit for asbestos manufacturing and fabrication facilities at paragraph 62-210.310(5)(j), F.A.C., until the date the authorization to operate under the Title V air general permit would have expired.

(f) Secondary Aluminum Sweat Furnaces. The Title V air general permit for secondary aluminum sweat furnaces is no longer effective. The owner or operator of a secondary aluminum sweat furnace operating under the authority of this Title V air general permit is automatically authorized to operate under the authority of the air general permit for secondary aluminum sweat furnaces at paragraph 62-210.310(5)(k), F.A.C., until the date the authorization to operate under the Title V air general permit would have expired.

Rulemaking Authority 403.061, 403.087 FS. Law Implemented 403.031, 403.061, 403.087, 403.0872, 403.814 FS. History--New 3-13-96, Amended 6-25-96, 10-7-96, 7-7-97, 11-13-97, 2-24-99, 1-3-01, 4-16-01, 4-14-03, 6-29-11.

62-213.400 Permits and Permit Revisions Required.

All Title V sources are subject to the air operation permit requirements of this chapter, except those Title V sources permissible pursuant to Rule 62-213.300, F.A.C., Title V Air General Permits.

(1) No Title V source may operate except in compliance with this chapter.

(2) Except as provided in Rule 62-213.410, F.A.C., no source with a permit issued under the provisions of this chapter shall make any changes in its operation without first applying for and receiving a permit revision if the change meets any of the following:

(a) Constitutes a modification;

(b) Violates any applicable requirement;

(c) Exceeds the allowable emissions of any air pollutant from any unit within the source;

(d) Contravenes any permit term or condition for monitoring, testing, recordkeeping, reporting or of a compliance certification requirement;

(e) Requires a case-by-case determination of an emission limitation or other standard or a source specific determination of ambient impacts, or a visibility or increment analysis under the provisions of Chapter 62-212 or 62-296, F.A.C.;

(f) Violates a permit term or condition which the source has assumed for which there is no corresponding underlying applicable requirement to which the source would otherwise be subject;

(g) Results in the trading of emissions among units within a source except as specifically authorized pursuant to Rule 62-213.415, F.A.C.;

(h) Results in the change of location of any relocatable facility identified as a Title V source pursuant to paragraph (a)-(e), (g) or (h) of the definition of "major source of air pollution" at Rule 62-210.200, F.A.C.

(i) Constitutes a change at an Acid Rain Source under the provisions of 40 CFR 72.81(a)(1), (2), or (3), (b)(1) or (b)(3), hereby incorporated by reference;

(j) Constitutes a change in a repowering plan, nitrogen oxides averaging plan, or nitrogen oxides compliance deadline extension at an Acid Rain Source.

Rulemaking Authority 403.061, 403.087 FS. Law Implemented 403.031, 403.061, 403.087, 403.0872 FS. History--New 11-28-93, Amended 4-17-94, Formerly 17-213.400, Amended 11-23-94, 1-3-95, 4-18-95, 3-13-96, 2-11-99, 1-3-01, 6-2-02, 3-16-08.

62-213.405 Concurrent Processing of Permit Applications.

(1) If requested by the applicant, the Department shall concurrently process the applications for air construction permit and Title

V permit revision or permit renewal, provided:

(a) The application for air construction permit complies with the requirements of subsections 62-213.420(3) and (4), F.A.C.;

(b) The application for air construction permit is subject to federally enforceable preconstruction review pursuant to Chapter 62-212, F.A.C.; and

(c) A source's responsible official waives the processing time requirements for the air construction permit to accommodate the processing time frames of the Title V permit, and the Department complies with all requirements of subsection 62-213.430(1), F.A.C., prior to taking final action on the applications for air construction permit and Title V permit revision or permit renewal.

(2) The applicant may use the same application form and set of any required copies (DEP Form No. 62-210.900(1)) for both the air construction and air operation permits.

(3) The Department will create a single public notice for both the air construction and air operation permits.

(4) The Department will issue separate air construction and air operation permits.

(5) The Title V air operation permit must contain a compliance plan in accordance with the provisions of subsection 62-213.440(2), F.A.C., for each emissions unit covered by the air construction permit, reflecting the terms of the construction permit.

(6) If concurrent application processing is not requested, nothing precludes the Department from combining the public notice for air construction and revision or renewal of air operation permits and acting on the air construction permit and air operation permit separately, at applicant request, provided the processing time frames accommodate concurrent notice or the applicant waives the processing time requirements to accommodate concurrent notice.

Rulemaking Authority 403.061, 403.087, 403.0872 FS. Law Implemented 403.061, 403.0872 FS. History--New 6-2-02.

62-213.410 Changes Without Permit Revision.

Title V sources having a valid permit issued pursuant to this chapter may make the following changes without permit revision, provided that sources shall maintain source logs or records to verify periods of operation:

(1) Permitted sources may change among those alternative methods of operation:

(2) A permitted source may implement operating changes, as defined in Rule 62-210.200, F.A.C., after the source submits any forms required by any applicable requirement and provides the Department and EPA with at least 7 days written notice prior to implementation. The source and the Department shall attach each notice to the relevant permit;

(a) The written notice shall include the date on which the change will occur, and a description of the change within the permitted source, the pollutants emitted and any change in emissions, and any term or condition becoming applicable or no longer applicable as a result of the change;

(b) The permit shield described in Rule 62-213.460, F.A.C., shall not apply to such changes;

(3) Permitted sources may implement changes involving modes of operation only in accordance with Rule 62-213.415, F.A.C.

Rulemaking Authority 403.061, 403.087 FS. Law Implemented 403.031, 403.061, 403.087, 403.0872 FS. History--New 11-28-93, Formerly 17-213.410, Amended 11-23-94, 4-16-01, 6-2-02.

62-213.412 Immediate Implementation Pending Revision Process.

(1) Those permitted Title V sources making any change that constitutes a modification pursuant to the definition of modification at Rule 62-210.200, F.A.C., but which would not constitute a modification pursuant to 42 USC 7412(a) or to 40 CFR 52.01, 60.2, or 61.15, adopted and incorporated by reference at Rule 62-204.800, F.A.C., may implement such change prior to final issuance of a Title V permit revision, provided the change:

(a) Does not violate any applicable requirement;

(b) Does not contravene any permit term or condition for monitoring, testing, recordkeeping or reporting, or any compliance certification requirement;

(c) Does not require or change a case-by-case determination of an emission limitation or other standard, or a source-specific determination of ambient impacts, or a visibility or increment analysis under the provisions of Chapter 62-212 or 62-296, F.A.C.;

(d) Does not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and which the source has assumed to avoid an applicable requirement to which the source would otherwise be subject including any federally enforceable emissions cap or federally enforceable alternative emissions limit.

(2) A Title V source may immediately implement such changes after they have been incorporated into the terms and conditions of a new or revised construction permit issued pursuant to Chapter 62-212, F.A.C., and after the source provides to EPA, the

Department, each affected state and any approved local air program having geographic jurisdiction over the source, a copy of the source's application for operation permit revision. The Title V source may conform its application for construction permit to include all information required by Rule 62-213.420, F.A.C., in lieu of submitting separate application forms.

(3) The Department shall process the application for operation permit revision in accordance with the provisions of this chapter, except that the Department shall issue a draft permit revision or a determination to deny the revision within 60 days of receipt of a complete application for operation permit revision or, if the Title V source has submitted a construction permit application conforming to the requirements of Rule 62-213.420, F.A.C., the Department shall issue a draft permit or a determination to deny the revision at the same time the Department issues its determination on issuance or denial of the construction permit application. The Department shall not take final action on the operation permit revision application until all the requirements of paragraphs 62-213.430(1)(a), (c), (d), and (e), F.A.C., have been complied with.

(4) Pending final action on the operation permit revision application, the source shall implement the changes in accordance with the terms and conditions of the source's new or revised construction permit. If any terms and conditions of the new or revised construction permit have not been complied with prior to issuance of the draft operation permit revision, the operation permit shall include a compliance plan in accordance with the provisions of subsection 62-213.440(2), F.A.C.

(5) The permit shield described in Rule 62-213.460, F.A.C., shall not apply to such changes until after the Department takes final action to issue the operation permit revision.

(6) If the Department denies the source's application for operation permit revision, the source shall cease implementation of the proposed changes.

Rulemaking Authority 403.061, 403.087 FS. Law Implemented 403.031, 403.061, 403.087, 403.0872 FS. History--New 11-28-93, Amended 4-17-94, Formerly 17-213.412, Amended 11-23-94, 1-1-96, 3-13-96, 2-11-99, 6-2-02.

62-213.413 Fast-Track Revisions of Acid Rain Parts.

Those Acid Rain Sources making a change described at subsection 62-214.370(4), F.A.C., may request such change as provided herein:

(1) The designated representative of the Acid Rain Source shall make application for permit revision to the Department using DEP Form No. 62-210.900(1)(a);

(2) Within five (5) business days after submittal of the application to the Department, the designated representative shall provide a copy of the application to EPA, any affected state, any approved local air program having geographical jurisdiction and any person who has requested a copy;

(3) Within five (5) business days after serving the copy of the application upon EPA, the designated representative shall publish notice of the application in accordance with the provisions of subsection 62-103.150(1), F.A.C. The notice shall require that comments be submitted in writing within 30 days of publication and shall identify the designated representative and the Department as parties to receive comment. The notice shall also contain the following statement:

"The Department shall take action on the application for permit revision within 40 days after publication of this notice. Any person desiring actual notice of the proposed agency action may request such notice pursuant to Section 120.60, F.S.;"

(4) The Department shall issue a draft permit revision or an intent to deny within forty (40) days after publication of the notice described at subsection 62-213.413(3), F.A.C. If the Department has received a request for actual notice of the agency action, the Department shall issue a proposed permit revision or denial only after the Department has provided all persons making such request with actual notice containing the information described in subsections 62-103.155(1)-(3), F.A.C., and has provided opportunity for petition for administrative hearing;

(5) If the Department has received no petition for administrative hearing, the Department shall issue a proposed permit revision within 60 days after the publication of the notice described at subsection 62-213.413(3), F.A.C. The Department shall take final action to issue or deny the proposed permit revision immediately after complying with subsection 62-213.430(1), F.A.C.

Rulemaking Authority 403.061, 403.087, 403.0872 FS. Law Implemented 403.031, 403.087, 403.0872, 403.0873 FS. History--New 1-3-95, Amended 7-6-95, 6-2-02.

62-213.415 Trading of Emissions Within a Source.

(1) The Department shall allow trading of emissions increases and decreases among emissions units in a Title V source permitted pursuant to this chapter. This trading of emissions shall be permitted solely for the purpose of complying with a federally

enforceable emissions cap that is established in the permit independent of otherwise applicable requirements.

(2) No permit revision shall be required provided the permitted source complies with the notice and recordkeeping provisions of this section and provided the permitted source had submitted with its last Title V permit application:

(a) A listing of all emission units which will be subject to trading of emissions;

(b) A description of each mode of operation that will be used at any given time and all of the necessary permit application data required by Rule 62-213.420 and subsection 62-210.900(1), F.A.C., to evaluate the application in each mode of operation;

(c) A plan for quantifying emissions trading increases and decreases of each regulated air pollutant for each unit and for demonstrating the continuous compliance in each mode of operation. The following procedures apply to pollutants which are subject to the federally enforceable emissions cap described in subsection 62-213.415(1), F.A.C.:

1. For a source with sulfur dioxide generated by the fuel, the source shall quantify increases or decreases of sulfur dioxide or nitrogen oxides emissions by the use of continuous emissions monitors which have been installed, performance tested, calibrated, operated and maintained as specified in paragraph 62-213.205(1)(e), F.A.C. The source shall determine stack gas volumetric flow rates using flowmeters with recorders, if available at the source, or the average gas flow rates from the three most recent stack tests conducted in accordance with the requirements of Rule 62-297.310, F.A.C., at an operation rate of 90 to 100 percent of the maximum operating level approved for the unit in its mode of operation. If three such tests have not been conducted, the source shall determine flow rates from the two latest such tests, if available, or by a single such test;

2. For sulfur dioxide generated from non-fuel sources, the Department shall approve alternative methods of determining actual SO₂ emissions on a case-by-case basis, if requested by the permittee, provided all of the sulfur used in the process is quantified and analyzed for sulfur content using methods approved in Chapter 62-297, F.A.C., on an as delivered basis, records are maintained to document the quantity and sulfur content of the sulfur containing material, and the method assumes that all of the sulfur is converted to SO₂ and released to the atmosphere;

3. For pollutants other than sulfur dioxide and nitrogen oxides the Department shall not approve the trading of emissions unless the source demonstrates the capability of quantifying emissions and verifying that emissions do not exceed permitted allowable emissions for each unit involved;

4. The Department shall accept inventory balance, as described in paragraph 62-213.205(1)(e), F.A.C., as a means of quantification of volatile organic compounds if no credit is taken for any incineration that takes place.

(d) Replicable procedures to demonstrate compliance with any trading provisions requested and with applicable requirements for each mode of operation. As a minimum, the source shall maintain source logs or records to verify the periods of operation within each mode of operation.

(3) The source shall provide written notice to the Department and EPA at least thirty days before implementation of each mode of operation. The notice shall identify the mode of operation, and the date upon which the change will occur.

Rulemaking Authority 403.061, 403.087 FS. Law Implemented 403.031, 403.061, 403.087, 403.0872 FS. History--New 11-28-93, Amended 4-17-94, Formerly 17-213.415, Amended 11-23-94, 3-13-96, 4-16-01.

62-213.420 Permit Applications.

(1) Duty to Apply. For each Title V source, the owner or operator shall submit a timely and complete permit application in compliance with the requirements of this section and subsections 62-4.050(1) through (3), F.A.C.

(a) Timely Application.

1. A facility that commences operation as a Title V source or that otherwise becomes subject to the permitting requirements of Chapter 62-213, F.A.C., must file an application for an operation permit under this chapter at least ninety days before expiration of the source's air construction permit, but no later than 180 days after commencing operation as a Title V source, unless a different application due date is provided at Rule 62-204.800, F.A.C., or an earlier date is provided in the air construction permit. A source that applied for an Electrical Power Plant Siting Certification prior to October 26, 1995, but was not issued the certification as of that date, or a source that was issued an Electrical Power Plant Siting Certification prior to October 26, 1995, but did not commence operation by that date, shall file an application for an operation permit under this chapter no later than 180 days after commencing operation.

2. For purposes of permit renewal, a timely application is one that is submitted 180 days before the expiration of a permit that expires before June 1, 2009, and 225 days before the expiration of a permit that expires on or after June 1, 2009.

3. A Title V source which contains an emissions unit that commences operation or is modified shall submit an application for a

permit revision, or a supplement to a pending application, at least ninety days prior to expiration of the unit's air construction permit, but no later than 180 days after the emissions unit commences operation or commences operation as modified. Any source that contains an emissions unit that has not commenced operation or which has not demonstrated initial compliance with all applicable requirements by the time that the source submits its application for a Title V permit, permit revision, or permit renewal may include such emissions unit in the application, provided the source submits a compliance schedule and methodology, in accordance with paragraph 62-213.420(3)(l), F.A.C.

4. For purposes of the CAIR Part form (DEP form number 62-210.900(1)(b)), a timely application is one that is submitted as follows.

a. For a CAIR unit covered by a Title V permit prior to May 1, 2008, a certified CAIR Part form shall be submitted to the Department by May 1, 2008. The form shall be submitted as part of a Title V permit revision application.

b. For a CAIR unit not covered by a Title V permit prior to May 1, 2008, a certified CAIR Part form shall be submitted to the Department prior to the unit commencing operation. The form shall be incorporated into the Title V permit upon issuance of an initial, revised, or renewal Title V permit, whichever comes first.

c. A CAIR Part form shall be submitted simultaneously with any Title V permit renewal application for a CAIR source.

(b) Complete Application.

1. Any applicant for a Title V permit, permit revision or permit renewal must submit an application on DEP form number 62-210.900(1), which must include all the information specified by subsection 62-213.420(3), F.A.C., except that an application for permit revision must contain only that information related to the proposed change(s) from the currently effective Title V permit and any other requirements that become applicable at the time of application. The applicant shall include information concerning fugitive emissions and stack emissions in the application. Each application for permit, permit revision or permit renewal shall be certified by a responsible official in accordance with subsection 62-213.420(4), F.A.C.

2. The application shall be deemed complete sixty days after receipt, unless the Department, within sixty days after receipt of a certified application for permit, permit revision or permit renewal, requests additional documentation or information needed to process the application. An applicant making timely and complete application for permit, or for permit renewal, shall continue to operate the source under the authority and provisions of any existing valid permit or Florida Electrical Power Plant Siting Certification, and in accordance with applicable requirements of the Acid Rain Program and CAIR Program, until the conclusion of proceedings associated with its permit application or until the new permit becomes effective, whichever is later, provided the applicant complies with all the provisions of subparagraphs 62-213.420(1)(b)3., F.A.C. Failure of the Department to request additional information within sixty days of receipt of a properly signed application shall not impair the Department's ability to request additional information pursuant to subparagraphs 62-213.420(1)(b)3., F.A.C.

3. Should the Department become aware, during processing of any application that the application contains incorrect information, or should the Department become aware, as a result of comment from an affected State, an approved local air program, EPA, or the public that additional information is needed to evaluate the application, the Department shall notify the applicant within 30 days. When an applicant becomes aware that an application contains incorrect or incomplete information, the applicant shall submit the corrected or supplementary information to the Department, and the Department's completeness review clock shall be restarted upon the Department's receipt of the information. If the Department notifies an applicant that corrected or supplementary information is necessary to process the permit application, and requests a response, the applicant shall provide the information to the Department within ninety days of the Department request unless the applicant has requested and been granted additional time to submit the information or, the applicant shall, within ninety days, submit a written request that the Department process the application without the information. Failure of an applicant to submit corrected or supplementary information requested by the Department within ninety days, or such additional time as requested and granted, or to demand in writing within ninety days that the application be processed without the information shall render the application incomplete. Nothing in this section shall limit any other remedies available to the Department.

4. All Department requests for additional information shall conform to the requirements of subsections 62-4.055(2), (3), and (4), F.A.C.

5. The Department shall grant requests for additional time to submit supplemental or corrected information as follows:

a. Each source requesting additional time must make a written request prior to the due date for receipt of the information and must specify the number of additional days requested;

b. The Department shall grant up to sixty additional days to any source operating in compliance with the terms and conditions of

the source's existing valid permit without the need to show cause;

c. The Department shall grant additional time beyond sixty days or to sources not operating in compliance with existing valid permits only after the source demonstrates good cause. Good cause shall mean any unforeseen situation outside the control of the source such as labor strikes, acts of war, extraordinary or sudden and unexpected acts of nature or accidents beyond the control of the source. If the Department has required, in the request for additional or corrected information, that the source undertake specific testing or investigation, good cause shall also include the requirement to complete any required tests or investigation that cannot be completed within 150 days, so long as the source specifies the expected date of completion in its demonstration of good cause and so long as the estimated time requested is for the work required.

(2) Confidential Information. Whenever an applicant submits information under a claim of confidentiality pursuant to Section 403.111, F.S., the applicant shall also submit a copy of all such information and claim directly to EPA.

(3) Standard Application Form and Required Information. Applications shall be submitted under this chapter on forms provided by the Department and adopted by reference in subsection 62-210.900(1), F.A.C. The information as described on the forms in subsection 62-210.900(1), F.A.C., shall be included for the Title V source and each emissions unit. An application must include information sufficient to determine all applicable requirements for the Title V source and each emissions unit and to evaluate a fee amount pursuant to Rule 62-213.205, F.A.C. The application shall specifically include the following information, as detailed in the application form (DEP form number 62-210.900(1)); provided, however, that the information required by paragraphs (g) through (m), below, shall not be required for any emissions unit which is not subject to any unit-specific applicable requirements, except as needed to determine that no applicable requirements exist:

(a) Identifying information;

(b) Description of source's processes and products;

(c) Information, as set forth in this subsection and in the application form number 62-210.900(1), on the emissions of all regulated pollutants which the applicant knows or has reason to believe are being emitted from a source in amounts as set forth in subparagraphs 62-213.420(3)(c)1. through 6., F.A.C. The applicant shall report pollutants for each emissions unit and for source-wide emissions such as fugitive emissions. When pollutants must be quantified, for those pollutants for which no standard test method or published emissions factor is available to the applicant, the applicant shall estimate the emissions and include the basis for the estimate with the emissions information. For purposes of this subsection, regulated pollutant means any pollutant to which an emissions limitation applies in accordance with subparagraph 62-213.420(3)(c)2., F.A.C.; any hazardous air pollutant; and any other regulated air pollutant as specified in Rule 62-210.200, F.A.C., except any pollutant that is regulated solely under 42 U.S.C. s.7412(r). Except as provided in Chapter 62-297, F.A.C., for submittal of compliance test data, nothing in this section shall be construed to require testing of actual emissions for determining estimated or potential emissions for a permit application. All applicants shall report regulated pollutants as set forth in subparagraphs 62-213.420(3)(c)1. through 6., F.A.C.

1. Each Title V source shall identify each regulated pollutant which the applicant knows or has reason to believe the facility emits or has the potential to emit in a major amount. Major source thresholds are as follows:

a. 100 tons per year for carbon monoxide, nitrogen oxides, particulate matter, sulfur dioxide, and volatile organic compounds;

b. 5 tons per year for lead and lead compounds expressed as lead;

c. 10 tons per year for any hazardous air pollutant;

d. 25 tons per year for total hazardous air pollutants; and

e. 100 tons per year for any other regulated pollutant.

2. Those Title V sources which are subject to a numerical emissions limitation under any applicable requirement, or for which a numerical emissions limitation is included in the source's most recent operation permit, shall report and quantify, for each emissions unit subject to the emissions limitation, all emissions of any pollutant to which the limitation applies. The provisions of this rule, subparagraph 62-213.420(3)(c)2., F.A.C., shall not apply to the reporting of radionuclides emissions or asbestos emissions resulting from asbestos removal.

3. Each Title V source that emits or has the potential to emit any pollutant described in paragraphs (a) and (c) of the definition of regulated air pollutant in Rule 62-210.200, F.A.C., shall identify, for each emissions unit, each such pollutant which the applicant knows or has reason to believe would be emitted in an amount equal to or greater than:

a. 5.0 tons per year for carbon monoxide, nitrogen oxides, particulate matter, sulfur dioxide, and volatile organic compounds; or

b. 500 pounds per year for lead and lead compounds expressed as lead.

4. Each Title V source that emits or has the potential to emit any hazardous air pollutant or total hazardous air pollutants in a

major amount as set forth in subparagraph 62-213.420(3)(c)1., F.A.C., or in an amount that would be a major amount but for a limitation on emissions being requested for the first time by the applicant, shall identify, for each emissions unit, each such pollutant which the applicant knows or has reason to believe would be emitted in an amount equal to or greater than:

- a. 1,000 pounds per year for each individual hazardous air pollutant; or
- b. 2,500 pound per year for total hazardous air pollutants.

5. Title V sources which are also subject to the Federal Acid Rain Program shall report all emissions of sulfur dioxide and nitrogen oxides from any affected acid rain unit in accordance with this subsection or the reporting requirements of the Federal Acid Rain Program, whichever are more stringent.

6. Each Title V source that emits or has the potential to emit ammonia in an amount greater than 250 tons per year shall identify each emissions unit that emits or has the potential to emit ammonia in an amount equal to or greater than 12.5 tons per year.

- (d) Process and operating information;
- (e) Control equipment information;

(f) If requested by the Department, information concerning operations and methodology for the development of periodic monitoring in accordance with subsection 62-213.440(4), F.A.C. Such request must be made within 60 days of the date the application was submitted, except as required by subparagraph 62-213.420(1)(b)3., F.A.C.;

- (g) Calculations;
- (h) Identification of all applicable requirements and test methods;
- (i) Limitations on source operations affecting emissions;
- (j) Proposed alternate methods of operation;
- (k) Compliance statement;
- (l) Compliance schedule and methodology, if applicable;
- (m) Reporting and recordkeeping requirements;
- (n) A list of emissions units or activities for which a determination of insignificance is requested pursuant to subsection 62-213.430(6), F.A.C., because of size or production rate and any information needed to demonstrate that the units or activities qualify as insignificant under the provisions of subsection 62-213.430(6), F.A.C.

(4) Certification by Responsible Official. In addition to the professional engineering certification required for applications by subsection 62-4.050(3), F.A.C., any application form, report, compliance statement, compliance plan and compliance schedule submitted pursuant to this chapter shall contain a certification signed by a responsible official that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. Any responsible official who fails to submit any required information or who has submitted incorrect information shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary information or corrected information.

(5) Acid Rain Part. For those facilities subject to the Federal Acid Rain Program, any applicant that wishes separate processing of the Acid Rain Part of a Title V permit shall request this by application. In such case, the Department shall process separate permit parts for the Acid Rain Part and for the remaining Title V requirements, provided that the expiration dates of both permit parts coincide for the duration of operation of the facility. The Department shall adjust the expiration date of the permit parts to assure that the dates coincide, but in no case shall either permit part duration exceed five years, per the provisions of paragraph 62-213.440(1)(a), F.A.C. There shall be only one Acid Rain Part for each facility. Each such permit part shall be processed as a Title V permit for purposes and requirements of this chapter.

(6) CAIR Part Form. For a source subject to the CAIR Program, there shall be included in the Title V permit application a certified CAIR Part form (DEP form number 62-210.900(1)(b)) that contains requirements concerning all CAIR units at the CAIR source for which the application is submitted, in the format prescribed by DEP form number 62-210.900(1)(b)).

Rulemaking Authority 403.061, 403.087 FS. Law Implemented 403.061, 403.0872 FS. History—New 11-28-93, Amended 4-17-94, Formerly 17-213.420, Amended 11-23-94, 4-2-95, 10-11-95, 3-13-96, 3-20-96, 6-25-96, 10-7-96, 11-13-97, 2-11-99, 7-15-99, 1-3-01, 4-16-01, 6-2-02, 3-16-08, 3-11-10.

62-213.430 Permit Issuance, Renewal, and Revision.

(1) Action on Application. The Department shall issue a draft permit or a determination that the requested permit be denied within 90 days after receipt of the latest of: the application; the last item of information requested pursuant to paragraph 62-213.420(1)(b), F.A.C.; or, a written request to process the application without the requested information. If written comments

received during the 30-day comment period result in a substantial change in this draft permit, the Department shall issue a revised draft permit within 45 days after the end of the 30-day public comment period, unless a different time period is agreed to between the applicant and the Department. A substantial change in a draft permit has the same meaning as “substantially modified” under subparagraph 62-110.106(7)(a)4., F.A.C. The Department shall issue a permit, permit revision or renewal only after all of the following conditions have been met:

(a) The applicant has submitted a complete application, properly certified by a responsible official as required by subsection 62-213.420(4), F.A.C., and either all corrected and supplemental information requested or a written request to process the application without such information pursuant to subparagraphs 62-213.420(1)(b)3., F.A.C.;

(b) The Department and the applicant have complied with the requirements for notice and public participation described in Rules 62-103.150 and 62-210.350, F.A.C.;

(c) The Department has complied with the requirements for notifying and responding to affected states and approved local air programs pursuant to subsections 62-213.450(2) and (3), F.A.C.;

(d) The Department has provided EPA with a copy of the draft permit, proposed permit and any notices required under subsections 62-213.450(1) and (2), F.A.C., and has not received written EPA objection to issuance of the permit within the time period specified in subsection 62-213.450(4), F.A.C. If the Department receives timely EPA objection, the Department shall not take final action until the Department receives written notice that the objection is resolved or withdrawn;

(e) The Department has provided a statement to EPA setting forth the basis for the draft permit conditions, including references to the applicable statutory or regulatory provisions.

(2) Permit Denial. If the Department proposes to deny the permit application, the Department shall provide the applicant an explanation of the denial in accordance with subsection 62-4.070(6), F.A.C.

(3) Permit Renewal and Expiration. Permits being renewed are subject to the same requirements that apply to permit issuance at the time of application for renewal. Permit renewal applications shall contain that information identified in subsections 62-210.900(1), 62-213.420(3), 62-213.420(6), and 62-213.420(7), F.A.C. Unless a Title V source submits a timely and complete application for permit renewal in accordance with the requirements of this rule, the existing permit shall expire and the source’s right to operate shall terminate. No Title V permit will be issued for a new term except through the renewal process.

(4) Permit Revision Procedures. Permit revisions shall meet all requirements of this chapter, including those for content of applications, public participation, review by approved local air programs and affected States, and review by EPA, as they apply to permit issuance and permit renewal, except that permit revisions for those activities implemented pursuant to Rule 62-213.412, F.A.C., need not meet the requirements of paragraph 62-213.430(1)(b), F.A.C. The Department shall require permit revision in accordance with the provisions of Rule 62-4.080, F.A.C., and 40 C.F.R. 70.7(f), whenever any source becomes subject to any condition listed at 40 C.F.R. 70.7(f)(1), hereby adopted and incorporated by reference.

(5) EPA Recommended Actions. Within 90 days after receipt of notification from EPA that cause exists to modify, suspend, or revoke a permit, the Department shall investigate and determine whether cause exists pursuant to 40 C.F.R. 70.7(f)(1), hereby adopted and incorporated by reference, and shall forward the determination to EPA. If cause exists, the Department shall proceed according to the requirements of Rule 62-4.080 or 62-4.100, F.A.C., and 40 C.F.R. 70.7(f) to modify, suspend, or revoke the permit.

(6) Insignificant Emissions Units or Pollutant-Emitting Activities.

(a) All requests for determination of insignificant emissions units or activities made pursuant to paragraph 62-213.420(3)(n), F.A.C., shall be processed in conjunction with the permit, permit renewal or permit revision application submitted pursuant to this chapter. Insignificant emissions units or activities shall be approved by the Department consistent with the provisions of paragraph 62-4.040(1)(b), F.A.C. Emissions units or activities which are added to a Title V source after issuance of a permit under this chapter shall be incorporated into the permit at its next renewal, provided such emissions units or activities have been exempted from the requirement to obtain an air construction permit and also qualify as insignificant pursuant to this rule.

(b) An emissions unit or activity shall be considered insignificant if all of the following criteria are met:

1. Such unit or activity would be subject to no unit-specific applicable requirement.

2. Such unit or activity, in combination with other units and activities proposed as insignificant, would not cause the facility to exceed any major source threshold(s) as defined in subparagraph 62-213.420(3)(c)1., F.A.C., unless it is acknowledged in the permit application that such units or activities would cause the facility to exceed such threshold(s).

3. Such unit or activity would neither emit nor have the potential to emit:

- a. 500 pounds per year or more of lead and lead compounds expressed as lead;

- b. 1,000 pounds per year or more of any hazardous air pollutant;
- c. 2,500 pounds per year or more of total hazardous air pollutants; or
- d. 5.0 tons per year or more of any other regulated pollutant.

Rulemaking Authority 403.061, 403.087 FS. Law Implemented 403.031, 403.061, 403.087, 403.0872 FS. History—New 11-28-93, Formerly 17-213.430, Amended 11-23-94, 3-20-96, 11-13-97, 2-11-99, 1-3-01, 4-16-01, 6-2-02, 3-16-08.

62-213.440 Permit Content.

(1) Standard Permit Requirements. Each permit issued under this chapter shall incorporate all applicable requirements for the Title V source and for each method of operation proposed by the applicant and approved by the Department. Each such permit shall include all emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements, with citation to the Department's rule authority for each term or condition, and identification of any difference in form from the applicable requirement upon which the term or condition is based. However, when there are multiple, redundant, or conflicting applicable requirements, these provisions can be reduced to a single streamlined term or condition that is the most stringent of the multiple applicable requirements. In addition, the Department shall label permit terms or conditions "not federally enforceable" consistent with 40 CFR 70.6(b)(2), adopted and incorporated by reference at Rule 62-204.800, F.A.C. Emissions units or pollutant-emitting activities within a Title V source determined to be insignificant pursuant to subsection 62-213.430(6), F.A.C., shall be identified. Whenever any condition or requirement of a Title V permit is added, changed, or deleted during the term of the permit, any such previous condition shall be documented with the permit for the duration of the term and any such new or changed condition shall include a condition effective date.

(a) Permit Duration. Permits for sources subject to the Federal Acid Rain Program shall be issued for terms of five years, provided that the initial Acid Rain Part may be issued for a term less than five years where necessary to coordinate the term of such part with the term of a Title V permit to be issued to the source. Operation permits for Title V sources may not be extended as provided in subsection 62-4.080(3), F.A.C., if such extension will result in a permit term greater than five years.

(b) Monitoring and Related Recordkeeping and Reporting Requirements.

1. Each permit shall specify the following requirements with respect to monitoring:

a. Emissions monitoring and analysis procedures or test methods specified by applicable requirements including 40 CFR 64, Compliance Assurance Monitoring, adopted and incorporated by reference at subsection 62-204.800, F.A.C.;

b. Periodic monitoring sufficient to yield reliable data from the relevant time period and that are representative of the source's compliance with the permit, as required by 40 CFR 70.6(a)(3)(i)(B), adopted and incorporated by reference at Rule 62-204.800, F.A.C. Periodic monitoring shall assure use of recordkeeping terms, test methods, units, averaging periods, or other statistical conventions consistent with the applicable requirement, as specified in subsection 62-213.440(4), F.A.C.; and

c. Requirements concerning the use, maintenance, and installation of monitoring equipment or methods.

2. The permit shall incorporate all applicable recordkeeping requirements including:

a. Records of monitoring information that specify the date, place, and time of sampling or measurement and the operating conditions at the time of sampling or measurement, the date(s) analyses were performed, the company or entity that performed the analyses, the analytical techniques or methods used, and the results of such analyses;

b. Retention of records of all monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.

3. Each permit shall incorporate reporting requirements as follows:

a. Submittal of reports of any required monitoring at least every 6 months. All instances of deviations from permit requirements must be clearly identified in such reports;

b. Reporting, in accordance with requirements of subsection 62-210.700(6) and Rule 62-4.130, F.A.C., of deviations from permit requirements, including those attributable to upset conditions as defined in the permit. Reports shall include the probable cause of such deviations, and any corrective actions or preventive measures taken.

c. All reports shall be accompanied by a certification by a responsible official, pursuant to subsection 62-213.420(4), F.A.C.

(c) Emission Allowances. The Acid Rain Part of a Title V permit shall include a permit condition prohibiting emissions exceeding any allowances that the source lawfully holds under the Federal Acid Rain Program. The CAIR Part of a Title V permit shall include a permit condition prohibiting emissions exceeding any allowances that the source lawfully holds under the CAIR

Program. The source may not, however, use allowances as a defense to noncompliance with any other applicable requirement.

1. No permit revision shall be required for increases in emissions that are authorized by allowances acquired pursuant to the Federal Acid Rain Program or the CAIR Program, provided that such increases do not require a permit revision pursuant to Rule 62-213.400, F.A.C. Each CAIR Part incorporates every allocation, transfer, or deduction of a CAIR NO_x or CAIR NO_x ozone season allowance to or from the compliance account of the CAIR source covered by the permit, upon recording by the Administrator.

2. No limit shall be placed on the number of allowances held by the source under the Federal Acid Rain Program or the CAIR Program.

3. Allowances shall be accounted for under the Federal Acid Rain Program or the CAIR Program.

4. Each CAIR Part incorporates the definitions of terms under 40 CFR 96.102, 96.202, and 96.302, adopted and incorporated by reference at Rule 62-204.800, F.A.C.

(d) In addition to the requirements stated above, each Title V permit shall include all of the following:

1. A statement that if any portion of the final permit is invalidated, the remainder of the permit shall remain in effect;

2. Identification of fugitive emissions and source-wide emissions in the same manner as stack emissions, regardless of whether or not the Title V source is specifically listed in paragraph (b) of the definition of major source of air pollution at Rule 62-210.200, F.A.C.

3. A statement that it shall not be a defense for a permittee in an enforcement action that maintaining compliance with any permit condition would necessitate halting of or reduction of the source activity;

4. A statement that any Title V source shall comply with all the terms and conditions of the existing permit until the Department has taken final action on any permit renewal or any requested permit revision, except as provided at subsection 62-213.412(2), F.A.C.

5. A statement that a situation arising from sudden and unforeseeable events beyond the control of the source which causes an exceedance of a technology-based emissions limitation because of unavoidable increases in emissions attributable to the situation and which requires immediate corrective action to restore normal operation, shall be an affirmative defense to an enforcement action in accordance with the provisions and requirements of 40 CFR 70.6(g)(2) and (3), hereby adopted and incorporated by reference;

6. A statement that any permittee may claim confidentiality of any data or other information by complying with subsection 62-213.420(2), F.A.C.

(2) Compliance Requirements. For each applicable requirement for which one or more units within a source is not in compliance at the time of application for any permit, permit renewal or permit revision, and for which that unit has not come into compliance at the date of issuance of the draft permit, the draft permit shall contain:

(a) A provision that the source shall meet measurable and enforceable milestones on no less than a semiannual basis until compliance is achieved and demonstrated to the Department. Each source shall notify the Department in writing, within 15 days after the date specified for completion of each milestone, to include the achievement of compliance, of progress achieved, requirements met, requirements not met, corrective measures adopted and an explanation of any measures not met by the completion date for the milestone or for compliance. All reports shall be accompanied by a certification, signed by a responsible official, in accordance with subsection 62-213.420(4), F.A.C.

(b) A provision requiring the source to be in compliance by the date specified in the permit.

(3) Statement of Compliance.

(a) For each applicable requirement, the permit shall contain:

1. A provision for assessing or monitoring compliance for each unit within the source;

2. A requirement that the source submit a Statement of Compliance with all terms and conditions of the permit that includes all the provisions of 40 CFR 70.6(c)(5)(iii), incorporated by reference at Rule 62-204.800, F.A.C. Such statements shall be accompanied by certification in accordance with subsection 62-213.420(4), F.A.C., for Title V requirements, with Rule 62-214.350, F.A.C., for Acid Rain requirements, and with Rule 62-296.470, F.A.C., for CAIR Program requirements. Such statement shall be submitted (postmarked) to the Department and EPA:

a. Annually, within 60 days after the end of each calendar year during which the Title V permit was effective, or more frequently if specified by subsection 62-213.440(2), F.A.C., or by any other applicable requirement; and

b. Within 60 days after submittal of a written agreement for transfer of responsibility as required pursuant to 40 CFR 70.7(d)(1)(iv), adopted and incorporated by reference at Rule 62-204.800, F.A.C., or within 60 days after permanent shutdown of a facility permitted under this chapter; provided that, in either such case, the reporting period shall be the portion of the calendar year

the permit was effective up to the date of transfer of responsibility or permanent facility shutdown, as applicable;

3. In lieu of requiring a responsible official to individually identify all applicable requirements and specify times of compliance with, noncompliance with, and deviation from each, a provision that a responsible official may use DEP Form No. 62-213.900(2), adopted and incorporated by reference at Rule 62-213.900, F.A.C., as such statement of compliance so long as the responsible official specifically identifies all reportable deviations from and all instances of non-compliance with any applicable requirements and includes all information required by the federal regulation relating to each reportable deviation and instance of non-compliance.

(b) For purposes of the Statement of Compliance required at paragraph 62-213.440(3)(a), F.A.C., a responsible official may treat compliance with all other applicable requirements as a surrogate for compliance with subsection 62-296.320(2), F.A.C., Objectionable Odor Prohibited.

(4) Periodic Monitoring.

(a) Periodic monitoring sufficient to satisfy the requirements of sub-subparagraph 62-213.440(1)(b)1.b., F.A.C., shall assure the use of recordkeeping terms, test methods, units, averaging periods, or other statistical conventions which yield reliable data and are consistent with the applicable requirement, representative of the emissions unit's actual performance, and sufficient to indicate whether the unit remains in compliance. All periodic monitoring data must be retained in accordance with sub-subparagraph 62-213.440(1)(b)2.b., F.A.C. When existing reporting, recordkeeping and testing requirements yield reliable data that are both representative of the unit's actual performance and sufficient to indicate whether the unit remains in compliance with an applicable requirement, additional periodic monitoring shall not be required for that applicable requirement.

(b) Monitoring performed pursuant to any of the following satisfies periodic monitoring for that applicable requirement:

1. Emission limitations or standards proposed and promulgated by the U.S. Environmental Protection Agency after November 15, 1990, pursuant to section 111 or 112 of the Clean Air Act. The emission limitations or standards include:

a. 40 CFR 60 (New Source Performance Standards and Emission Guidelines for Existing Sources);

b. 40 CFR 61 (National Emission Standards for Hazardous Air Pollutants); and

c. 40 CFR 63 (National Emission Standards for Hazardous Air Pollutants);

2. Acid Rain Program requirements pursuant to sections 404, 405, 406, 407(a), 407(b), or 410 of the Clean Air Act. The requirements include continuous monitoring system requirements established pursuant to 40 CFR 75;

3. Emission limits or standards for which monitoring requirements are established pursuant to 40 CFR 64 (Compliance Assurance Monitoring);

4. Emission limitations or standards for which a Title V permit specifies a continuous compliance determination method, as defined in 40 CFR 64.1, adopted and incorporated by reference at Rule 62-204.800, F.A.C., unless such compliance method includes an assumed control device emission reduction factor that could be affected by the actual operation and maintenance of the control device; and

5. CAIR Program requirements for which monitoring requirements are established pursuant to 40 CFR Part 75, adopted and incorporated by reference at Rule 62-204.800, F.A.C.

Rulemaking Authority 403.061, 403.087 FS. Law Implemented 403.087, 403.0872 FS. History--New 11-28-93, Amended 4-17-94, Formerly 17-213.440, Amended 11-23-94, 4-18-95, 3-13-96, 3-20-96, 11-13-97, 4-7-98, 2-11-99, 7-15-99, 1-3-01, 4-16-01, 6-2-02, 3-16-08, 3-11-10, 6-29-11.

62-213.450 Permit Review by EPA and Affected States.

(1) Transmission of Information to EPA. Unless waived by EPA, the Department shall provide to EPA a copy of each permit application, including any application for permit revision or permit renewal, each draft permit, each proposed permit, and each final permit. Unless a different time frame is agreed to between the applicant and the Department, the Department shall issue and forward the proposed permit to EPA for its 45-day review within 30 days after the conclusion of the comment period on the last draft permit; or, if the draft permit is the subject of an administrative hearing under Sections 120.569 and 120.57, F.S. The Department shall issue and forward the proposed permit to EPA no later than 30 days after the date the final order is required to be filed under Section 120.57(1)(k), F.S. The Department shall also provide notice to the applicant of the date that the Department forwards the proposed permit to EPA, within 10 days of forwarding the proposed permit.

(2) Review by Affected States and Approved Local Air Programs. At the time that the Department provides the notice to the public under Chapters 62-103 and 62-210, F.A.C., the Department shall give notice of each draft permit to any affected state and any approved local air program having geographical jurisdiction of the source. The Department shall also provide the approved local air program and affected state a copy of each proposed and final permit at the time the information is forwarded to EPA.

(3) The Department shall notify, in writing, EPA and any affected state of any refusal by the Department to accept all recommendations for the draft permit that the affected state submitted during the public or affected state review period. The notice shall include the Department's reasons for not accepting any such recommendation.

(4) EPA Objection. The Department shall not issue any permit, permit revision or permit renewal if EPA objects to issuance, in writing, within 45 days of receipt of the proposed permit.

Rulemaking Authority 403.061, 403.087, 403.0872 FS. Law Implemented 403.087, 403.0872 FS. History--New 11-28-93, Formerly 17-213.450, Amended 2-11-99, 1-3-01.

62-213.460 Permit Shield.

Except as provided in this chapter, compliance with the terms and conditions of a permit issued pursuant to this chapter shall, as of the effective date of the permit, be deemed compliance with any applicable requirements in effect, provided that the source included such applicable requirements in the permit application. Nothing in this section or in any permit shall alter or affect the ability of EPA or the Department to deal with an emergency, the liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance, or the requirements of the Federal Acid Rain Program or the CAIR Program.

Rulemaking Authority 403.061, 403.0872 FS. Law Implemented 403.087, 403.0872 FS. History--New 11-28-93, Formerly 17-213.460, Amended 11-23-94, 1-3-01, 3-16-08, 3-11-10.

62-213.900 Forms and Instructions.

The forms used by the Department in the Title V source operation program are adopted and incorporated by reference in this section. The forms are listed by rule number, which is also the form number, and with the subject, title, and effective date. Copies of forms may be obtained by writing to the Department of Environmental Protection, Division of Air Resource Management, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400 or online at www.dep.state.fl.us/air.

(1) [Reserved].

(2) Statement of Compliance Form (DEP Form No. 62-213.900(2), Effective 8-1-11) required in Rule 62-213.440, F.A.C. (<http://www.flrules.org/Gateway/reference.asp?No=Ref-00273>).

(3) Responsible Official Notification Form (DEP Form No. 62-213.900(3), Effective 8-1-11) required in Rule 62-213.202, F.A.C. (<http://www.flrules.org/Gateway/reference.asp?No=Ref-00274>).

Rulemaking Authority 403.061 FS. Law Implemented 403.0872 FS. History--New 12-21-92, Amended 11-25-93, Formerly 17-213.900, Amended 11-23-94, 1-1-96, 3-13-96, 6-25-96, 2-11-99, 2-24-99, 1-3-01, 6-2-02, 4-14-03, 10-12-08, 6-29-11, 12-31-13.

Chapter 62-214, F.A.C.

Requirements for Sources Subject to the Federal Acid Rain Program

CHAPTER 62-214
REQUIREMENTS FOR SOURCES SUBJECT TO THE FEDERAL ACID RAIN PROGRAM

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62-214.100 Purpose and Scope.

This chapter outlines the additional permitting requirements for Title V sources that are subject to the Federal Acid Rain Program. The rules under this chapter set forth requirements for the Acid Rain Part of an operation permit for a Title V source which is subject to the Federal Acid Rain Program. The Department intends that this chapter shall implement and be consistent with the federal requirements of 40 C.F.R. Part 72. Words and phrases used in this chapter, unless clearly indicated otherwise, are defined at either 40 CFR 72.2 or 76.2 or Rule 62-210.200, F.A.C. The provisions of 40 CFR Parts 72, 73, 74, 75, and 76 referenced in this rule are adopted and incorporated by reference at Rule 62-204.800, F.A.C.

Specific Authority 403.061, 403.087, 403.0872 FS. Law Implemented 403.031, 403.061, 403.0872 FS. History—New 1-3-95, Amended 7-6-95, 3-13-96, 1-3-01, 3-16-08.

62-214.300 Applicability.

Owners and operators of a Title V source that contains an Acid Rain unit shall operate the source and each Acid Rain unit in compliance with Chapter 62-213, F.A.C., and shall comply with the applicable requirements of this chapter.

Specific Authority 403.061, 403.087, 403.0872 FS. Law Implemented 403.031, 403.061, 403.0872 FS. History—New 1-3-95, Amended 3-16-08.

62-214.320 Applications.

The designated representative of any Title V source containing an Acid Rain unit shall submit to the Department a complete Acid Rain Part application no later than the applicable deadline of this section. The Acid Rain Part application shall be submitted pursuant to this chapter and to Rule 62-213.420, F.A.C. The designated representative of an Acid Rain Source has the option of filing the Acid Rain Part application as a separate document from the Title V Air Operation Permit application and requesting separate processing. The Department shall process the Acid Rain Part application pursuant to Chapter 62-213, F.A.C. The owners and operators of such source and any Acid Rain unit at the source shall not operate the source or unit without a Title V permit which includes an Acid Rain Part, except that a source having a valid air construction or operation permit or a site certification pursuant to the Florida Electrical Power Plant Siting Act and for which the designated representative has submitted a timely and complete initial Acid Rain Part application shall be deemed in compliance with the Federal Acid Rain Program requirements provided that the designated representative submits all timely supplemental information as provided at Rule 62-213.420, F.A.C., and provided the source operates in compliance with the terms and conditions of the Acid Rain Part application during the Department's processing of the application.

(1) Timeliness. The designated representative shall submit a complete Acid Rain Part application as set forth below and at each renewal:

(a) For any new unit, the designated representative of the source containing the unit shall submit a complete Acid Rain Part application governing such unit to the Department at least 24 months before the date on which the unit commences operation.

(b) For any unit that did not serve a generator with a nameplate capacity greater than 25 megawatts-electrical (MWe) on November 15, 1990, but serves such a generator after November 15, 1990, the designated representative of the source containing the

unit shall submit a complete Acid Rain Part application governing such unit to the Department at least 24 months before the date on which the unit begins to serve a generator with a nameplate capacity greater than 25 MWe.

(c) For any unit which was a simple combustion turbine on November 15, 1990, but which adds or uses auxiliary firing after November 15, 1990, the designated representative of the source containing the unit shall submit a complete Acid Rain Part application governing such unit to the Department at least 24 months before the date on which the auxiliary firing device commences operation.

(d) For any unit that was an exempt cogeneration unit pursuant to 40 C.F.R. 72.6(b)(4), adopted and incorporated by reference at Rule 62-204.800, F.A.C., but which during any three calendar year period after November 15, 1990, sold to a utility power distribution system, as defined at 40 C.F.R. 72.2, adopted and incorporated by reference at Rule 62-204.800, F.A.C., an annual average of more than one third of its potential electrical output capacity, as defined at 40 C.F.R. 72.2, and more than 219,000 megawatts-electrical hours (MWe hrs) output, on a gross basis, the designated representative of the source containing the unit shall submit a complete Acid Rain Part application governing such unit to the Department before March 1 of the year following the three calendar year period in which the unit sold to a utility power distribution system an annual average of more than one-third of its potential electrical output capacity and more than 219,000 MWe-hrs actual electric output on a gross basis.

(e) For any unit which was exempt pursuant to 40 C.F.R. 72.6(b)(5), adopted and incorporated by reference at Rule 62-204.800, F.A.C., but which at any time after the date of November 15, 1990, or the date the source containing the unit commences commercial operation, fails to meet one or more of the criteria of 40 C.F.R. 72.6(b)(5), the designated representative of the source containing the unit shall submit a complete Acid Rain Part application governing such unit to the Department before March 1 of the year following the calendar year in which the source fails to meet one or more of the criteria of 40 C.F.R. 72.6(b)(5).

(f) For any unit which was exempt pursuant to 40 C.F.R. 72.6(b)(6), adopted and incorporated by reference at Rule 62-204.800, F.A.C., but which at any time after the later of November 15, 1990, or the date the source containing the unit commences commercial operation, fails to meet one or more of the criteria of 40 C.F.R. 72.6(b)(6), the designated representative of the source containing the unit shall submit a complete Acid Rain Part application governing such unit to the Department before March 1 of the year following the calendar year in which the source fails to meet one or more of the criteria of 40 C.F.R. 72.6(b)(6).

(g) For any unit which was a solid waste incinerator, burning less than 20 percent fossil fuel as described in 40 C.F.R. 72.6(b)(7), adopted and incorporated by reference at Rule 62-204.800, F.A.C., the designated representative of the source containing the unit shall submit a complete Acid Rain Part application governing such unit to the Department before March 1 of the year following the three calendar year period in which the incinerator consumed 20 percent or more fossil fuel on a British thermal unit (Btu) basis.

(h) For any unit that would opt-in to the Acid Rain program as described in 40 C.F.R. Part 74, Sulfur Dioxide Opt-Ins, adopted and incorporated by reference at Rule 62-204.800, F.A.C., the designated representative of the source containing the unit may submit a complete Acid Rain Part application with monitoring plan governing such unit at any time to the Department.

(i) Pursuant to subparagraph 62-213.420(1)(a)2. and subsection 62-213.430(3), F.A.C., the designated representative of any Title V source having a Title V permit with an Acid Rain Part shall submit a complete application for renewal of the Title V permit with an Acid Rain Part for each Acid Rain unit at the source, and the designated representative of a Title V source having a separate Acid Rain Part shall submit a complete application for renewal of the separate Acid Rain Part for each Acid Rain unit at the source.

(2) Information Requirements for Applications. The designated representative shall submit a complete Acid Rain Part application using DEP Form No. 62-210.900(1)(a) and DEP Form Nos. 62-210.900(1)(a)1., 2., and 3., as appropriate, and including the following:

(a) Identification of the Acid Rain source;

(b) Identification of each Acid Rain unit at the source;

(c) A complete Acid Rain compliance plan for each unit, in accordance with Rule 62-214.330, F.A.C.;

(d) If the unit is a new unit or opt-in source, the date that the unit commenced or will commence operation and the deadline for monitor certification, pursuant to 40 C.F.R. Part 75, adopted and incorporated by reference at Rule 62-204.800, F.A.C.;

(e) If the unit is an opt-in combustion source, the information required pursuant to 40 C.F.R. 74.16, adopted and incorporated by reference at Rule 62-204.800, F.A.C.;

(f) Notification for any exemptions of Acid Rain units if the designated representative indicates such exemption in accordance with Rule 62-214.340, F.A.C.; and

(g) Certification, in accordance with Rule 62-214.350, F.A.C., that the data submitted are true and correct and that the Acid

Rain source and each Acid Rain unit shall operate in accordance with the terms and conditions of the Acid Rain Part application (DEP Form No. 62-210.900(1)(a)).

Rulemaking Authority 403.061, 403.087, 403.0872 FS. Law Implemented 403.031, 403.061, 403.0872 FS. History—New 1-3-95, Amended 7-6-95, 12-10-97, 1-3-01, 4-16-01, 6-2-02, 3-16-08, 3-11-10.

62-214.330 Acid Rain Compliance Plan and Compliance Options.

(1) The designated representative shall submit to the Department a complete Acid Rain compliance plan for each Acid Rain unit included in an Acid Rain Part application, including:

(a) For sulfur dioxide emissions, a certification that, the designated representative will hold allowances, as defined at 40 C.F.R. 72.2, adopted and incorporated by reference at Rule 62-204.800, F.A.C., as of the allowance transfer deadline, as defined at 40 C.F.R. 72.2, not less than the total annual emissions of sulfur dioxide from the unit for the previous calendar year and shall comply with the unit's elected compliance options, if any. Such requirement shall become effective on:

1. January 1, 2000, for an Acid Rain unit that is an existing unit pursuant to 40 C.F.R. 72.6(2), adopted and incorporated by reference at Rule 62-204.800, F.A.C.;

2. The deadline for monitor certification pursuant to 40 C.F.R. Part 75, adopted and incorporated by reference at Rule 62-204.800, F.A.C., for an Acid Rain unit that is a new unit as defined at 40 C.F.R. 72.6(3), adopted and incorporated by reference at Rule 62-204.800, F.A.C.;

3. The deadline for monitor certification pursuant to 40 C.F.R. Part 75, adopted and incorporated by reference at Rule 62-204.800, F.A.C., for an Acid Rain unit that is an opt-in source as defined at 40 C.F.R. 72.2, adopted and incorporated by reference at Rule 62-204.800, F.A.C.

(b) For nitrogen oxides emissions, a certification that the unit will comply with any applicable limitation established by the EPA pursuant to 40 C.F.R. Part 76.5, 76.6, or 76.7, adopted and incorporated by reference at Rule 62-204.800, F.A.C., or will elect and comply with one or more Acid Rain compliance options in accordance with the provisions of 40 C.F.R. Part 76.10 and 76.11, adopted and incorporated by reference at Rule 62-204.800, F.A.C.

(2) The designated representative may include in the Acid Rain compliance plan a multi-unit compliance option pursuant to the requirements of 40 C.F.R. 76.11, adopted and incorporated by reference at Rule 62-204.800, F.A.C., provided that:

(a) A plan for a compliance option that includes units at more than one Acid Rain source shall be complete only if:

1. Such plan is signed and certified in accordance with Rule 62-214.350, F.A.C., by the designated representative for each source with an Acid Rain unit governed by such plan; and

2. A complete Title V permit application including an Acid Rain Part application is submitted covering each unit governed by such plan.

(b) The designated representative of the source containing the unit or units covered by the Acid Rain Part application certifies that every permitting authority (as defined at 40 C.F.R. 70.2, adopted and incorporated by reference at Rule 62-204.800, F.A.C.) with jurisdiction over any other units included in the multi-unit compliance option has approved the Acid Rain compliance plan with the same modifications or conditions, if any, stated in the proposed Acid Rain Part of the permit or submits a schedule in the form of a Title V compliance plan for providing such certifications.

Specific Authority 403.061, 403.087, 403.0872 FS. Law Implemented 403.031, 403.061, 403.0872 FS. History—New 1-3-95, Amended 7-6-95, 12-10-97, 1-3-01, 3-16-08.

62-214.340 Exemptions.

(1) New Units Exemption.

(a) Any new utility unit that meets all the criteria of 40 CFR 72.7(a)(1) through (3); which has not previously lost a new unit exemption; which is not allocated any allowances pursuant to 40 CFR Part 73, Subpart B; and which has timely and sufficiently supplied notice to the Department and the EPA shall be exempt from the Federal Acid Rain Program and Chapter 62-214, F.A.C., except for the requirements of this section and those provisions of 40 CFR 72.2 through 72.7 and 72.10 through 72.13, beginning January 1 of the first full calendar year for which the unit meets all the criteria of 40 CFR 72.7(a)(1) through (3) and paragraph 62-214.340(1)(a), F.A.C.

1. For purposes of this section, timely and sufficient notice is a statement meeting all of the criteria of 40 CFR 72.7(b)(2),

certified as required by Rule 62-214.350, F.A.C., using DEP Form No. 62-210.900(1)(a)2. and submitted to the Department no later than December 31 of the first calendar year for which the exemption shall be effective, except that the notice need not be provided if the unit has already received a written new unit exemption and the unit shall be subject to the requirements of 40 CFR 72.7(a), (d), (e)(2), and (f).

2. Upon receipt of a timely and sufficient notice, the Department shall amend the applicable Acid Rain Part and any other affected portion of the Title V permit issued for the facility of which the unit is a part pursuant to Rule 62-210.360, F.A.C., to add the provisions and requirements of the exemption under 40 CFR 72.7(a), (b), (d), and (f).

3. Compliance with the requirements of 40 CFR 72.7(a)(3) shall be determined as specified by 40 CFR 72.7(d).

(b) The new unit exemption shall be lost and the unit shall be fully subject to Chapter 62-214, F.A.C., and the Federal Acid Rain Program in accordance with the provisions of 40 CFR 72.7(f)(4). The unit shall be subject to the monitoring requirements of 40 CFR Part 75 on the date the exemption is lost, and the designated representative must submit a completed Acid Rain Part application no later than 60 days after the unit has lost the exemption.

(c) A unit otherwise meeting the criteria of 40 CFR 72.7(a)(1) through (3), but which has been allocated allowances under 40 CFR Part 73, Subpart B, may qualify for the new unit exemption if it is in compliance with all other requirements of paragraph 62-214.340(1)(a), F.A.C., and the allowances are surrendered as provided at 40 CFR 72.7(c). For such units, timely and sufficient notice shall include all information required by 40 CFR 72.7(c)(1)(i). The exemption shall be effective January 1 of the first full calendar year for which all requirements of 40 CFR 72.7(a) and (c)(1) are met, including notification from EPA of the allowances surrender, as described at 40 CFR 72.7(c)(1)(i)(D). Following receipt of such notification, the Department shall amend the Acid Rain Part and any other affected portion of the Title V permit issued for the facility of which the unit is a part in accordance with subparagraph 62-214.340(1)(a)2., F.A.C. The provisions of subparagraphs 62-214.340(1)(a)3. and (b), F.A.C., shall apply to the unit.

(d) All records demonstrating that the requirements of 40 CFR 72.7(a) are met must be maintained at the facility for a period of 5 years, as specified at 40 CFR 72.7(f)(3).

(2) Retired Units Exemption.

(a) Any permanently retired utility unit (except for an opt-in source, as defined in 40 CFR 72.2) which has timely and sufficiently supplied notice to the Department and the EPA shall be exempt from the Federal Acid Rain Program and Chapter 62-214, F.A.C., except for the requirements of this section and except for those provisions of 40 CFR 72.2 through 72.6, 72.8, 72.10 through 72.13, and 40 CFR 73, Subpart B, beginning January 1 of the first full calendar year during which the unit is permanently retired. The unit shall not emit any sulfur dioxide and nitrogen oxides beginning the date the exemption takes effect.

1. For purposes of this section, timely and sufficient notice is a statement meeting all of the criteria of 40 CFR 72.8(b)(2), certified as required by Rule 62-214.350, F.A.C., using DEP Form No. 62-210.900(1)(d) and submitted to the Department no later than December 31 of the first calendar year for which the exemption shall be effective, except that the notice need not be provided if the unit has already received a written retired unit exemption and the unit shall be subject to the requirements of 40 CFR 72.8(d).

2. Upon receipt of a timely and sufficient notice, the Department shall amend the applicable Acid Rain Part and any other affected portion of the Title V permit issued for the facility of which the unit is a part pursuant to Rule 62-210.360, F.A.C., to add the provisions and requirements of the exemption under 40 CFR 72.8(b)(1) and (d).

(b) The retired unit exemption shall be lost and the unit shall be fully subject to Chapter 62-214, F.A.C., and the Federal Acid Rain Program in accordance with the provisions of 40 CFR 72.8(d)(6). The unit shall be subject to the monitoring requirements of 40 CFR Part 75 on the date the exemption is lost, and the designated representative must submit a completed Acid Rain Part application no later than 24 months prior to the date the exemption will be lost.

(c) All records demonstrating that the requirements of 40 CFR 72.8(a) are met must be maintained at the facility for a period of 5 years, as specified at 40 CFR 72.8(d)(5).

Specific Authority 403.061, 403.087, 403.0872 FS. Law Implemented 403.031, 403.061, 403.0872 FS. History—New 1-3-95, Amended 7-6-95, 12-10-97, 1-3-01, 6-2-02, 3-16-08.

62-214.350 Certification.

(1) The Department shall accept or act on a submission made on behalf of owners and operators of an Acid Rain source and an Acid Rain unit only if the submission has been made, signed, and certified in accordance with the provisions of this section.

(2) The designated representative shall submit to the Department a copy of the Certificate of Representation submitted to EPA pursuant to 40 C.F.R. 72 subpart B, adopted and incorporated by reference at Rule 62-204.800, F.A.C.

(3) The designated representative shall sign and certify each submission with the following:

(a) "I am authorized to make this submission on behalf of the owners and operators of the Acid Rain source or Acid Rain units for which the submission is made."

(b) "I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment."

(4) The Department shall make no determination concerning any private legal dispute related to authorization of any designated representative or any private legal disputes concerning the proceeds of allowance transfers. The Department shall not stay any submission or the effect of any action of the designated representative based upon any communication or objection concerning the authorization of the designated representative to make any submission, to take any action or to determine not to take action.

(5) The designated representative shall certify that each unit for which any initial Acid Rain Part application is submitted shall be operated and the source containing the unit shall be operated in compliance with all the terms and conditions of the application until the Department takes final action on the application.

(6) The designated representative shall serve notice on each owner and operator of any Acid Rain unit of each Acid Rain Program submittal made by the designated representative and of each EPA or Department determination received by the designated representative, provided that the submittal or determination covers the source or the unit and provided that the owner or operator has not waived the right to receive the copy. The timing of such notice shall be:

(a) For submittals, the date submitted;

(b) For determinations, within 10 business days of receipt;

Specific Authority 403.061, 403.087, 403.0872, 403.8055 FS. Law Implemented 403.061, 403.0872 FS. History--New 1-3-95, Amended 12-10-97.

62-214.360 Department Action on Applications.

Any application submitted pursuant to this chapter, including any proposal for NO_x alternative emission limitation, shall be processed by the Department under the provisions of Rules 62-213.420 and 62-213.430, F.A.C., with the following additional limitations.

(1) The Department shall not approve any Acid Rain compliance plan described at subsection 62-214.330(2), F.A.C., until the Department receives, in addition to the information required by paragraph 62-210.900(1)(a), Rules 62-214.320 and 62-214.330, F.A.C., certification from the designated representative that the proposed Acid Rain compliance plan technology has received any necessary EPA approvals, pursuant to 40 CFR 72.44(f), adopted and incorporated by reference at Rule 62-204.800, F.A.C.

(2) The Department shall take no final action on any permit application for revision submitted by a designated representative to alter or terminate any Acid Rain compliance plan described at Rule 62-214.330(2), F.A.C., until the Department receives notice from EPA that the proposed revision has received necessary EPA approvals.

(3) The Department shall consider notice from EPA that an Acid Rain compliance plan described at Rule 62-214.330(2), F.A.C., has failed or for other reason no longer has necessary EPA approval to be cause for permit revision pursuant to Rule 62-4.080, F.A.C.

(4) The Department shall not allocate allowances.

(5) A NO_x alternative emission limitation must meet the substantive and procedural criteria of 40 CFR 76.10.

Specific Authority 403.061, 403.087, 403.0872 FS. Law Implemented 403.031, 403.061, 403.0872 FS. History--New 1-3-95, Amended 7-6-95, 12-10-97, 1-3-01, 4-16-01, 6-2-02, 3-16-08.

62-214.370 Revisions and Administrative Corrections.

Except as specifically provided in this section, all revisions of and administrative corrections to a final Acid Rain Part shall be processed in accordance with the provisions of Chapters 62-213 and 62-210, F.A.C., respectively.

(1) An Acid Rain Part revision may be submitted for approval at any time. No revision shall affect the expiration date of the Acid Rain Part of final Title V source permit to be revised. No revision shall excuse any violation of an Acid Rain Program requirement that occurred prior to the effective date of the revision. An Acid Rain unit shall comply with its existing Acid Rain Part while a revision is pending.

(2) The Department shall not change or void, through a permit revision, the standard requirements of 40 C.F.R. 72.9, adopted and incorporated by reference at Rule 62-204.800, F.A.C.

(3) The designated representative shall comply with the additional requirements of Rule 62-214.330, F.A.C., when applying for revisions that:

(a) Involve incorporation of a compliance option that was not submitted for approval and comment during the issuance process, or

(b) Involve a change in a compliance option that was previously submitted.

(4) The designated representative, may opt to submit the revisions described at 40 C.F.R. 72.81(b)(1) and (3), adopted and incorporated by reference at Rule 62-204.800, F.A.C., and those described at paragraph 62-213.400(2)(j), F.A.C., as revisions that may be requested, processed, and implemented pursuant to Rule 62-213.413, F.A.C.

(5) The Department shall revise an Acid Rain Part for cause in accordance with the procedures in subsection 62-213.430(4), F.A.C.

(6) Acid Rain Part changes listed in 40 C.F.R. 72.83(a)(1), (2), (6), (9) and (10), which are adopted and incorporated by reference at Rule 62-204.800, F.A.C., shall be made as administrative permit corrections pursuant to Rule 62-210.360, F.A.C. Incorporation of changes approved by EPA under 40 C.F.R. 72.83(a)(11) and (12) shall also be accomplished as administrative permit corrections. The Department shall submit the revised portion of the Acid Rain Part to EPA.

(7) The following revisions shall be deemed to amend automatically and become incorporated in the unit's Acid Rain Part by operation of law without any further action by the Department:

(a) All EPA approved allowance allocations, transfers to and deductions from an Acid Rain unit's Allowance Tracking System account; and

(b) EPA approved offset plans under 40 C.F.R. Part 77, incorporated by reference at Rule 62-204.800, F.A.C.

Specific Authority 403.061, 403.087, 403.0872 FS. Law Implemented 403.031, 403.061, 403.0872 FS. History--New 1-3-95, Amended 7-6-95, 12-10-97, 1-3-01, 4-16-01.

62-214.420 Acid Rain Part Content.

In addition to the requirements of Chapter 62-213, F.A.C., any draft, proposed or final Acid Rain Part, shall contain the following:

(1) All of the information required for application at subsection 62-214.320(2), F.A.C.;

(2) The applicable Acid Rain emissions limitation for sulfur dioxide as defined in 40 C.F.R. 72.2, adopted and incorporated by reference at Rule 62-204.800, F.A.C.;

(3) The applicable Acid Rain emissions limitation for nitrogen oxides as defined by 40 C.F.R. 72.2, adopted and incorporated by reference at Rule 62-204.800, F.A.C.;

(4) A statement of basis containing factual information on the reasons and supporting legal authority for approval or disapproval of the Acid Rain Part and any compliance options requested in the permit application, including references to applicable statutory or regulatory provisions;

(5) A statement that the owners and operators and designated representative of each Acid Rain source and each Acid Rain unit at the source shall comply with the provisions of 40 C.F.R. Parts 75 and 76, each adopted and incorporated by reference at Rule 62-204.800, F.A.C.;

(6) A statement that the designated representative of an Acid Rain source and each Acid Rain unit at the source shall submit all compliance certifications required by the Federal Acid Rain Program;

(7) A statement that the designated representative of a source shall comply with the requirements of subsection 62-214.350(5),

F.A.C.;

(8) A statement that an Acid Rain Part shall be binding on any new owner or operator or the new designated representative of any Acid Rain source or Acid Rain unit governed by the permit;

(9) A statement that the annual statement of compliance pursuant to subsection 62-213.440(3), F.A.C., be submitted within 60 days after the end of the calendar year;

(10) A statement that an Acid Rain source shall comply with the recordkeeping and reporting requirements of 40 C.F.R. 72.9(f), adopted and incorporated by reference at Rule 62-204.800, F.A.C. Such recordkeeping and reporting requirements are in addition to those requirements of Chapter 62-213, F.A.C.; and

(11) For opt-in sources, the requirements of 40 C.F.R. 74.12, adopted and incorporated by reference at Rule 62-204.800, F.A.C.

Specific Authority 403.061, 403.087, 403.0872 FS. Law Implemented 403.031, 403.061, 403.0872 FS. History—New 1-3-95, Amended 7-6-95, 12-10-97, 1-3-01, 3-16-08.

62-214.430 Implementation and Termination of Compliance Options.

(1) Activation. The designated representative shall not activate an approved conditional compliance option except by providing notice to the Department that the option will actually be pursued beginning January 1 of a specified year. An approved conditional compliance option must be activated, if at all, before the date of any enforceable milestone applicable to the option. The option becomes binding on the owners and operators of any unit governed by the option at the time the designated representative submits the notice. The notice shall:

(a) Specify the first calendar year and the last calendar year for which the approved conditional compliance option is to be active; and

(b) Certify that the source has obtained all necessary EPA approvals of the technology pursuant to Subpart D of 40 C.F.R. Parts 72, 74, and 76, each adopted and incorporated by reference at Rule 62-204.800, F.A.C.

(2) Termination of Approved Conditional Compliance Options. The designated representative shall not terminate an approved conditional compliance option after activation except by providing notice to the Department that the termination will occur on January 1 of a specified year. The termination becomes binding on the owners and operators and the designated representative of any unit governed by the option at the time the designated representative submits the notice. The notice of termination shall:

(a) Specify the calendar year for which the approved conditional compliance option is to be terminated; and

(b) Certify that the source has obtained any necessary EPA approvals of the termination pursuant to Subpart D of 40 C.F.R. Parts 72, 74, and 76, each adopted and incorporated by reference at Rule 62-204.800, F.A.C.

(3) The date of activation of the compliance option shall not be a defense against failure to meet the requirements applicable to that compliance option during each calendar year for which the compliance option is activated.

(4) Upon receipt of a notice described at subsection 62-214.430(1) or subsection 62-214.430(2), F.A.C., the Department shall correct the source's permit pursuant to Rule 62-210.360 and subsection 62-214.370(6), F.A.C.

Specific Authority 403.061, 403.087, 403.0872 FS. Law Implemented 403.031, 403.061, 403.0872 FS. History—New 1-3-95, Amended 7-6-95, 12-10-97, 1-3-01, 3-16-08.

Chapter 62-243, F.A.C.

Tampering with Motor Vehicle Air Pollution Control Equipment

CHAPTER 62-243
TAMPERING WITH MOTOR VEHICLE AIR POLLUTION CONTROL EQUIPMENT

62-243.100	Purpose and Scope (Repealed)
62-243.200	Definitions (Repealed)
62-243.300	Exemptions
62-243.400	Prohibitions (Repealed)
62-243.500	Certification
62-243.600	Enforcement (Repealed)

62-243.100 Purpose and Scope.

Rulemaking Authority 316.2935 FS. Law Implemented 316.2935, 316.6105, 318.18, 325.209 FS. History—New 2-21-90, Amended 5-29-90, Formerly 17-243.100, Repealed 2-16-12.

62-243.200 Definitions.

Rulemaking Authority 316.2935 FS. Law Implemented 316.2935 FS. History—New 2-21-90, Amended 5-29-90, 1-2-91, Formerly 17-243.200, Repealed 2-16-12.

62-243.300 Exemptions.

(1) The following motor vehicles are exempt from the provisions of this chapter:

(a) Motor vehicles which have net vehicle weights greater than 5,000 pounds or gross vehicle weights greater than 10,000 pounds.

(b) Motor vehicles which are designated as model year 1974 or older.

(c) Motorcycles, mopeds, scooters and golf carts, as defined in Section 320.01, F.S.

(d) Farm vehicles, as defined in Section 320.51, F.S.

(e) Imported nonconforming motor vehicles which are documented to be exempt from federal emission control requirements by the U.S. Environmental Protection Agency under 40 CFR 85, Subpart P.

(2) Motor vehicles which are owned by persons who have received hardship exemptions, or exchanged engine certifications, pursuant to Department of Highway Safety and Motor Vehicles Rule 15C-6.002, F.A.C., are exempt from the provisions of subsection 62-243.400(1), F.A.C., but, unless otherwise exempted, are subject to the provisions of subsection 62-243.400(2) and Rule 62-243.500, F.A.C.

(3) The following motor vehicle transactions are exempt from the provisions of subsection 62-243.400(2), F.A.C.:

(a) Sales, reassignments, and trades to licensed motor vehicle dealers.

(b) First-time retail sales or leases of new motor vehicles subject to certification under Section 207, Clean Air Act, 42 U.S.C., 7541.

(c) Lease agreements for 30 days or less.

(d) Sales of motor vehicles for salvage purposes only.

(4) The following motor vehicle transactions are exempt from the certification requirement of Rule 62-243.500, F.A.C.:

(a) Sales, reassignments or transfers of motor vehicles by endorsement or delivery of a manufacturer's or distributor's statement of origin to a motor vehicle dealer holding a franchise agreement from the manufacturer or distributor issuing the statement of origin.

(b) First-time retail sales or leases of new motor vehicles subject to certification under Section 207, Clean Air Act, 42 U.S.C., 7541.

(c) Sales, reassignments, and trades to licensed motor vehicle dealers, where the dealer elects not to request the certification from the seller or person reassigning title.

(d) Sales, reassignments, and trades by licensed motor vehicle dealers to licensed motor vehicle dealers.

(e) Lease agreements for 30 days or less.

(f) Sales of motor vehicles for salvage purposes only.

Rulemaking Authority 316.2935 FS. Law Implemented 316.2935, 325.209 FS. History—New 2-21-90, Amended 5-29-90, 1-2-91, Formerly 17-

243.300.

62-243.400 Prohibitions.

Rulemaking Authority 316.2935 FS. Law Implemented 316.2935 FS. History—New 2-21-90, Amended 5-29-90, 1-2-91, Formerly 17-243.400, Repealed 2-16-12.

62-243.500 Certification.

(1) Certification Statement.

(a) Except as provided in subsection 62-243.300(4), F.A.C., on and after January 1, 1991, at the time of sale, lease, or transfer of title of a nonexempt motor vehicle, the seller, lessor, or person transferring title shall provide a written certification to the purchaser, lessee, or transferee that the air pollution control equipment of the motor vehicle has not been tampered with by the seller, lessor, transferor, or by his or her agents, employees, or other representatives.

(b) As provided in paragraph 62-243.500(1)(d), F.A.C., a licensed motor vehicle dealer shall also visually observe and certify in writing that specific air pollution devices and systems are in place and appear properly connected and undamaged.

(c) For sales, leases, or transfers of title by private parties, the certification shall read as follows:

1. Florida law prohibits the operation, sale, lease, or transfer of title of any automobile or light-duty truck (1975 or newer, 10,000 pounds gross vehicle weight or less) that has been tampered with. "Tampering" means the dismantling, removal, or rendering ineffective of any air pollution control device or system which has been installed on a motor vehicle by the vehicle manufacturer except to replace such device or system with a device or system equivalent in design and function to the part that was originally installed on the motor vehicle (Section 316.2935, F.S.).

2. As the owner of this motor vehicle, or on behalf of the owner which is an organization, firm, or other such entity, I hereby certify that the following air pollution emission control devices and systems of this vehicle, if installed by the vehicle manufacturer or importer, have not been tampered with by me or with my permission, or by or with the permission of the owner of said vehicle: catalytic converter, fuel inlet restrictor, unvented fuel cap, exhaust gas recirculation system (EGR)*, air pump and/or air injection system (AIS)*, and fuel evaporative emissions system (EVP)* (*1981 and newer vehicles only).

3. This certification shall not be deemed or construed as a warranty that any air pollution control device or system of the vehicle is in functional condition, nor does the execution or delivery of this certification create by itself grounds for a cause of action between the parties to this transaction.

(d) For sales, leases, or transfers of title by licensed motor vehicle dealers to private parties, the certification shall read as follows:

1. Florida law prohibits the operation, sale, lease, or transfer of title of any automobile or light-duty truck (1975 or newer, 10,000 pounds gross vehicle weight or less) that has been tampered with. "Tampering" means the dismantling, removal, or rendering ineffective of any air pollution control device or system which has been installed on a motor vehicle by the vehicle manufacturer except to replace such device or system with a device or system equivalent in design and function to the part that was originally installed on the motor vehicle (Section 316.2935, F.S.).

2. As a motor vehicle dealer licensed to conduct business in the State of Florida, I hereby certify that the following air pollution emission control devices and systems of this vehicle, if installed by the vehicle manufacturer or importer, have not been tampered with by me or by my agents, employees, or other representatives: catalytic converter, fuel inlet restrictor, unvented fuel cap, exhaust gas recirculation system (EGR)*, air pump and/or air injection system (AIS)*, and fuel evaporative emissions system (EVP)* (*1981 and newer vehicles only). I also hereby certify that I or persons under my supervision have inspected this motor vehicle and, based on said inspection, have determined that the above-listed air pollution control devices and systems, if installed by the vehicle manufacturer or importer, are in place and appear properly connected and undamaged as determined by visual observation.

3. This certification shall not be deemed or construed as a warranty that any air pollution control device or system of the vehicle is in functional condition, nor does the execution or delivery of this certification create by itself grounds for a cause of action between the parties to this transaction.

(e) The certification statement shall be provided on the bill of sale, lease agreement, or other document furnished by the seller, lessor, or person transferring title. The make, model, year, and vehicle identification number of the motor vehicle being sold, leased, or transferred shall be included on the document containing the certification statement.

(2) Acknowledgment of Certification.

(a) All parties to a transaction, or their authorized agent(s) or attorney(s) in fact, shall acknowledge that the certification required by this section has been prepared, tendered and received. Such acknowledgment may be included on the face of the certification document and shall reflect the date of tender and receipt.

(b) Those persons authorized or empowered to execute motor vehicle title transactions shall also be authorized to execute the certification as described by subparagraph (a).

Rulemaking Authority 316.2935 FS. Law Implemented 316.2935 FS. History—New 5-29-90, Amended 1-2-91, Formerly 17-243.500.

62-243.600 Enforcement.

Rulemaking Authority 316.2935 FS. Law Implemented 316.2935 FS. History—New 2-21-90, Amended 5-29-90, 1-2-91, Formerly 17-243.600, Repealed 2-16-12.

Chapter 62-252, F.A.C.

Gasoline Vapor Control

**CHAPTER 62-252
GASOLINE VAPOR CONTROL**

62-252.100	Purpose and Scope (Repealed)
62-252.200	Definitions (Repealed)
62-252.300	Gasoline Dispensing Facilities – Stage I Vapor Recovery
62-252.400	Gasoline Dispensing Facilities – Stage II Vapor Recovery (Repealed)
62-252.500	Gasoline Tanker Trucks or Trailers (Repealed)
62-252.900	Form

62-252.100 Purpose and Scope.

Rulemaking Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061, 403.087 FS. History–New 2-2-93, Formerly 17-252.100, Repealed 2-16-12.

62-252.200 Definitions.

Rulemaking Authority 403.061 FS. Law Implemented 403.031, 403.061, 403.087 FS. History–Formerly 17-2.100, Amended 2-2-93, Formerly 17-252.200, Amended 5-9-07, Repealed 2-16-12.

62-252.300 Gasoline Dispensing Facilities - Stage I Vapor Recovery.

(1) Applicability. The requirements of this rule section shall apply to:

(a) All gasoline dispensing facilities with a monthly gasoline throughput of 20,000 gallons (75,700 liters) or more located in any area designated as a nonattainment area or air quality maintenance area for ozone under Rule 62-204.340, F.A.C.;

(b) All gasoline dispensing facilities in the state with a monthly throughput of 10,000 gallons (37,850 liters) or more that begin operation on or after August 1, 2007;

(c) All gasoline dispensing facilities in the state with a monthly throughput of 10,000 gallons (37,850 liters) or more that are not otherwise subject to this rule pursuant to paragraphs 62-252.300(1)(a) or (b), F.A.C., and whose storage tanks are upgraded or replaced to meet the secondary containment requirements for integral piping in Rule 62-761.510, F.A.C., and are returned to operation on or after August 1, 2007; and

(d) All gasoline dispensing facilities in the state with a monthly throughput of 10,000 gallons (37,850 liters) or more that are not otherwise subject to this rule pursuant to paragraphs 62-252.300(1)(a), (b) or (c), F.A.C.

(2) Prohibition. No owner or operator of a gasoline dispensing facility subject to the provisions of this section shall transfer or cause or allow the transfer of gasoline from any gasoline cargo tank into any stationary storage tank located at any such gasoline dispensing facility unless the stationary storage tank is equipped for submerged filling and the vapors displaced from the storage tank during filling are processed by a Stage I vapor recovery system in accordance with subsection 62-252.300(3), F.A.C.

(3) Control Technology Requirements.

(a) The Stage I vapor recovery system required by this rule section shall conform with the equipment specifications of the U.S. Environmental Protection Agency document, “Design Criteria for Stage I Vapor Control Systems – Gasoline Service Stations,” dated November 1975, with the exception of Attachment A, hereby adopted and incorporated by reference.

(b) The Stage I vapor recovery system piping shall include pressure-vacuum vents and be leak-tight.

Rulemaking Authority 403.061 FS. Law Implemented 403.031, 403.061, 403.087 FS. History–Formerly 17-2.650(1)(f)11., Amended 2-2-93, Formerly 17-252.300, Amended 5-9-07, 9-24-13.

62-252.400 Gasoline Dispensing Facilities - Stage II Vapor Recovery.

Rulemaking Authority 403.061 FS. Law Implemented 403.031, 403.061, 403.087 FS. History–New 2-2-93, Formerly 17-252.400, Amended 11-23-94, 5-9-07, Repealed 2-16-12.

62-252.500 Gasoline Tanker Trucks or Trailers.

Rulemaking Authority 403.061 FS. Law Implemented 403.031, 403.061, 403.087 FS. History–Formerly 17-2.650(1)(c)3., 17-2.700(6)(c)2.d.,

Amended 2-2-93, Formerly 17-252.500, Amended 9-10-96, 5-9-07, Repealed 2-16-12.

62-252.900 Form.

Rulemaking Authority 403.061 FS. Law Implemented 403.031, 403.061, 403.087 FS. History–New 2-2-93, Formerly 17-252.900, Amended 11-23-94, 9-10-96, 5-9-07, Repealed 2-16-12.

Chapter 62-256, F.A.C.

Open Burning

**CHAPTER 62-256
OPEN BURNING**

62-256.200	Definitions
62-256.300	Prohibitions
62-256.700	Open Burning Allowed

62-256.200 Definitions.

The following words, phrases, or terms when used in this chapter shall, unless the content otherwise indicates, have the following meanings:

- (1) “Air curtain incinerator” is a portable or stationary combustion device that directs a plane of high velocity forced draft air through a manifold head into a pit with vertical walls in such a manner as to maintain a curtain of air over the surface of the pit and a recirculating motion of air under the curtain. An air curtain incinerator is considered open burning for purposes of this chapter and Rule 62-701.300, F.A.C.
- (2) “Air pollution episode” is any day on which generally unhealthy air (an Air Quality Index value of 151 or greater) occurs or is forecast to occur by the Department.
- (3) “Department” is the Department of Environmental Protection.
- (4) “Extinguished” means the absence of any visible flames, smoke or emissions.
- (5) “Garbage” means all kitchen and table food waste, animal or vegetative waste that is attendant with or results from the storage, packaging, preparation, cooking or handling of food materials.
- (6) “Group I containers” means combustible containers which formerly contained organic or metallo-organic pesticides, except organic mercury, lead, cadmium, or arsenic compounds.
- (7) “Land clearing debris” is uprooted or cleared vegetation resulting from a land clearing operation, including any untreated wood generated by the land clearing operation (e.g., untreated fence posts).
- (8) “Land clearing operation” means the uprooting or clearing of vegetation in connection with construction for buildings and rights-of-way; land development; or mineral operations. It does not include landscaping and yard maintenance operations or other such routine property clean-up activities.
- (9) “National Weather Service air stagnation advisory” is an advisory issued by the National Weather Service to caution local and regional agencies of meteorological conditions which are conducive to poor dispersion and that are expected to persist for at least 36 hours.
- (10) “Open burning” means the burning of any matter in such a manner that the products of combustion resulting from the burning are emitted directly into the outdoor atmosphere without passing through a stack or chimney.
- (11) “Open field” means any location in a well ventilated cleared area that is at least 200 feet in all directions from any wooded area or occupied building(s), and 100 feet from any public road.
- (12) “Pesticide” means any substance or mixture substances intended for preventing, destroying, repelling, or mitigating any insects, rodents, nematodes, fungi, weeds, or other forms of plant or animal life or viruses, except viruses or fungi on or in living man or other animals, which the Department of Agriculture and Consumer Services shall declare to be a pest, and any substance or mixture of substances intended for use as a plant regulator, defoliant, or desiccant.
- (13) “Sunset” is the official time the sun will set as set forth by the U.S. Naval Observatory (tables are available at National Weather Service offices and on the internet at www.usno.navy.mil).
- (14) “Trash” means materials resulting from the construction, renovation or demolition of a structure, and other debris such as paper, cardboard, packing material, cloth, glass, street sweepings, vehicle tires and other like matter. The term does not include untreated wood or vegetative debris.
- (15) “Treated wood” means wood coated or infused with paint, glue, filler, pentachlorophenol, creosote, tar, asphalt, chromated copper arsenate (CCA), or other wood preservatives or treatments.
- (16) “Tree cutting debris” is debris consisting of trees, tree stumps, and tree limbs resulting from a tree removal or tree trimming operation.
- (17) “Untreated wood” means wood (including lighter pine, tree trunks, limbs and stumps, shrubs, and lumber) which is free of paint, glue, filler, pentachlorophenol, creosote, tar, asphalt, chromated copper arsenate (CCA), and other wood preservatives or treatments.

(18) “Waste pesticide containers” means any containers made of combustible materials, including but not limited to paper, plastic, or burlap, which formerly contained pesticides and which the manufacturer or formulator provided as an end user conveyance for the specified product.

(19) “Yard waste” means vegetative matter resulting from landscaping and yard maintenance operations and other such routine property clean-up activities. It includes materials such as leaves, shrub trimmings, grass clippings, palm fronds, and brush. It does not include land clearing debris or tree cutting debris.

Rulemaking Authority 403.061 FS. Law Implemented 403.031, 403.061 FS. History—New 7-1-71, Amended 1-11-82, 7-30-85, Formerly 17-5.02, Amended 10-20-86, Formerly 17-5.020, 17-256.200, Amended 11-30-94, 7-6-05.

62-256.300 Prohibitions.

- (1) General Prohibition. No person shall ignite, cause to be ignited, or permit to be ignited, any material which will result in any prohibited open burning as regulated by this chapter; nor shall any person suffer, allow, conduct or maintain any prohibited open burning.
- (2) Prohibition on the Open Burning of Certain Materials.
 - (a) Except as provided at paragraph 62-256.300(2)(b), F.A.C., the open burning of biological waste, hazardous waste, asbestos-containing materials, mercury-containing devices, pharmaceuticals, tires, rubber material, residual oil, used oil, asphalt, roofing material, tar, treated wood, plastics, garbage, or trash is prohibited.
 - (b) Notwithstanding the provisions of paragraph 62-256.300(2)(a), F.A.C., certain otherwise prohibited materials may be burned for the training of firefighters in accordance with subsection 62-256.700(4), F.A.C.; waste pesticide containers may be burned in accordance with subsection 62-256.700(5), F.A.C.; animal carcasses may be burned in accordance with subsection 62-256.700(6), F.A.C.; and polyethylene agricultural plastic, untreated wood pallets, and packing material used in agriculture may be burned in accordance with subsection 62-256.700(7), F.A.C.
 - (c) Open burning of vegetative debris and untreated wood is prohibited except as provided at subsections 62-256.700(1), (2), (3), (8), (9), and (10), F.A.C., or subsection 62-296.320(3), F.A.C.
- (3) Prohibition on Open Burning During Adverse Conditions. No open burning, including use of any air curtain incinerator exempted from permitting pursuant to Rule 62-210.300, F.A.C., shall be conducted during a National Weather Service Air Stagnation Advisory or Air Pollution Episode, or if the Department of Agriculture and Consumer Services, Florida Forest Service, has determined that weather conditions are unfavorable for safe burning.
- (4) Applicability of Other Laws, Rules and Ordinances. Nothing in this chapter shall relieve any person from complying with any other applicable laws, rules, or ordinances, including Chapter 590, F.S.; rules of the Department of Agriculture and Consumer Services, Florida Forest Service; and ordinances of any local, county, or municipal government.

Rulemaking Authority 403.061 FS. Law Implemented 403.031, 403.061 FS. History—New 7-1-71, Amended 1-11-82, 7-30-85, Formerly 17-5.03, Amended 10-20-86, 8-26-87, Formerly 17-5.030, 17-256.300, Amended 11-30-94, 7-6-05, 10-6-08.

62-256.700 Open Burning Allowed.

- (1) Open Burning of Yard Waste.
 - (a) Open burning of yard waste is allowed provided:
 1. The yard waste was generated on residential premises of not more than two family units;
 2. The open burning is conducted on the premises where the material was generated;
 3. The fire is ignited after 8:00 a.m. Central time or 9:00 a.m. Eastern time and extinguished no later than one hour before sunset, provided however that no burning shall be conducted during windy conditions;
 4. The fire is enclosed in a noncombustible container or is restricted to a pile no greater than eight feet in diameter built upon ground cleared of all combustible material;
 5. The fire is set back at least 25 feet from any wildlands, brush, or combustible structure, 50 feet from any paved public roadway, and 150 feet from any occupied building other than that owned or leased by the individual doing the burning;
 6. The fire is attended and adequate fire extinguishing equipment is readily available at all times; and
 7. The moisture content and composition of material to be burned is favorable to good burning which will minimize smoke.
 - (b) Except as provided above and at subsections 62-256.700(8) and (9), F.A.C., any other open burning of yard waste is allowed only if such burning is conducted using a Department-permitted air curtain incinerator operated in compliance with the provisions of

Rule 62-296.401, F.A.C., and any other terms of the unit's air permit.

(2) Open Burning of Tree Cutting Debris.

(a) Open burning of tree cutting debris is allowed provided:

1. The tree cutting debris was generated on residential premises of not more than two family units;
2. The open burning is restricted to the site where the tree cutting debris was generated;
3. The fire is ignited after 8:00 a.m. Central time or 9:00 a.m. Eastern time and shall have no visible flame one hour before sunset or anytime thereafter, except in smoke sensitive areas as determined by the Florida Forest Service, where the fire must be extinguished no later than one hour before sunset;
4. The fire is attended, and adequate fire extinguishing equipment is readily available at all times;
5. The moisture content and composition of material to be burned is favorable to good burning which will minimize smoke; and
6. Prior to conducting the open burning, the person responsible for the burn contacts the Florida Forest Service regarding the planned burning activity.

(b) Except as provided above and at subsections 62-256.700(8) and (9), F.A.C., any other open burning of tree cutting debris shall be conducted using a Department-permitted air curtain incinerator operated in compliance with the provisions of Rule 62-296.401, F.A.C., and any other terms of the unit's air permit.

(3) Open Burning of Land Clearing Debris.

(a) Open burning of land clearing debris is allowed provided:

1. The open burning is restricted to the site where the land clearing debris was generated;
2. The fire is ignited after 8:00 a.m. Central time or 9:00 a.m. Eastern time and shall have no visible flame one hour before sunset or anytime thereafter, except in smoke sensitive areas as determined by the Florida Forest Service, where the fire must be extinguished no later than one hour before sunset;
3. The fire is attended, and adequate fire extinguishing equipment is readily available at all times;
4. The moisture content and composition of material to be burned is favorable to good burning which will minimize smoke; and
5. Prior to conducting the open burning, the person responsible for the burn contacts the Florida Forest Service regarding the planned burning activity.

(b) Except as provided above, any other open burning of land clearing debris shall be conducted using an air curtain incinerator operated in compliance with the terms of the exemption from air permitting at Rule 62-210.300, F.A.C., if such exemption applies, or if such exemption does not apply, in compliance with the provisions of Rule 62-296.401, F.A.C., and any other terms of the unit's air permit.

(4) Open Burning for the Training of Firefighters.

(a) Except as provided at paragraph 62-256.700(4)(b), F.A.C., open burning is allowed for the instruction and training of organized firefighters or industrial employees under the supervision of the appropriate public fire control official provided that all such burning is conducted at a fire training center certified by the Department of Financial Services, Division of State Fire Marshal, and does not involve the burning of any asbestos-containing materials, mercury-containing devices, or hazardous waste.

(b) A structure not on the premises of a certified fire training center may be burned for the instruction and training of organized firefighters provided the following conditions are met.

1. The burning activities shall be conducted under the auspices of a certified training center or by an organized fire department recognized by the Division of State Fire Marshal. Said activities shall be supervised by a fire training instructor certified by the Division of State Fire Marshal;

2. The burning shall be conducted in accordance with the National Fire Protection Association document, "Standard on Live Fire Training Evolutions, 2002 Edition (NFPA 1403)," hereby adopted and incorporated by reference, and available from the National Fire Protection Association, P. O. Box 9101, Quincy, MA 02269-9101;

3. The burning of the structure and disposal of the waste products shall be conducted in compliance with all applicable provisions of 40 CFR Part 61, Subpart M, National Emission Standard for Asbestos, adopted and incorporated by reference at Rule 62-204.800, F.A.C.;

4. Prior to the structure being burned, all hazardous waste, mercury-containing devices, and vinyl siding shall be removed; and

5. The Florida Forest Service and the Department shall be notified at least 10 business days in advance of the time and place of the burning exercise.

(5) Open Burning of Waste Pesticide Containers. Subject to all of the following conditions, waste pesticide containers may be

burned in open fields by the owner of the crops, the owner's authorized employee or caretaker, or by commercial pesticide applicators hired by the owner or caretaker.

(a) Plastic containers must be the original container provided by the pesticide manufacturer or formulator as end user conveyance for the specific product, and not reused containers designed for other products.

(b) Containers must be classified as Group I Containers and bear label instructions stating that small quantities of the containers may be burned in open fields by the user of the pesticide when such open burning is permitted by State and local regulations.

(c) The quantity of containers to be burned each day per parcel treated shall not exceed the amount accumulated during one day's use of pesticide. No more than 500 pounds of pesticide containers shall be burned per day at any specific location. If more than one fire is to be set in any area each specific burning location shall be at least 1,000 yards from each other location at which burning will occur concurrently.

(d) All Group I Containers which are to be disposed by open burning shall be completely empty and free of residual material pursuant to the following criteria:

1. Plastic containers including inner liners shall be triple rinsed with the same kind of solvent used to dilute the spray mixture in the field. The rinse liquids from the containers shall be added to the spray mixture in the field.

2. Paper containers shall be emptied by a final shaking and tapping of the sides and bottom to remove clinging particles. All loosened particles shall be added to the spray mixture or application in the field.

(e) The open burning shall meet the following conditions:

1. The open burning is two hundred feet or more away from any farm workers or occupied buildings and is one hundred feet or more away from any public road.

2. The fire is ignited after 9:00 a.m. and is extinguished one hour before sunset of the same day.

3. The person responsible for the burning is in attendance at an upwind location from the fire for the entire period of the burn (until all flame and smoke have dissipated).

4. The open burning is enclosed in a noncombustible container or ground excavation covered by a metal grill.

(6) Open Burning of Animal Carcasses. Open burning of animal carcasses is allowed provided:

(a) The Department of Agriculture and Consumer Services has determined that the need for destruction of such carcasses constitutes an emergency requiring the use of open burning; and

(b) Such burning is conducted using an air curtain incinerator operated in compliance with the terms of the exemption from air permitting at Rule 62-210.300, F.A.C., if such exemption applies, or if such exemption does not apply, in compliance with the provisions of Rule 62-296.401, F.A.C., and any other terms of the unit's air permit.

(7) Open Burning Related to Agricultural Operations.

(a) Open burning of the following materials used in agricultural operations related to the growing, harvesting or maintenance of crops is allowed provided such burning is conducted in accordance with the provisions of Section 403.707(2)(e), F.S.

1. Polyethylene agricultural plastic;

2. Damaged, nonsalvageable, untreated wood pallets; and

3. Packing material that cannot feasibly be recycled.

(b) Agricultural burning conducted under the authority of the Department of Agriculture and Consumer Services is not regulated under this chapter.

(8) Open Burning of Storm-Generated Debris. Open burning of storm-generated debris consisting only of vegetative debris and untreated wood is allowed provided:

(a) The open burning is conducted by or under the authority of the municipal or county government responsible for clean-up activities following a storm;

(b) Such burning is conducted using an air curtain incinerator operated in compliance with the terms of the exemption from air permitting at Rule 62-210.300, F.A.C., if such exemption applies, or if such exemption does not apply, in compliance with the provisions of Rule 62-296.401, F.A.C., and any other terms of the unit's air permit; or such burning is pile burning conducted under the authority of the Florida Forest Service; and

(c) By no later than 10 days after the start of the open burning, the local government or its agent provides a written notice to the Department describing the general nature of the materials being burned, the location of the burning activity, the method of burning being used, and the name, address, and telephone number of the local government representative to contact regarding the burning activity.

(9) Open Burning of Insect or Disease-Infested Vegetation. Open burning of insect or disease-infested vegetation is allowed provided:

(a) The Director of the Florida Forest Service has determined that the need for destruction of such vegetation constitutes an emergency requiring the use of open burning; and

(b) Such burning is conducted using an air curtain incinerator operated in compliance with the terms of the exemption from air permitting at Rule 62-210.300, F.A.C., if such exemption applies, or if such exemption does not apply, in compliance with the provisions of Rule 62-296.401, F.A.C., and any other terms of the unit's air permit; or such burning is pile burning conducted under the authority of the Florida Forest Service.

(10) Recreational Open Burning. Nothing in this chapter shall be construed to prohibit the open burning of vegetative debris and untreated wood in a campfire, ceremonial bonfire, outdoor fireplace, or other contained outdoor heating or cooking device, or on cold days for warming of outdoor workers.

Rulemaking Authority 403.061 FS. Law Implemented 403.031, 403.061, 403.707 FS. History--New 7-1-71, Amended 1-11-82, 10-10-82, 7-30-85, Formerly 17-5.09, Amended 10-20-86, 8-26-87, 11-23-88, Formerly 17-5.090, 17-256.700, Amended 11-30-94, 7-6-05, 10-6-08.

Chapter 62-257, F.A.C.

Asbestos Program

**CHAPTER 62-257
ASBESTOS PROGRAM**

62-257.100	Purpose and Scope (Repealed)
62-257.200	Definitions
62-257.301	Notification Procedure and Fee
62-257.400	Fee Schedule
62-257.900	Form

62-257.100 Purpose and Scope.

Rulemaking Authority 376.60, 403.061 FS. Law Implemented 376.60, 403.061 FS. History--New 3-31-94, Formerly 17-257.100, Amended 11-23-94, 3-24-96, 2-9-99, Repealed 2-16-12.

62-257.200 Definitions.

(1) "Asbestos" means the asbestiform varieties of serpentinite (chrysotile), riebeckite (crocidolite), cummingtonite-grunerite, anthophyllite, and actinolite-tremolite and includes trade acronyms products such as amosite.

(2) "Asbestos-containing materials", ACM, means any materials which contain more than one percent asbestos as determined by Polarized Light Microscopy.

(3) "Asbestos removal project" means a renovation or demolition operation in a facility that involves the removal of a threshold amount of regulated asbestos-containing material.

(4) "Category I Nonfriable Asbestos-Containing Material (ACM)" means asbestos-containing packings, gaskets, resilient floor covering, and asphalt roofing products containing more than 1 percent asbestos as determined using the method specified in Appendix A, Subpart F, 40 CFR Part 763, Section 1, Polarized Light Microscopy.

(5) "Category II Nonfriable ACM" means any material, excluding Category I Nonfriable ACM, containing more than 1 percent asbestos as determined using the methods specified in Appendix A, Subpart F, 40 CFR Part 763, Section 1, Polarized Light Microscopy, that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

(6) "Department" means the Florida Department of Environmental Protection.

(7) "Demolition" means the wrecking or taking out of any load-supporting structural member of a facility together with any related handling operations or the intentional burning of any facility.

(8) "Emergency renovation operation" means a renovation operation that was not planned but results from a sudden, unexpected event that, if not immediately attended to, presents a safety or public health hazard, is necessary to protect equipment from damage, or is necessary to avoid imposing an unreasonable financial burden. This term includes operations necessitated by nonroutine failures of equipment.

(9) "Facility" is as defined in 40 CFR 61.141, adopted and incorporated by reference in Rule 62-204.800, F.A.C.

(10) "Friable Asbestos Material" means any material containing more than 1 percent asbestos as determined using the method specified in Appendix A, Subpart F, 40 CFR Part 763 Section 1, Polarized Light Microscopy that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. If the asbestos content is less than 10 percent as determined by a method other than point counting by Polarized Light Microscopy (PLM), verify the asbestos content by point counting using PLM.

(11) "Local Air Program," for purposes of Chapter 62-257, F.A.C., only, means a county air pollution control program which meets the criteria of Section 403.182(1), F.S.

(12) "Nonscheduled renovation operation" means a renovation operation necessitated by the routine failure of equipment, which is expected to occur within a given period based on past operating experience, but for which an exact date cannot be predicted.

(13) "Ordered demolition" means a demolition under an order of a State or local government agency, issued because the facility is structurally unsound and in danger of imminent collapse.

(14) "Owner or operator" means any person or entity who owns, leases, operates, controls, or supervises either the renovation or demolition operation or the site of the renovation or demolition operation.

(15) "Planned renovation operation" means a renovation operation, or a number of such operations, in which regulated asbestos-containing material will be removed or stripped within a given period of time and that can be predicted. Individual nonscheduled operations are included if a number of such operations can be predicted to occur during a given period of time based on operating experience.

(16) "Renovation" means the alteration in any way of a facility or of one or more facility components. Operations in which load-supporting structural members are wrecked or taken out are demolitions.

(17) "Regulated Asbestos-Containing Material (RACM)" means:

(a) Friable asbestos material;

(b) Category I nonfriable ACM that has become friable;

(c) Category I nonfriable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading; or

(d) Category II nonfriable ACM that has become crumbled, pulverized, or reduced to powder or has a high probability of becoming crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations regulated by 40 CFR Part 61, Subpart M, as adopted in this chapter.

(18) "Residential dwelling" means any structure or building intended to house a single family, or a residential building having no more than four dwelling units. This term is not intended to include any institutional, commercial, public, or industrial structure, installation or building, any structure or building being demolished as part of a public project, regardless of its previous use, function or ownership, or any building, structure or installation being used partly for residential purposes and partly for commercial, public or industrial use.

(19) "State Asbestos Coordinator" means the person designated by the Director of the Department's Division of Air Resources Management to serve as the statewide coordinator for the asbestos program.

(20) "Threshold amount of regulated asbestos-containing material" means at least 260 linear feet on pipes, or at least 160 square feet on other facility components, or at least 35 cubic feet off facility components where the length or area could not be measured previously.

(21) "Working day" means Monday through Friday and includes holidays that fall on any of the days Monday through Friday.

Rulemaking Authority 376.60, 403.061 FS. Law Implemented 376.60, 403.061 FS. History--New 3-31-94, Formerly 17-257.200, Amended 11-23-94, 2-9-99.

62-257.301 Notification Procedure and Fee.

(1) The notice requirements of Chapter 62-257, F.A.C., Asbestos Program, apply to each owner or operator of a renovation of a facility involving the removal of a threshold amount of regulated ACM or any demolition of a facility regardless of whether or not asbestos is present and to each owner or operator of the site for a renovation of a facility involving the removal of a threshold amount of regulated ACM or any demolition of a facility regardless of whether or not asbestos is present.

(2) If a notice is required per subsection 62-257.301(1), F.A.C., the timely submittal of a completed "Notice of Demolition or Asbestos Renovation" form, as promulgated under subsection 62-257.900(1), F.A.C., or an electronically generated facsimile thereof, is required.

(a) The notice will be complete when the owner or operator legibly provides all the information requested on the Department's form, and, if applicable, the additional information required by 40 CFR 61.145(b), adopted and incorporated by reference in Rule 62-204.800, F.A.C., for ordered demolitions or emergency renovation operations.

(b) The notice will be timely when the owner or operator mails it or delivers it to the Local Air Program or, where there is no Local Air Program, to the Department's District Office having jurisdiction over the site of the renovation or demolition operation, so that it is postmarked or received:

1. At least 10 working days prior to the start of the renovation or demolition operation; or

2. No later than the following working day after an emergency renovation operation or ordered demolition; or

3. At least 10 working days prior to the end of the calendar year preceding the year for which a planned renovation operation notice is being given.

(3) The owner or operator who submits a single planned renovation operation notification involving small individual nonscheduled operations shall indicate on the notice form the total amount of regulated asbestos-containing material predicted to be removed during the calendar year based on operating experience.

(4) If after the start of the project it is determined that at least 20 percent more regulated asbestos-containing material than originally reported to the Department is to be removed, the owner or operator shall submit a revised notification according to Rule 62-257.301, F.A.C.

(5) This notification form, when complete and timely submitted, will satisfy the notification requirements of the EPA's National Emission Standards for Asbestos, 40 CFR 61.145(b).

(6) Except in the following situations, the owner or operator of an asbestos removal project shall pay a fee calculated pursuant to Rule 62-257.400, F.A.C., Fee Schedule.

(a) The Department's fee requirements are not applicable to schools, colleges, universities, or to a residential dwelling as defined in Rule 62-257.200, F.A.C.

(b) The Department's fee requirements are not applicable to those persons otherwise exempted from licensure under Section 469.002(4), F.S.

(c) The Department's fee requirements are not applicable if the county in which the asbestos removal project is located collects a fee for providing asbestos notification and inspection services according to 40 CFR 61, Subpart M, adopted and incorporated by reference in Rule 62-204.800, F.A.C.

(d) The fee to be paid by a small business, as small business is defined in Section 288.703, F.S., shall not exceed \$300.

Rulemaking Authority 376.60, 403.061 FS. Law Implemented 376.60, 403.061 FS. History--New 3-31-94, Formerly 17-257.301, Amended 11-23-94, 3-24-96, 2-9-99, 10-12-08.

62-257.400 Fee Schedule.

Except as noted in subsection 62-257.301(6), F.A.C., each asbestos removal project fee shall be calculated in accordance with the following fee schedule; however, no fee shall exceed \$1,000 for the total of square, linear, and cubic feet of regulated asbestos-containing material to be removed:

REGULATED ASBESTOS-CONTAINING MATERIAL TO BE REMOVED	FEE
0-159 square feet	\$ 0
0-259 linear feet	\$ 0
160-420 square feet	\$ 100
260-420 linear feet	\$ 100
but if, square plus linear feet totals 421 or greater, then pay:	
421-2,000	\$ 200
2,001-3,000	\$ 300
3,001-4,000	\$ 400
4,001-5,000	\$ 500
5,001-6,000	\$ 600
6,001-7,000	\$ 700
7,001-8,000	\$ 800
8,001-9,000	\$ 900
Greater than 9,000	\$1000
and for total cubic feet, if applicable, pay:	
0-34	\$0
35-44	\$ 200
45-54	\$ 400
55-64	\$ 600
65-74	\$ 800
Greater than 74	\$1000

Rulemaking Authority 376.60 FS. Law Implemented 376.60 FS. History--New 3-31-94, Formerly 17-257.400, Amended 11-23-94, 2-9-99.

62-257.900 Form.

The form with instructions used by the Department in the asbestos air regulatory program is adopted and incorporated herein by reference. Copies of the form and instructions may be obtained by writing to the State Asbestos Coordinator, Division of Air Resource Management, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. The form is also available on the internet at www.dep.state.fl.us/air or at the Department's District Offices or at Local Air Program offices.
"Notice of Demolition or Asbestos Renovation", DEP Form Number 62-257.900(1), effective 10-12-08.

Rulemaking Authority 376.60, 403.061 FS. Law Implemented 376.60, 403.061 FS. History--New 3-31-94, Formerly 17-257.900, Amended 11-23-94, 2-9-99, 10-12-08.

Chapter 62-285, F.A.C.

**Greenhouse Gas
Emissions Reduction**

**CHAPTER 62-285
Greenhouse Gas Emissions Reduction**

62-285.400	Adoption of California Motor Vehicle Emission Standards (Repealed)
62-285.420	Heavy-Duty Vehicle Idling Reduction (Repealed)
62-285.421	Clean Diesel Rebate Program

62-285.400 Adoption of California Motor Vehicle Emission Standards.

Rulemaking Authority 403.061 FS. Law Implemented 403.031, 403.061 FS. History--New 2-15-09, Repealed 2-16-12.

62-285.420 Heavy-Duty Vehicle Idling Reduction.

Rulemaking Authority 403.061 FS. Law Implemented 403.031, 403.061 FS. History--New 12-15-08, Repealed 2-16-12.

62-285.421 Clean Diesel Rebate Program.

(1) Rebates Available. The Department of Environmental Protection (Department) makes available Clean Diesel Rebates in an amount equal to \$1,500 per qualifying vehicle for eligible applicants that equip their vehicles with auxiliary power units (APUs). Funding for the Clean Diesel Rebate program is limited and will be awarded on a first-come, first-served basis starting March 15, 2009, and continuing while rebate funds are still available. If more eligible applications than remaining funds can cover are postmarked on the same day, rebates will be awarded to such applicants, as funds allow, on the basis of earliest APU installation date. Availability of rebate funds may be checked online at www.dep.state.fl.us/air/.

(2) Eligibility.

- (a) The eligible applicant for a Clean Diesel Rebate must be an individual or corporate owner of a qualifying vehicle.
- (b) The APU must be purchased and professionally installed on the qualifying vehicle in 2009 or later.
- (c) The total invoice price of the APU and installation less taxes must be greater than or equal to \$1,500.
- (d) The Department shall not award multiple rebates for a single qualifying vehicle or rebates for more than three separate qualifying vehicles to any one applicant.

(e) For the purposes of this rule:

- 1. A qualifying vehicle is a 2006 or older Florida-registered Class 8 on-road commercial diesel vehicle equipped with a sleeper berth and a 2006 or older vehicle engine.
- 2. A Class 8 vehicle means a vehicle with a manufacturer's gross vehicle weight rating greater than 33,001 pounds.
- 3. An auxiliary power unit (APU) means:
 - a. A manufactured device that contains an engine certified under 40 CFR Part 89, as adopted and incorporated by reference at Rule 62-204.800, F.A.C., designed to eliminate the need for the vehicle's main drive engine to supply cooling, heating and electrical power to the Class 8 diesel truck upon which it is installed; or
 - b. A manufactured device that contains a battery powered system designed to eliminate the need for the vehicle's main drive engine to supply cooling, heating and electrical power to the Class 8 diesel truck upon which it is installed.

(3) Application.

(a) The applicant for a Clean Diesel Rebate must submit a completed Clean Diesel Rebate Application form (DEP Form 62-285.421(1), effective March 15, 2009, hereby adopted and incorporated by reference) to the Department after purchase and professional installation of the APU. The form is available from the Department of Environmental Protection, Division of Air Resource Management, 2600 Blair Stone Road, MS #5510, Tallahassee, FL 32399-2400, and on the internet at <http://www.dep.state.fl.us/air/>.

(b) The applicant must also submit a photocopy of the Florida vehicle registration; a photocopy of the signed original APU purchase invoice showing installation date, equipment and labor cost, and payment received; and a photograph of the diesel vehicle and installed APU. Failure to provide all required information and supporting documentation, or submission of false or incorrect information, will result in a delay or denial of the rebate.

(c) The signed and dated original application form and the required supporting documentation must be mailed on or after March 15, 2009 to:

airresource@dep.state.fl.us; or

Department of Environmental Protection
Division of Air Resource Management
2600 Blair Stone Road, MS #5510
Tallahassee, FL 32399-2400
ATTN: Clean Diesel Rebate Program

Rulemaking Authority 403.061 FS. Law Implemented 403.031, 403.061 FS. History--New 3-15-09.

Chapter 62-296, F.A.C.

**Stationary Sources -
Emission Standards**

CHAPTER 62-296
STATIONARY SOURCES – EMISSION STANDARDS

62-296.100	Purpose and Scope
62-296.320	General Pollutant Emission Limiting Standards
62-296.340	Best Available Retrofit Technology
62-296.341	Regional Haze – Reasonable Progress Control Technology (Repealed)
62-296.401	Incinerators
62-296.402	Sulfuric Acid Plants
62-296.403	Phosphate Processing Fluorides Limits
62-296.404	Tall Oil Plants and Kraft (Sulfate) Pulp Mills
62-296.405	Fossil Fuel Steam Generators with More Than 250 Million Btu Per Hour Heat Input
62-296.406	Fossil Fuel Steam Generators with Less Than 250 Million Btu Per Hour Heat Input, New and Existing Emissions Units
62-296.407	Portland Cement Plants (Repealed)
62-296.408	Nitric Acid Plants
62-296.409	Sulfur Recovery Plants
62-296.410	Carbonaceous Fuel Burning Equipment
62-296.411	Sulfur Storage and Handling Facilities (Repealed)
62-296.412	Dry Cleaning Facilities
62-296.413	Synthetic Organic Fiber Production (Repealed)
62-296.414	Concrete Batching Plants
62-296.415	Soil Thermal Treatment Facilities
62-296.416	Waste-to-Energy Facilities
62-296.417	Volume Reduction, Mercury Recovery and Mercury Reclamation
62-296.418	Bulk Gasoline Plants
62-296.470	Implementation of Federal Clean Air Interstate Rule
62-296.480	Implementation of Federal Clean Air Mercury Rule (Repealed)
62-296.500	Reasonably Available Control Technology (RACT) – Volatile Organic Compounds (VOC) and Nitrogen Oxides (NOx) Emitting Facilities
62-296.501	Can Coating
62-296.502	Coil Coating
62-296.503	Paper Coating
62-296.504	Fabric and Vinyl Coating
62-296.505	Metal Furniture Coating
62-296.506	Surface Coating of Large Appliances
62-296.507	Magnet Wire Coating
62-296.508	Petroleum Liquid Storage
62-296.509	Bulk Gasoline Plants. (Repealed)
62-296.510	Bulk Gasoline Terminals
62-296.511	Solvent Metal Cleaning
62-296.512	Cutback Asphalt
62-296.513	Surface Coating of Miscellaneous Metal Parts and Products
62-296.514	Surface Coating of Flat Wood Paneling
62-296.515	Graphic Arts Systems
62-296.516	Petroleum Liquid Storage Tanks with External Floating Roofs
62-296.570	Reasonably Available Control Technology (RACT) – Requirements for Major VOC- and NOx-Emitting Facilities
62-296.600	Reasonably Available Control Technology (RACT) – Lead
62-296.601	Lead Processing Operations in General
62-296.602	Primary Lead-Acid Battery Manufacturing Operations

62-296.603	Secondary Lead Smelting Operations
62-296.604	Electric Arc Furnace Equipped Secondary Steel Manufacturing Operations
62-296.605	Lead Oxide Handling Operations
62-296.700	Reasonably Available Control Technology (RACT) Particulate Matter
62-296.701	Portland Cement Plants
62-296.702	Fossil Fuel Steam Generators
62-296.703	Carbonaceous Fuel Burners
62-296.704	Asphalt Concrete Plants
62-296.705	Phosphate Processing Operations
62-296.706	Glass Manufacturing Process
62-296.707	Electric Arc Furnaces
62-296.708	Sweat or Pot Furnaces
62-296.709	Lime Kilns
62-296.710	Smelt Dissolving Tanks
62-296.711	Materials Handling, Sizing, Screening, Crushing and Grinding Operations
62-296.712	Miscellaneous Manufacturing Process Operations

62-296.100 Purpose and Scope.

(1) The Department of Environmental Protection adopts this chapter to establish emission limiting standards and compliance requirements for stationary sources of air pollutant emissions.

(2) The chapter includes emission limitations for specific categories of facilities and emissions units, and it establishes reasonably available control technology requirements. Where work practice standards, including requirements for specific types of pollution control equipment, are provided for in this chapter, such standards shall be of the same force and effect as emission limiting standards. The emission limiting and work practice standards of Rule 62-296.320, F.A.C., and Rules 62-296.401 through 62-296.480, F.A.C., are applicable statewide. The reasonably available control technology requirements are established for specific areas of the state as set forth in Rules 62-296.500, 62-296.600, and 62-296.700, F.A.C.

(3) A facility or emissions unit subject to any standard or requirement of 40 CFR. Part 60, 61, 63 or 65, adopted and incorporated by reference at Rule 62-204.800, F.A.C., shall comply with such standard or requirement. Nothing in this chapter shall relieve a facility or emissions unit from complying with such standard or requirement, provided, however, that where a facility or emissions unit is subject to a standard established in this chapter, such standard shall also apply.

(4) Words and phrases used in this chapter, unless clearly indicated otherwise, are defined at Rule 62-210.200, F.A.C.

Rulemaking Authority 403.061 FS. Law Implemented 403.031, 403.061, 403.087 FS. History—New 11-23-94, Amended 3-13-96, 10-6-08.

62-296.320 General Pollutant Emission Limiting Standards.

(1) Volatile organic compounds emissions or organic solvents emissions – No person shall store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds or organic solvents without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department.

(2) Objectionable Odor Prohibited – No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor.

(3) Permitted Open Burning. Open burning in connection with industrial, commercial, institutional, or governmental operations is allowed only as provided at Chapter 62-256, F.A.C., or when:

(a) Open burning is determined by the Department to be the only available method of disposal and is authorized by an air permit; and

(b) Such open burning does not involve any material prohibited from being burned at Rule 62-256.300, F.A.C.

(4) General Particulate Emission Limiting Standards. The following emission limiting standards shall apply to emissions units of particulate matter not subject to a particulate emission limit or opacity limit set forth in or established elsewhere in this chapter.

(a) Process Weight Table.

1. Applicability. The emission limitations set forth in subparagraph 62-296.320(4)(a)2., F.A.C., below, shall apply to any emissions unit which processes raw materials to produce a finished product through a chemical or physical change, except emissions

units which:

- a. Burn fuel to produce heat or power by indirect heating where the products of combustion do not come in contact with the process materials.
- b. Burn refuse.
- c. Salvage materials by burning.

2. Particulate Matter Emissions Standard – No person shall cause, let, permit, suffer or allow the emission of particulate matter through a stack or vent, from any emissions unit subject to this rule in total quantities in excess of the amount shown in Table 296.320-1. Interpolation of the data in Table 296.320-1 for the process weight rates up to 30 tons per hour shall be accomplished by use of the equation: $E = 3.59P^{0.62}$, where P is less than or equal to 30 tons per hour. Interpolation and extrapolation of the data for process weight rates in excess of 30 tons per hour shall be accomplished by use of the equation: $E = 17.31P^{0.16}$, where P is greater than 30 tons per hour. In both equations: E = emissions in pounds per hour and P = process weight rate in tons per hour.

PROCESS WEIGHT TABLE TABLE 296.320-1	
Process Rate (Tons Per Hour)	Emission Rate (Pounds Per Hour)
.025	0.36
.050	0.56
.250	1.52
.50	2.34
2.50	6.34
5	9.74
10	14.97
30	29.57
40	31.23
60	33.33
80	34.90
100	36.17
200	40.41
500	46.79

3. Particulate Matter Emissions Test Method and procedures. All particulate matter emissions tests performed pursuant to the requirements of this rule shall comply with the following provisions.

- a. Emissions units incorporating a scrubber for control of particulate matter shall use the following test methods.
 - (i) Citrus Plants. The test method for particulate emissions shall be EPA Method 5, as described at 40 C.F.R. Part 60, Appendix A-3, adopted and incorporated by reference at Rule 62-204.800, F.A.C. An acetone wash shall be used. The minimum sample volume shall be 32 dry standard cubic feet.
 - (ii) All Others. The test method for particulate emissions shall be EPA Method 5, as described at 40 C.F.R. Part 60, Appendix A-3, adopted and incorporated by reference at Rule 62-204.800, F.A.C. An acetone wash shall be used.
- b. Emissions units incorporating dry controls for control of particulate matter shall use the following test methods.
 - (i) Phosphate Processing. The test method for particulate emissions shall be EPA Method 5, as described at 40 C.F.R. Part 60, Appendix A-3, adopted and incorporated by reference at Rule 62-204.800, F.A.C. An acetone wash shall be used. The minimum sample volume shall be 30 dry standard cubic feet.
 - (ii) All Others. The test method for particulate emissions shall be EPA Method 17, with an acetone wash and an average stack temperature below 275 degrees Fahrenheit, or EPA Method 5 with an acetone wash. EPA Method 17 is described at 40 C.F.R. Part 60, Appendix A-6; and EPA Method 5 is described at 40 C.F.R. Part 60, Appendix A-3. These test methods are adopted and incorporated by reference at Rule 62-204.800, F.A.C.

c. Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.

(b) General Visible Emissions Standard.

1. No person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity, the density of which is equal to or greater than 20 percent opacity.
2. Notwithstanding subparagraph 62-296.320(4)(b)1., F.A.C., above, the owner or operator of an emissions unit subject to the

general visible emission standard may request the Department to establish a higher visible emissions standard for that emissions unit. The owner or operator may request that a visible emissions standard be established at that level at which the emissions unit will be able, as indicated by compliance tests, to meet the opacity standard at all times during which the emissions unit is meeting the applicable particulate matter standard. The Department shall establish such a standard, through the permitting process, if it finds that:

- a. The emissions unit was in compliance with the applicable particulate emission standard while a compliance test was being conducted but failed to comply with the general visible emissions standard during the test;
- b. The emissions unit and associated air pollution control equipment were operated and maintained in a manner to minimize the opacity emissions during the compliance test; and
- c. The emissions unit and associated air pollution control equipment were incapable of being adjusted or operated in such a manner as to meet the opacity standard.

3. If the presence of uncombined water is the only reason for failure to meet visible emission standards given in this rule, such failure shall not be a violation of this rule.

4. All visible emissions tests performed pursuant to the requirements of this rule shall comply with the following provisions.

a. The test method for visible emissions shall be EPA Method 9, as described at 40 C.F.R. Part 60, Appendix A-4, adopted and incorporated by reference at Rule 62-204.800, F.A.C.

b. Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.

(c) Unconfined Emissions of Particulate Matter.

1. No person shall cause, let, permit, suffer or allow the emissions of unconfined particulate matter from any activity, including vehicular movement; transportation of materials; construction, alteration, demolition or wrecking; or industrially related activities such as loading, unloading, storing or handling; without taking reasonable precautions to prevent such emissions.

2. Any permit issued to a facility with emissions of unconfined particulate matter shall specify the reasonable precautions to be taken by that facility to control the emissions of unconfined particulate matter.

3. Reasonable precautions include the following:

a. Paving and maintenance of roads, parking areas and yards.

b. Application of water or chemicals to control emissions from such activities as demolition of buildings, grading roads, construction, and land clearing.

c. Application of asphalt, water, oil, chemicals or other dust suppressants to unpaved roads, yards, open stock piles and similar activities.

d. Removal of particulate matter from roads and other paved areas under the control of the owner or operator of the facility to prevent reentrainment, and from buildings or work areas to prevent particulate from becoming airborne.

e. Landscaping or planting of vegetation.

f. Use of hoods, fans, filters, and similar equipment to contain, capture and/or vent particulate matter.

g. Confining abrasive blasting where possible.

h. Enclosure or covering of conveyor systems.

4. In determining what constitutes reasonable precautions for a particular facility, the Department shall consider the cost of the control technique or work practice, the environmental impacts of the technique or practice, and the degree of reduction of emissions expected from a particular technique or practice.

Rulemaking Authority 403.061 FS. Low Implemented 403.031, 403.061, 403.087 FS. History--Formerly 17-2.620, 17-296.320, Amended 1-1-96, Amended 3-13-96, 10-6-08, 7-10-14.

62-296.340 Best Available Retrofit Technology.

(1) Applicability. This rule applies to all BART-eligible sources as defined at 40 CFR 51.301, adopted and incorporated by reference at Rule 62-204.800, F.A.C. Failure of the Department to include a particular BART-eligible source on any list of BART-eligible sources it produces does not relieve the owner or operator of such source from responsibility to comply with the requirements of this rule.

(2) Definitions. For the purposes of this rule:

(a) All definitions at 40 CFR 51.301 shall apply, including the definition of “Best Available Retrofit Technology (BART)” contained therein.

(b) The term “CAIR Program” shall mean the requirements of 40 CFR 52.540 and 52.541, adopted and incorporated by reference at Rule 62-204.800, F.A.C., or it shall have the meaning given at Rule 62-210.200, F.A.C., whichever is applicable.

(c) The term “Class I area” shall mean any mandatory Class I federal area where visibility is an important value, as set forth at 40 CFR Part 81, Subpart D, adopted and incorporated by reference at Rule 62-204.800, F.A.C.

(3) Requirements.

(a) Unless exempted under subsection 62-296.340(5), F.A.C., the owner or operator of a BART-eligible source shall install, operate, and maintain BART, as determined by the Department, for each emissions unit and each pollutant for which a BART determination is required.

1. The Department shall determine BART for all BART-eligible sources in accordance with the criteria of 40 CFR 51.308(e) and the procedures and guidelines contained in 40 CFR Part 51, Appendix Y, each adopted and incorporated by reference at Rule 62-204.800, F.A.C.

2. The pollutants for which a BART determination is required are those pollutants identified as visibility-impairing pollutants in 40 CFR Part 51, Appendix Y, excluding volatile organic compounds, ammonia, and ammonia compounds, except that:

a. A BART determination shall not be required for sulfur dioxide or for nitrogen oxides if the BART-eligible source has the potential to emit less than 40 tons per year of such pollutant(s), or for PM₁₀ if the BART-eligible source has the potential to emit less than 15 tons per year of such pollutant.

b. A BART determination shall not be required for sulfur dioxide or for nitrogen oxides for any electric generating unit at a BART-eligible source that is subject to the CAIR Program.

(b) The Department shall articulate the basis for its BART determination(s) in an air construction permit.

1. The owner or operator of a BART-eligible source subject to the requirement for BART determination under paragraph 62-296.340(3)(a), F.A.C., shall perform a BART evaluation for each emissions unit comprising the BART-eligible source and for each pollutant for which a BART determination is required. The BART evaluation shall be performed in accordance with the criteria of 40 CFR 51.308(e) and the procedures and guidelines contained in 40 CFR Part 51, Appendix Y. The BART evaluation and proposed BART determination(s) shall be submitted to the Department in an application for an air construction permit not later than January 31, 2007.

2. The air construction permit issued by the Department shall require the owner or operator of the BART-eligible source to comply with BART as expeditiously as practicable, but not later than December 31, 2013. Such permit shall also require an operation and maintenance plan for any control equipment required by the BART determination.

3. Before taking final agency action on any air construction permit application to establish its BART determination(s), the Department shall comply with all applicable provisions of Rule 62-110.106, F.A.C., and, in its intent to issue, provide an opportunity for public comment which shall include at a minimum the following:

a. Pursuant to Chapter 119, F.S., a complete file available for public inspection at its Tallahassee offices which includes the information submitted by the owner or operator, exclusive of confidential records under Section 403.111, Florida Statutes, and the Department’s preliminary BART determination(s);

b. A 30-day period for submittal of public comments; and

c. A notice, by advertisement in a newspaper of general circulation in the county affected, specifying the nature and location of the BART-eligible source and the location of the information specified in sub-subparagraph 62-296.340(3)(b)3.a., F.A.C., and notifying the public of the opportunity for submitting comments. The notice shall be prepared by the Department and published by the applicant in accordance with all applicable provisions of Rule 62-110.106, F.A.C., except that the applicant shall cause the notice to be published no later than thirty (30) days prior to final agency action.

(4) Optional Reasonable Progress Evaluation. An electric generating unit that is part of a BART-eligible source and also subject to the CAIR Program shall not be subject to further emissions reductions to meet Florida’s reasonable progress goal for 2018 for any Class I area pursuant to the requirements of 40 CFR 51.308(d)(1), provided that the owner or operator:

(a) Performs a unit-specific BART evaluation for sulfur dioxide and nitrogen oxides in accordance with the criteria of 40 CFR 51.308(e) and the procedures and guidelines contained in 40 CFR Part 51, Appendix Y, and submits such evaluation and proposed BART-equivalent emission limitations for sulfur dioxide and nitrogen oxides to the Department in an application for an air construction permit; and

(b) Accepts an air construction permit wherein the Department establishes BART-equivalent emission limitations for sulfur dioxide and nitrogen oxides for the unit.

(c) In establishing BART-equivalent emission limitations pursuant to this subsection, the Department shall use the criteria of 40 CFR 51.308(e) and the procedures and guidelines contained in 40 CFR Part 51, Appendix Y, each adopted and incorporated by reference at Rule 62-204.800, F.A.C.

(d) The air construction permit issued by the Department shall require the owner or operator of the unit to comply with the BART-equivalent emission limitations as expeditiously as practicable, but not later than December 31, 2013, if the permit is issued on or before December 31, 2008; or the earlier of December 31, 2017, or the date five years after permit issuance, if the permit is issued after December 31, 2008.

(e) Before taking final agency action on any air construction permit application to establish its BART-equivalent emission limitations, the Department shall provide opportunity for public comment in accordance with the provisions of subparagraph 62-296.340(3)(b)3., F.A.C.

(f) BART-equivalent emission limitations for sulfur dioxide and nitrogen oxides established pursuant to this subsection are separate and distinct from the BART requirements of subsection 62-296.340(3), F.A.C. Noncompliance with a BART-equivalent emission limitation established pursuant to this subsection shall not constitute noncompliance with BART.

(5) Exemptions.

(a) A BART-eligible source may demonstrate that it is exempt from the requirement for BART determination for all pollutants by documenting that:

1. The sum of its potential emissions of sulfur dioxide, nitrogen oxides, and particulate matter (expressed as equivalent tons of sulfur dioxide or nitrogen oxides in terms of its light extinction efficiency) is less than 500 tons per year and the source is located greater than 50 kilometers from all Class I areas; or

2. The sum of its potential emissions of sulfur dioxide, nitrogen oxides, and particulate matter (expressed as equivalent tons of sulfur dioxide or nitrogen oxides in terms of its light extinction efficiency) is less than 1,000 tons per year and the source is located greater than 100 kilometers from all Class I areas.

(b) A BART-eligible source comprising only electric generating units that are subject to the CAIR Program and other emissions units that emit no visibility-impairing pollutants other than particulate matter may demonstrate that it is exempt from the requirement for BART determination for all pollutants by documenting that:

1. Its potential emissions of particulate matter (expressed as equivalent tons of sulfur dioxide or nitrogen oxides in terms of its light extinction efficiency) are less than 500 tons per year and the source is located greater than 50 kilometers from all Class I areas; or

2. Its potential emissions of particulate matter (expressed as equivalent tons of sulfur dioxide or nitrogen oxides in terms of its light extinction efficiency) are less than 1,000 tons per year and the source is located greater than 100 kilometers from all Class I areas.

(c) If unable to claim exemption pursuant to paragraph 62-296.340(5)(a) or (b), F.A.C., a BART-eligible source may demonstrate that it is exempt from the requirement for BART determination for all pollutants by performing an individual source attribution analysis in accordance with the procedures contained in 40 CFR Part 51, Appendix Y. A BART-eligible source is exempt from BART determination requirements if its contribution to visibility impairment, as determined below, does not exceed 0.5 deciviews above natural conditions in any Class I area.

1. For electric generating units subject to the CAIR Program, the source attribution analysis need only consider particulate matter emissions (including primary sulfate) for comparison with the contribution threshold.

2. For all other units, the source attribution analysis shall consider sulfur dioxide, nitrogen oxides, and particulate matter emissions collectively for comparison with the contribution threshold.

(d) If the owner or operator of a BART-eligible source requests exemption from the requirement for BART determination for all pollutants by submitting its source attribution analysis or other supporting documentation to the Department not later than January 31, 2007, and the Department ultimately grants such exemption, the requirement for submission of an air construction permit application pursuant to subparagraph 62-296.340(3)(b)1., F.A.C., shall not apply. If the Department denies such exemption, the owner or operator shall submit an application for air construction permit containing a BART evaluation and proposed BART determination(s) to the Department not later than January 31, 2007, or thirty (30) days after receipt of the Department’s denial, whichever is later.

Rulemaking Authority 403.061, 403.087 FS. Law Implemented 403.031, 403.061, 403.087 FS. History—New 1-31-07.

62-296.341 Regional Haze – Reasonable Progress Control Technology.

Rulemaking Authority 403.061, 403.087 FS. Law Implemented 403.031, 403.061, 403.087 FS. History—New 2-7-08, Repealed 3-28-12.

62-296.401 Incinerators.

(1) Small Incinerators. Any incinerator, other than a biological waste incinerator, human or animal crematory, or air curtain incinerator, with a charging rate of less than 50 tons per day shall comply with the following requirements.

(a) Emission Limiting Standards. Visible emissions shall not exceed 5% opacity except that visible emissions not exceeding 15% opacity are allowed for one six-minute period in any one-hour period.

(b) Test Methods and Procedures. All emissions tests performed pursuant to the requirements of this subsection shall comply with the following requirements.

1. The reference test method for visible emissions shall be EPA Method 9, as described at 40 CFR, Part 60, Appendix A-4, adopted and incorporated by reference at Rule 62-204.800, F.A.C.

2. Test procedures shall conform to the procedures specified in Rule 62-297.310, F.A.C. All test results shall be reported to the Department in accordance with the provisions of Rule 62-297.310, F.A.C.

(c) Frequency of Testing. The owner or operator of an incinerator subject to this subsection shall have a performance test conducted for visible emissions prior to submitting the application for an initial air operation permit, and annually thereafter.

(2) Existing incinerators, other than those which are operated or utilized for the disposal or treatment of biological waste, with a charging rate equal to or greater than 50 tons per day.

(a) Particulate matter – 0.1 grains per standard cubic foot dry gas corrected to 50 percent excess air.

(b) No objectionable odor allowed.

(c) Test Methods and Procedures. All emissions tests performed pursuant to the requirements of this rule shall comply with the following requirements.

1. The test method for particulate emissions shall be EPA Method 5, as described at 40 C.F.R. Part 60, Appendix A-3, adopted and incorporated by reference at Rule 62-204.800, F.A.C. The minimum sample volume shall be 30 dry standard cubic feet. EPA Method 3 or 3A, using Orsat analysis is required for percent excess air correction. EPA Methods 3 and 3A, are described at 40 C.F.R. Part 60, Appendix A-2, adopted and incorporated by reference at Rule 62-204.800, F.A.C.

2. Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.

(d) Calculations Correcting Concentrations to 50% Excess Air (EA), EPA Method 3, Section 1.2. When correcting a pollutant emission concentration to 50% excess air, pursuant to this rule, the following equation shall be used:

$$Cs50 = \frac{Cs (100 + \%EA)}{150}$$

Equation 296.401-1

where: Cs50 is the pollutant concentration at 50% excess air;

Cs is the pollutant concentration computed at standard conditions on a dry basis; and %EA is calculated by equation 296.401-2:

$$\%EA = \frac{(\%O_2 - 0.5\%CO) \times 100}{0.264\%N_2 - (\%O_2 - 0.5\%CO)}$$

Equation 296.401-2

(3) New incinerators, other than those which are operated or utilized for the disposal or treatment of biological waste, with a charging rate equal to or greater than 50 tons per day.

(a) Particulate matter – .08 grains per standard cubic foot dry gas corrected to 50 percent excess air.

(b) No objectionable odor allowed.

(c) Test Methods and Procedures. All emissions tests performed pursuant to the requirements of this rule shall comply with the following requirements.

1. The test method for particulate emissions shall be EPA Method 5, as described at 40 C.F.R. Part 60, Appendix A-3, adopted and incorporated by reference at Rule 62-204.800, F.A.C. The minimum sample volume shall be 30 dry standard cubic feet. EPA Method 3 or 3A, using Orsat analysis is required for percent excess air correction. EPA Methods 3 and 3A, are described at 40 C.F.R. Part 60, Appendix A-2, adopted and incorporated by reference at Rule 62-204.800, F.A.C.

2. Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.

(d) Calculations Correcting Concentrations to 50% Excess Air (EA), EPA Method 3, Section 1.2. When correcting a pollutant emission concentration to 50% excess air, pursuant to this rule, the following equation shall be used:

$$Cs50 = \frac{Cs (100 + \%EA)}{150}$$

Equation 296.401-1

where: Cs50 is the pollutant concentration at 50% excess air;

Cs is the pollutant concentration computed at standard conditions on a dry basis; and %EA is calculated by equation 296.401-2:

$$\%EA = \frac{(\%O_2 - 0.5\%CO) \times 100}{0.264\%N_2 - (\%O_2 - 0.5\%CO)}$$

Equation 296.401-2

(4) Biological Waste Incinerators.

(a) Applicability. The requirements of this subsection apply to all biological waste incinerator units.

1. Any biological waste incinerator unit that is also regulated as a hospital/medical/infectious waste incinerator under 40 CFR Part 60, Subpart Ec or Ce, adopted and incorporated by reference at Rule 62-204.800, F.A.C., shall be constructed and operated so as to comply with all standards, limitations, and requirements of the applicable Subpart, and with the requirements of paragraphs 62-296.401(4)(b)-(f), F.A.C., to the extent that such requirements are stricter than, or supplemental to, the requirements of the applicable Subpart.

2. Any biological waste incinerator unit that is not regulated as a hospital/medical/infectious waste incinerator under 40 CFR Part 60, Subpart Ec or Ce, shall be constructed and operated so as to comply with all requirements of paragraphs 62-296.401(4)(b)-(f), F.A.C.

3. This subsection does not apply to human or animal crematories.

(b) Emission Limiting Standards.

1. For any biological waste incinerator unit with a capacity less than 50 tons per day, visible emissions shall not exceed 5% opacity, except that visible emissions not exceeding 15% opacity shall be allowed for one six-minute period in any one-hour period.

2. For any unit with a capacity equal to or less than 500 pounds per hour:

a. Particulate matter emissions shall not exceed 0.100 grains per dry standard cubic foot of flue gas, corrected to 7% O₂.

b. Hydrochloric acid (HCl) emissions shall not exceed 4.0 pounds per hour.

3. For any unit with a capacity greater than 500 pounds per hour, but less than or equal to 2,000 pounds per hour:

a. Particulate matter emissions shall not exceed 0.030 grains per dry standard cubic foot of flue gas, corrected to 7% O₂.

b. Hydrochloric acid (HCl) emissions shall not exceed 4.0 pounds per hour; or shall be reduced by 90% by weight on an hourly average basis.

4. For any unit with a capacity greater than 2000 pounds per hour:

a. Particulate matter emissions shall not exceed 0.020 grains per dry standard cubic foot of flue gas, corrected to 7% O₂.

b. Hydrochloric acid (HCl) emissions shall not exceed fifty (50) parts per million by volume, dry basis, corrected to seven percent (7%) O₂ on a three (3) hour average basis. As an alternative to this HCl limit, the HCl emission produced by the unit shall be reduced, by its air pollution control equipment, by at least ninety percent (90%) by weight on an hourly average basis.

5. For any unit, carbon monoxide emissions (CO) shall not exceed 100 parts per million by volume, dry basis, corrected to 7% O₂ on an hourly average basis.

(c) Design and Operating Requirements. All biological waste incineration units, shall be constructed and operated so as to comply with the following design, operating, monitoring and operator training requirements.

1. The unit shall operate with a combustion zone design temperature of no less than 1800 degrees Fahrenheit for at least a 1.0 second gas residence time in the secondary (or last) combustion chamber. The primary chamber and stack volumes shall not be utilized in calculating this residence time.

2. Mechanically fed units shall incorporate an air lock system to prevent opening the incinerator to the room environment. The volume of the loading system shall be designed to prevent overcharging, thereby assuring complete combustion of the waste.

3. Incineration or ignition of waste shall not begin until the secondary (or last) combustion chamber temperature requirement is attained. All air pollution control and continuous emission monitoring equipment shall be operational and functioning properly prior to the incineration or ignition of waste and until all the wastes are incinerated. The secondary (or last) combustion chamber

temperature requirement shall be maintained until the wastes are completely combusted.

4. The owner or operator is advised to contact the Department of Health regarding requirements that may apply to any proposed burning of radioactive waste.

5. The owner or operator is advised to contact the Department's Division of Waste Management regarding requirements that may apply to any proposed burning of hazardous waste.

6. Each operator of the unit shall successfully complete a training program meeting the requirements of 40 CFR 60.53c(c) and the annual refresher training course requirements of 40 CFR 60.53c(f), adopted and incorporated by reference at Rule 62-204.800, F.A.C.

a. If the incinerator is modified to the extent that a Department construction permit is required, the operators shall be retrained to operate the modified incinerator.

b. An operator's training certificate must be kept on file at the facility for the duration of the operator's employment and for an additional two (2) years after termination of employment. The owner shall not allow the incinerator to be operated unless it is operated by an operator who has satisfactorily completed the required training program.

(d) Test Methods and Procedures. All emissions tests performed pursuant to the requirements of this subsection shall comply with the following requirements. All EPA reference test methods are described in 40 CFR Part 60, Appendices A-2 through A-8, adopted and incorporated by reference at Rule 62-204.800, F.A.C.

1. The reference test method for visible emissions shall be EPA Method 9.

2. The reference test method for carbon monoxide shall be EPA Method 10.

3. The reference test method for oxygen shall be EPA Method 3 or 3A.

4. The reference test method for particulate emissions shall be EPA Method 5 or 26A. The minimum sample volume shall be thirty (30) dry standard cubic feet.

5. The reference test method for hydrochloric acid shall be EPA Method 26 or 26A.

6. Test procedures shall conform to the procedures specified in Rule 62-297.310, F.A.C. All test results shall be reported to the Department in accordance with the provisions of Rule 62-297.310, F.A.C.

(e) Frequency of Testing.

1. The owner or operator of any biological waste incineration unit with a capacity equal to or less than 500 pounds per hour shall:

a. Have a performance test conducted for visible emissions prior to submitting the application for an initial air operation permit, and annually thereafter.

b. Have performance tests conducted for particulate matter and hydrochloric acid prior to submitting the application for an initial or renewal air operation permit.

2. The owner or operator of any biological waste incineration unit with a capacity greater than 500 pounds per hour shall:

a. Have a performance test conducted for visible emissions prior to submitting the application for an initial air operation permit, and annually thereafter.

b. Have performance tests conducted for particulate matter and hydrochloric acid prior to submitting the application for an initial air operation permit, and annually thereafter.

(f) Continuous Emissions Monitoring Requirements. Each owner or operator of a biological waste incinerator unit shall install, operate, and maintain, in accordance with the manufacturer's instructions, continuous emission monitoring equipment at the exit of the secondary (or last) combustion chamber.

1. The monitors shall record the following operating parameters:

a. Temperature.

b. Oxygen (for facilities with a capacity greater than 500 pounds per hour).

2. The owner or operator shall maintain a complete file of all measurements, including continuous emissions monitoring system, monitoring device, and performance testing measurements; all continuous emissions monitoring system performance evaluations; all continuous emissions monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required, recorded in a permanent legible form available for inspection. The file shall be retained for at least two (2) years following the date of such measurements, maintenance, reports and records.

(5) Human Crematories.

(a) Applicability. The requirements of this subsection apply to all human crematory units.

(b) Emission Limiting Standards.

1. Visible emissions shall not exceed 5% opacity, except that visible emissions not exceeding 15% opacity shall be allowed for one six-minute period in any one-hour period.

2. Particulate matter emissions shall not exceed 0.080 grains per dry standard cubic foot of flue gas, corrected to 7% O₂.

3. Carbon monoxide (CO) emissions shall not exceed 100 parts per million by volume, dry basis, corrected to 7% O₂ on an hourly average basis.

(c) Operating Temperatures.

1. The owner or operator of any proposed new crematory unit which submits either a complete application for a permit to construct the new unit or an initial air general permit registration for the new unit to the Department on or after August 30, 1989, shall provide design calculations to confirm a sufficient volume in the secondary chamber combustion zone to provide for at least a 1.0 second gas residence time at 1800 degrees Fahrenheit. This information shall be provided to the Department with the air construction permit application or air general permit registration form for the proposed new unit. The actual operating temperature of the secondary chamber combustion zone shall be no less than 1600 degrees Fahrenheit throughout the combustion process in the primary chamber. The primary chamber and stack volumes shall not be used in calculating this residence time. Except as provided in subparagraph 62-296.401(5)(c)2., F.A.C., cremation in the primary chamber shall not begin unless the secondary chamber combustion zone temperature is equal to or greater than 1600 degrees Fahrenheit.

2. The owner or operator of any crematory unit for which construction began or for which a complete application for a permit to construct was received by the Department prior to August 30, 1989, shall maintain the actual operating temperature of the secondary chamber combustion zone at no less than 1400 degrees Fahrenheit throughout the combustion process in the primary chamber. Cremation in the primary chamber shall not begin unless the secondary chamber combustion zone temperature is equal to or greater than 1400 degrees Fahrenheit.

(d) Allowed Materials. Human crematory units shall cremate only human or fetal remains with appropriate containers. The remains may be clothed. The containers shall contain no more than 0.5 percent by weight chlorinated plastics as demonstrated by the manufacturer's data sheet. If containers are incinerated, documentation from the manufacturer certifying that they are composed of 0.5 percent or less by weight chlorinated plastics shall be kept on-file at the site for the duration of their use and for at least two (2) years after their use. No other material, including biomedical waste as defined in Rule 62-210.200, F.A.C., shall be incinerated.

(e) Equipment Maintenance. All human crematory units shall be maintained in proper working order in accordance with the manufacturer's specifications to ensure the integrity and efficiency of the equipment. If a crematory unit contains a defect that affects the integrity or efficiency of the unit, the unit shall be taken out of service. No person shall use or permit the use of that unit until it has been repaired or adjusted. Repair records on all crematory units shall be maintained onsite for at least two years. A written plan with operating procedures for startup, shutdown and malfunction of each crematory unit shall be maintained and followed during those events. Each unit's burners shall be operated with a proper air-to-fuel ratio. If the unit so allows, the burners' flame characteristics shall be visually checked at least once during each operating shift and adjusted when warranted by the visual checks.

(f) Test Methods and Procedures. All emissions tests performed pursuant to the requirements of this subsection shall comply with the following requirements. All EPA reference test methods are described in 40 CFR Part 60, Appendices A-2 through A-4, adopted and incorporated by reference at Rule 62-204.800, F.A.C.

1. The reference test method for visible emissions shall be EPA Method 9.

2. The reference test method for carbon monoxide shall be EPA Method 10.

3. The reference test method for oxygen shall be EPA Method 3.

4. The reference test method for particulate matter emissions shall be EPA Method 5. The minimum sample volume shall be thirty (30) dry standard cubic feet.

5. Test procedures shall conform to the procedures specified in Rule 62-297.310, F.A.C. All test results shall be reported to the Department in accordance with the provisions of Rule 62-297.310, F.A.C.

(g) Operation During Emissions Test. Testing of emissions shall be conducted with the unit operating at a capacity of one (1) adult-sized cadaver.

(h) Frequency of Testing.

1. The owner or operator of any human crematory unit using an air general permit shall have a performance test conducted for visible emissions no later than thirty (30) days after the unit commences operation, and annually thereafter.

2. The owner or operator of any human crematory unit operating under the authority of an air construction permit or air operation permit shall have a performance test conducted for visible emissions prior to submitting the application for an initial air operation permit, and annually thereafter.

3. The owner or operator of any human crematory unit shall not be required to have performance tests conducted for carbon monoxide and particulate matter, except as provided at paragraph 62-297.310(7)(c), F.A.C.

(i) Continuous Monitoring Requirements. Each crematory unit shall be equipped and operated with a continuous monitor to record temperature at the point or beyond where 1.0 second gas residence time is obtained in the secondary chamber combustion zone in accordance with the manufacturer's instructions. In addition, each crematory unit installed after February 1, 2007, shall be equipped and operated with a pollutant monitoring system to automatically control combustion based on continuous in-stack opacity measurement. Such system shall be calibrated to restrict combustion in the primary chamber whenever any opacity exceeding 15% opacity is occurring. A complete file of all temperature measurements; all continuous monitoring systems, monitoring devices, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; and all adjustments, preventive maintenance, and corrective maintenance performed on these systems or devices, shall be recorded in a permanent legible form available for inspection. Continuous temperature monitoring documentation shall include operator name, operator indication of when cremation in the primary chamber was begun, date, time, and temperature markings. Pollutant monitoring system documentation shall include indication of when the opacity measurement system was cleaned and checked for proper operation in accordance with the manufacturer's recommended maintenance schedule. The file shall be retained for at least two (2) years following the recording of such measurements, maintenance, reports, and records.

(6) Animal Crematories.

(a) Applicability. The requirements of this subsection apply to all animal crematory units.

(b) Emission Limiting Standards.

1. Visible emissions shall not exceed 5% opacity, except that visible emissions not exceeding 15% opacity shall be allowed for one six-minute period in any one-hour period.

2. Particulate matter emissions shall not exceed 0.080 grains per dry standard cubic foot of flue gas, corrected to 7% O₂.

3. Carbon Monoxide (CO) emissions shall not exceed 100 parts per million by volume, dry basis, corrected to 7% O₂ on an hourly average basis.

(c) Operating Temperatures.

1. The owner or operator of any proposed new crematory unit which submits either a complete application for a permit to construct the new unit or an initial air general permit registration for the new unit to the Department on or after August 30, 1989, shall provide design calculations to confirm a sufficient volume in the secondary chamber combustion zone to provide for at least a 1.0 second gas residence time at 1800 degrees Fahrenheit. This information shall be provided to the Department with the air construction permit application or air general permit registration form for the proposed new unit. The actual operating temperature of the secondary chamber combustion zone shall be no less than 1600 degrees Fahrenheit throughout the combustion process in the primary chamber. The primary chamber and stack volumes shall not be used in calculating this residence time. Except as provided in subparagraph 62-296.401(6)(c)2., F.A.C., cremation in the primary chamber shall not begin unless the secondary chamber combustion zone temperature is equal to or greater than 1600 degrees Fahrenheit.

2. The owner or operator of any crematory unit for which construction began or for which a complete application for a permit to construct was received by the Department prior to August 30, 1989, shall maintain the actual operating temperature of the secondary chamber combustion zone at no less than 1400 degrees Fahrenheit throughout the combustion process in the primary chamber. Cremation in the primary chamber shall not begin unless the secondary chamber combustion zone temperature is equal to or greater than 1400 degrees Fahrenheit.

(d) Allowed Materials. Animal crematory units shall cremate only animal remains and, if applicable, the bedding associated with the animals and appropriate containers. Containers shall contain no more than 0.5 percent by weight chlorinated plastics as demonstrated by the manufacturer's data sheet. If containers are incinerated, documentation from the manufacturers certifying that they are composed of 0.5 percent or less by weight chlorinated plastics shall be kept on-file at the site for the duration of their use and for at least two (2) years after their use. Animal crematory units shall not cremate dead animals which were used for medical or commercial experimentation. No other material, including biomedical waste as defined in Rule 62-210.200, F.A.C., shall be incinerated.

(e) Equipment Maintenance. All animal crematory units shall be maintained in proper working order in accordance with the manufacturer's specifications to ensure the integrity and efficiency of the equipment. If a crematory unit contains a defect that affects the integrity of the unit, the unit shall be taken out of service. No person shall use or permit the use of that unit until it has been repaired or adjusted. Repair records on all crematory units shall be maintained onsite for at least two (2) years. A written plan with operating procedures for startup, shutdown and malfunction of each crematory unit shall be maintained and followed during those events. Each unit's burners shall be operated with a proper air-to-fuel ratio. If the unit so allows, the burners' flame characteristics shall be visually checked at least once during each operating shift and adjusted when warranted by the visual checks.

(f) Test Methods and Procedures. All emissions tests performed pursuant to the requirements of this subsection shall comply with the following requirements. All EPA reference test methods are described in 40 CFR Part 60, Appendices A-2 through A-4, adopted and incorporated by reference at Rule 62-204.800, F.A.C.

1. The reference test method for visible emissions shall be EPA Method 9.

2. The reference test method for carbon monoxide shall be EPA Method 10.

3. The reference test method for oxygen shall be EPA Method 3.

4. The reference test method for particulate matter emissions shall be EPA Method 5. The minimum sample volume shall be thirty (30) dry standard cubic feet.

5. Test procedures shall conform to the procedures specified in Rule 62-297.310, F.A.C. All test results shall be reported to the Department in accordance with the provisions of Rule 62-297.310, F.A.C.

(g) Operation During Emissions Test. Testing of emissions shall be conducted with the unit operating at a capacity that is representative of normal operations and is not greater than the manufacturer's recommended capacity. The operating capacity shall be a batch load, in pounds, for a batch animal crematory unit and a charging rate, in pounds per hour, for a ram-charged animal crematory unit.

(h) Frequency of Testing.

1. The owner or operator of any animal crematory unit using an air general permit shall have a performance test conducted for visible emissions no later than thirty (30) days after the unit commences operation, and annually thereafter.

2. The owner or operator of any animal crematory unit with a capacity of less than 500 pounds per hour and operating under the authority of an air construction permit or air operation permit shall have a performance test conducted for visible emissions prior to submitting the application for an initial air operation permit, and annually thereafter.

3. The owner or operator of any animal crematory unit with a capacity of less than 500 pounds per hour shall not be required to have performance tests conducted for carbon monoxide and particulate matter, except as provided at paragraph 62-297.310(7)(c), F.A.C.

4. The owner or operator of any animal crematory unit with a capacity of 500 pounds per hour or more shall have performance tests conducted for visible emissions, carbon monoxide, and particulate matter prior to submitting the application for an initial air operation permit, and annually thereafter.

(i) Continuous Monitoring Requirements. Each animal crematory unit shall be equipped and operated with a continuous monitor to record temperature at the point or beyond where 1.0 second gas residence time is obtained in the secondary chamber combustion zone in accordance with the manufacturer's instructions. In addition, each crematory unit installed after February 1, 2007, shall be equipped and operated with a pollutant monitoring system to automatically control combustion based on continuous in-stack opacity measurement. Such system shall be calibrated to restrict combustion in the primary chamber whenever any opacity exceeding fifteen percent (15%) opacity is occurring. A complete file of all temperature measurements; all continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; and all adjustments, preventive maintenance, and corrective maintenance performed on these systems or devices, shall be recorded in a permanent legible form available for inspection. Continuous temperature monitoring documentation shall include operator name, operator indication of when cremation in the primary chamber was begun, date, time, and temperature markings. Pollutant monitoring system documentation shall include indication of when the opacity measurement system was cleaned and checked for proper operation in accordance with the manufacturer's recommended maintenance schedule. The file shall be retained for at least two (2) years following the recording of such measurements, maintenance, reports, and records.

(7) Air Curtain Incinerators.

(a) Applicability.

1. Any air curtain incinerator subject to 40 CFR Part 60, Subpart AAAAA, BBBB, CCCC, DDDD or EEEE, adopted and incorporated by reference at Rule 62-204.800, F.A.C., shall be constructed and operated so as to comply with all standards, limitations, and requirements of the applicable subpart, and with the requirements of paragraph 62-296.401(7)(b), F.A.C., to the extent that those requirements are stricter than, or supplemental to, the requirements of the applicable subpart.

2. Any air curtain incinerator not subject to any subpart of 40 CFR Part 60 and not claiming the exemption from air permitting at subsection 62-210.300(3), F.A.C., shall be constructed and operated so as to comply with the requirements of paragraph 62-296.401(7)(b), F.A.C.

(b) Operating Requirements.

1. Outside of startup periods, visible emissions shall not exceed 10% opacity. During startup periods, which shall not exceed the first 30 minutes of operation, an opacity of up to 35% shall be allowed. The general excess emissions rule, Rule 62-210.700, F.A.C., shall not apply.

2. If the air curtain incinerator employs an earthen trench, the pit walls (width and length) shall be vertical, and maintained as such, so that combustion of the waste within the pit is maintained at an adequate temperature and with sufficient air recirculation to provide enough residence time and mixing for proper combustion and control of emission. The following dimensions for the pit must be strictly adhered to: no more than twelve feet (12') wide, between eight feet (8') and fifteen (15') feet deep, and no longer than the length of the manifold. The pit shall not be dug within a previously active portion of a landfill.

3. Except as provided herein and at subparagraph 4., the only materials that shall be burned in the air curtain incinerator are vegetative material and untreated wood, excluding sawdust. The air curtain incinerator shall not be used to burn any biological waste, hazardous waste, asbestos-containing materials, mercury-containing devices, pharmaceuticals, tires, rubber material, residual oil, used oil, asphalt, roofing material, tar, treated wood, plastics, garbage, trash or other material prohibited to be open burned as set forth in subsection 62-256.300(2), F.A.C. Only kerosene, diesel fuel, drip-torch fuel (as used to ignite prescribed fires), untreated wood, virgin oil, natural gas, or liquefied petroleum gas shall be used to start the fire in the air curtain incinerator. The use of used oil, chemicals, gasoline, or tires to start the fire is prohibited.

4. Notwithstanding the provisions of subparagraph 3., the air curtain incinerator may be used for the destruction of animal carcasses in accordance with the provisions of subsection 62-256.700(6), F.A.C. When using an air curtain incinerator to burn animal carcasses, untreated wood may also be burned to maintain good combustion.

5. In no case shall the air curtain incinerator be started before sunrise. All charging shall end no later than one (1) hour after sunset. After charging ceases, air flow shall be maintained until all material within the air curtain incinerator has been reduced to coals, and flames are no longer visible. A log shall be maintained onsite that documents daily beginning and ending times of charging.

6. The air curtain incinerator shall be attended at all times while materials are being burned or flames are visible within the incinerator.

7. The air curtain incinerator shall be located at least fifty (50) feet from any wildlands, brush, combustible structure, or paved public roadway.

8. The material shall not be loaded into the air curtain incinerator such that it protrudes above the air curtain.

9. Ash shall not be allowed to build up in the pit of the air curtain incinerator to higher than one third (1/3) the pit depth or to the point where the ash begins to impede combustion, whichever occurs first.

10. An operation and maintenance guide shall be available to the operators of the air curtain incinerator at all times, and the owner shall provide training to all operators before they work at the incinerator. This guide shall be made available to the Department or for an inspector's onsite review upon request.

(c) Test Methods and Procedures. All emissions tests performed pursuant to the requirements of this subsection shall comply with the following requirements.

1. The reference test method for visible emissions shall be EPA Method 9, as described at 40 CFR Part 60, Appendix A-4, adopted and incorporated by reference at Rule 62-204.800, F.A.C.

2. Test procedures shall conform to the procedures specified in Rule 62-297.310, F.A.C. All test results shall be reported to the Department in accordance with the provisions of Rule 62-297.310, F.A.C.

3. Records of the results of all initial and annual visible emissions tests shall be kept by the owner or operator in either paper copy or electronic format for at least five (5) years. These records shall be made available to the Department or for an inspector's onsite review upon request.

(d) Frequency of Testing.

1. The owner or operator of any air curtain incinerator subject to this subsection shall have a performance test conducted for visible emissions prior to submitting the application for an initial air operation permit, and, except as provided at subparagraph 62-296.401(7)(d)2., F.A.C., annually thereafter.

2. The owner or operator of any air curtain incinerator subject to this subsection and using an earthen trench shall have a performance test conducted for visible emissions no later than thirty (30) days after it commences operation at any new trench location, and annually thereafter. However, if the air curtain incinerator will be operated for less than thirty (30) days at the new trench location, and the owner or operator has demonstrated compliance with the emissions limiting standards of paragraph 62-296.401(7)(b), F.A.C., through a visible emissions test conducted and submitted to the Department within the previous twelve (12) months, the requirement for testing within thirty (30) days of commencing operation at the new trench location shall not apply.

Rulemaking Authority 403.061, 403.716 FS. Law Implemented 403.031, 403.061, 403.087, 403.716, 497.606 FS. History--Formerly 17-2.600(1), Amended 12-2-92, Formerly 17-296.401, Amended 11-23-94, 1-1-96, 3-13-96, 11-13-97, 1-10-07, 7-10-14.

62-296.402 Sulfuric Acid Plants.

(1) Existing Plants.

(a) Florida portion of the Jacksonville, Florida – Brunswick, Georgia, Interstate Air Quality Control Region as defined in 40 C.F.R. Section 81.91.

1. Visible Emissions – ten percent opacity.

2. Sulfur Dioxide – 29 pounds per ton of 100 percent acid produced.

3. Acid Mist – 0.5 pounds per ton of 100 percent acid produced.

(b) All other areas of the State of Florida.

1. Visible Emissions – ten percent opacity.

2. Sulfur Dioxide – 10 pounds per ton of 100 percent acid produced.

3. Acid Mist – 0.3 pounds per ton of 100 percent acid produced.

(2) New Plants.

(a) Visible emissions – ten percent opacity.

(b) Sulfur Dioxide – four pounds per ton of 100 percent acid produced.

(c) Acid Mist – 0.15 pounds per ton of 100 percent acid produced.

(3) Test Methods and Procedures. All emissions tests performed pursuant to the requirements of this rule shall comply with the following requirements.

(a) The test method for visible emissions shall be EPA Method 9, as described at 40 C.F.R. Part 60, Appendix A-4, adopted and incorporated by reference at Rule 62-204.800, F.A.C.

(b) The test method for acid mist/sulfur dioxide shall be EPA Method 8, as described at 40 C.F.R. Part 60, Appendix A-4, adopted and incorporated by reference at Rule 62-204.800, F.A.C. The minimum sample volume shall be 40 dry standard cubic feet.

(c) Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.

(4) Continuous Emissions Monitoring Requirements. Each owner or operator of a sulfuric acid plant shall install, calibrate, operate and maintain a continuous monitoring system for continuously monitoring the pollutants specified in this subsection. Performance specifications, location of monitor, data requirements, data reduction and reporting requirements, shall conform with the requirements of 40 C.F.R. Part 51, Appendix P, adopted and incorporated by reference in subsection 62-204.800(2), F.A.C.; and 40 C.F.R. Part 60, Appendix B, adopted by reference in subsection 62-204.800(7), F.A.C., for existing and new emissions units provided, however, any alternative procedure (as specified in Section 3.9, 40 C.F.R. Part 51, Appendix P) or special consideration (as specified in Section 6.0, 40 C.F.R. Part 51, Appendix P) shall be incorporated in the Department's air permit for the emissions unit and submitted to the U.S. Environmental Protection Agency as a proposed revision to the State Implementation Plan.

(a) Facilities greater than 300 tons per day production capacity, expressed as 100% acid, shall install continuous monitoring systems for the measurement of sulfur dioxide emissions for each sulfuric acid emission source.

(b) Where two or more emissions units emit through a common stack, continuous monitoring systems, if required, shall be installed on each emissions unit prior to combination of the emission.

(5) Quarterly Reporting Requirements. The owners or operators of facilities for which monitoring is required shall submit to the Department a written report of emissions in excess of emission limiting standards as set forth in Rule 62-296.402, F.A.C., for each

calendar quarter. The nature and cause of the excessive emissions shall be explained. This report does not relieve the owner or operator of the legal liability for violations. All recorded data shall be maintained on file by the Source for a period of two years.

Rulemaking Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061, 403.087 FS. History—Formerly 17-2.600(2), 17-296.402, Amended 11-23-94, 1-1-96, 3-13-96, 7-10-14.

62-296.403 Phosphate Processing Fluorides Limits.

Fluorides (water soluble or gaseous atomic weight 19) expressed as pounds of fluoride per ton of phosphate materials input to the system expressed as tons of P_2O_5 .

- (1) New Plants or Plant Sections.
 - (a) Wet process phosphoric acid production and auxiliary equipment – 0.02 pounds.
 - (b) Run-of-pile triple super phosphate (TSP) mixing belt and den and auxiliary equipment – 0.05 pounds.
 - (c) Run-of-pile TSP curing or storage process and auxiliary equipment – 0.12 pounds.
 - (d) Granular triple super phosphate (GTSP) production and auxiliary equipment.
1. GTSP made by granulating run-of-pile TSP – 0.06 pounds.
2. GTSP made from phosphoric acid and phosphate rock slurry – 0.15 pounds.
- (e) GTSP storage and auxiliary equipment – 0.05 pounds.
- (f) Diammonium phosphate production and auxiliary equipment – 0.06 pounds.
- (g) Calcining or other thermal phosphate rock processing and auxiliary equipment excepting phosphate rock drying and defluorinating – 0.05 pounds.
- (h) Defluorinating phosphate rock by thermal processing and auxiliary equipment – 0.37 pounds.
- (i) All plants, plant sections or unit operations and auxiliary equipment not listed in paragraphs (a) through (h) above must use the best available control technology.
- (2) Existing plants or plant sections shall comply with subsection 62-296.403(1), F.A.C., no later than July 1, 1975; or existing plant complexes with an operating wet process phosphoric acid section (including any items in paragraphs 62-296.403(1)(a) through (f), F.A.C.) and other plant sections processing or handling phosphoric acid or products of phosphoric acid processing, total emissions from the entire complex shall not exceed 0.4 pounds per ton of P_2O_5 input to the wet process phosphoric acid section.
- (3) Test Methods and Procedures. All emissions tests performed pursuant to the requirements of this rule shall comply with the following requirements.
 - (a) The test method for fluoride emissions shall be EPA Method 13A or EPA Method 13B, as described at 40 C.F.R. Part 60, Appendix A-5, adopted and incorporated by reference at Rule 62-204.800, F.A.C. The minimum sample volume shall be 30 dry standard cubic feet.
 - (b) Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.

Rulemaking Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061, 403.087 FS. History—Formerly 17-2.600(3), 17-296.403, Amended 11-23-94, 1-1-96, 3-13-96, 7-10-14.

62-296.404 Tall Oil Plants and Kraft (Sulfate) Pulp Mills.

- (1) Visible Emissions.
 - (a) Kraft Recovery Furnaces Equipped with Dry Collectors – 45 percent opacity, except:
 1. Visible emissions of up to 60 percent opacity shall be allowed for one six-minute period during any one-hour period; or
 2. If the emissions unit is equipped with a certified continuous emission monitoring device for measuring opacity, then the monitoring results shall be reported to the Department quarterly in the form of an excess emissions report, and visible emissions in excess of 45 percent opacity shall be allowed for up to six percent of the total number of possible contiguous periods of excess emissions in a quarter (excluding periods of startup, shutdown, or malfunction and periods when the emissions unit is not operating). The continuous emission monitoring device shall be certified, calibrated, and operated according to the procedures for opacity monitors contained in 40 C.F.R. Part 60, Subpart A, adopted and incorporated by reference at Rule 62-204.800, F.A.C.
 - (b) (Reserved).
 - (c) (Reserved).
 - (2) Particulate Matter.
 - (a) Kraft Recovery Furnaces – three pounds per each 3000 pounds of black liquor solids fed.

(b) Visible emission limits for kraft pulp mill emissions units equipped with wet scrubbers shall be effective only if the visible emission measurement can be made without being substantially affected by plume mixing or moisture condensation.

(3) Total Reduced Sulfur (TRS).

(a) Digester Systems, Multiple Effect Evaporator Systems, Condensate Stripper Systems.

1. Gaseous emissions shall be collected and incinerated in a lime kiln or calciner meeting the requirements of either paragraph 62-296.404(3)(e), F.A.C., or subsection 62-204.800(7), F.A.C., or a kraft recovery furnace meeting the requirements of paragraph 62-296.404(3)(c), F.A.C., or subsection 62-204.800(7), F.A.C., or a combustion device meeting the requirements of either paragraph 62-296.404(3)(f), F.A.C., or subsection 62-204.800(7), F.A.C., or;
2. 5 ppm by volume on a dry basis at standard conditions corrected to the actual oxygen content of the untreated flue gas stream as a 12-hour average if a means other than incineration in a combustion device pursuant to subparagraph 62-296.404(3)(a)1., F.A.C., is used to control gaseous emissions of total reduced sulfur.

3. Total reduced sulfur emissions shall not be vented to the atmosphere at any point connected to or between the emissions unit and the control device except in the event of an emergency that presents a danger to life or property, or during those times when the control device is shut down for essential maintenance. The owner or operator of the affected facility shall develop a contingency plan, acceptable to the Department, for such circumstances. The plan shall include definitions of what constitutes essential maintenance and a reportable venting incident. The plan shall also include an evaluation of feasible means of controlling or mitigating the impact of total reduced sulfur when a control device or piece of process equipment that is used to control total reduced sulfur emissions is inoperative, and an assessment of the use of back-up control devices. Once approved by the Department, the plan shall become a modification to the operation permits for affected emissions units and its provisions shall be followed whenever a shutdown occurs. The time allowed for venting shall be as short as possible and limited to the time required to effect the required maintenance. In no event shall the cumulative time exceed ten days in any annual period unless authorized by the Secretary or the Secretary's designee. These provisions supplement the provisions of Rule 62-210.700, F.A.C., which shall also apply where not in direct conflict with this provision.

Normal excess or erratic pressures shall be controlled in such a manner as to prevent the release of uncontrolled gaseous emissions.

In the event that venting of uncontrolled total reduced sulfur emissions does occur the owner or operator shall notify the Department verbally by the close of the Department's next working day. The owner shall provide the Department with a written report as required by Rule 62-210.700, F.A.C. If the next quarterly report is due to the Department sooner than 30 days after the first day of a reportable venting incident, the report on that incident may be filed with the quarterly reports for the following quarter.

4. Emissions units subject to this rule shall also comply with subsection 62-2.960(1), F.A.C. (Compliance Schedules). Digester systems and multiple effect evaporator systems shall also comply with applicable continuous emissions monitoring requirements of subsection 62-296.404(5), F.A.C., if a technology other than incineration is used.

(b) Tall Oil Plants. Gaseous emissions shall be collected and incinerated in a lime kiln or calciner meeting the requirements of paragraph 62-296.404(3)(e), F.A.C., or subsection 62-204.800(7), F.A.C., or a kraft recovery furnace meeting the requirements of paragraph 62-296.404(3)(c), F.A.C., or subsection 62-296.800(7), F.A.C., or a combustion device meeting the requirements of paragraph 62-296.404(3)(f), F.A.C., or subsection 62-204.800(7), F.A.C., or;

1. 0.05 pound per ton of crude tall oil produced as a 12-hour average.
2. Emissions units subject to this rule shall also comply with applicable continuous emissions monitoring requirements of subsections 62-296.404(5) and 62-2.960(1), F.A.C. (Compliance Schedules).

(c) Kraft Recovery Furnaces.

1. Straight kraft recovery furnaces.

a. Old design kraft recovery furnaces, new design kraft recovery furnaces that are not direct-fired, and new design direct-fired suspension-burning kraft recovery furnaces – 17.5 ppm by volume on a dry basis at standard conditions corrected to 8 percent oxygen as a 12-hour average.

b. New design direct-fired kraft recovery furnaces that are not direct-fired suspension-burning kraft recovery furnaces – 5 ppm by volume on a dry basis at standard conditions corrected to 8 percent oxygen as a 12-hour average.

c. Any straight kraft recovery furnace shall comply with the total reduced sulfur emissions limit for cross recovery furnaces whenever the green liquor sulfidity exceeds 28 percent and the black liquor being burned contains an average of more than 7 weight percent solids originating from the neutral sulfite semichemical (NSSC) process, based on the average of all previous 12-hour averages during the quarter.

2. Cross recovery furnaces – 25 ppm by volume on a dry basis at standard conditions corrected to 8 percent oxygen as a 12-hour average. Any cross recovery furnace shall comply with the total reduced sulfur emissions limit for straight kraft recovery furnaces whenever the green liquor sulfidity is less than or equal to 28 percent or the black liquor being burned contains an average of 7 weight percent or less solids originating from the neutral sulfite semichemical (NSSC) process, based on the average of all previous 12-hour averages during the quarter.

3. Emissions units subject to this rule shall also comply with applicable continuous emissions monitoring requirements of subsections 62-296.404(5) and 62-2.960(1), F.A.C. (Compliance Schedules).

(d) Smelt Dissolving Tank Vents.

1. 0.0480 pound per each 3000 pounds black liquor solids as hydrogen sulfide (H₂S).

2. Emissions units subject to this rule shall also comply with applicable continuous emissions monitoring requirements of subsections 62-296.404(5) and 62-2.960(1), F.A.C. (Compliance Schedules).

(e) Lime Kilns and Calciners.

1. 20 ppm by volume on a dry basis at standard conditions corrected to 10 percent oxygen as a 12-hour average.

2. Emissions units subject to this rule shall also comply with applicable continuous emissions monitoring requirements of subsections 62-296.404(5) and 62-2.960(1), F.A.C. (Compliance Schedules).

(f) Other Combustion Devices Used to Incinerate Total Reduced Sulfur Emissions.

1. 5 ppm by volume on a dry basis at standard conditions corrected to 10 percent oxygen as a 12-hour average.

2. Emissions units subject to this provision may include but shall not be limited to power boilers, carbonaceous fuel burning equipment and incinerators.

3. Emissions units subject to this rule shall also comply with applicable continuous emissions monitoring requirements of subsections 62-296.404(5) and 62-2.960(1), F.A.C. (Compliance Schedules).

(4) Test Methods and Procedures. All emissions tests performed pursuant to the requirements of this rule shall comply with the following requirements.

(a) Kraft Recovery Furnaces.

1. The test method for visible emissions shall be EPA Method 9, as described at 40 C.F.R. Part 60, Appendix A-4, adopted and incorporated by reference at Rule 62-204.800, F.A.C.

2. The test method for particulate emissions shall be EPA Method 5, as described at 40 C.F.R. Part 60, Appendix A-3, adopted and incorporated by reference at Rule 62-204.800, F.A.C. The minimum sample volume shall be 32 dry standard cubic feet. For EPA Method 5, the filter temperature must not exceed 320 degrees Fahrenheit. EPA Method 17, as described at 40 C.F.R. Part 60, Appendix A-6, adopted and incorporated by reference at Rule 62-204.800, F.A.C., may be used if stack temperature is less than 400 degrees Fahrenheit. An adjustment of 0.004 grains per dry standard cubic foot shall be added to the test results when using Method 17. A water wash shall be used with either method.

3. The test method for TRS shall be EPA Method 16 or EPA Method 16A or EPA Method 16B or EPA Method 16C, as described at 40 C.F.R. Part 60, Appendix A-6, adopted and incorporated by reference at Rule 62-204.800, F.A.C. EPA Method 16 or EPA Method 16A or EPA Method 16B or EPA Method 16C shall also be required for instrument certification.

(b) Lime Kilns and Calciners.

1. The particulate emissions test method for scrubber controlled emissions units shall be EPA Method 5, as described at 40 C.F.R. Part 60, Appendix A-3, adopted and incorporated by reference at Rule 62-204.800, F.A.C. The minimum sample volume shall be 32 dry standard cubic feet. A water wash shall be used.

2. The particulate emissions test method for dry control emissions units shall be EPA Method 5, as described at 40 C.F.R. Part 60, Appendix A-3, adopted and incorporated by reference at Rule 62-204.800, F.A.C. The minimum sample volume shall be 32 dry standard cubic feet. An acetone wash shall be used.

3. The test method for TRS shall be EPA Method 16 or EPA Method 16A or EPA Method 16B or EPA Method 16C, as described at 40 C.F.R. Part 60, Appendix A-6, adopted and incorporated by reference at Rule 62-204.800, F.A.C. EPA Method 16 or EPA Method 16A or EPA Method 16B or EPA Method 16C shall also be required for instrument certification.

(c) Smelt Dissolving Tank Vents.

1. The particulate emissions test method for scrubber controlled emissions units shall be EPA Method 5 as described at 40 C.F.R. Part 60, Appendix A-3, adopted and incorporated by reference at Rule 62-204.800, F.A.C. The minimum sample volume shall be 32 dry standard cubic feet. A water wash shall be used.

2. The particulate emissions test method for dry control emissions units shall be EPA Method 5, as described at 40 C.F.R. Part 60, Appendix A-3, adopted and incorporated by reference at Rule 62-204.800, F.A.C. The minimum sample volume shall be 32 dry standard cubic feet. An acetone wash shall be used.

3. The test method for TRS shall be EPA Method 16 or EPA Method 16A or EPA Method 16B or EPA Method 16C, as described at 40 C.F.R. Part 60, Appendix A-6, adopted and incorporated by reference at Rule 62-204.800, F.A.C. EPA Method 16 or EPA Method 16A or EPA Method 16B or EPA Method 16C shall also be required for instrument certification.

(d) The TRS test method for tall oil plants shall be EPA Method 16 or EPA Method 16A or EPA Method 16B or EPA Method 16C, as described at 40 C.F.R. Part 60, Appendix A-6, adopted and incorporated by reference at Rule 62-204.800, F.A.C. EPA Method 16 or EPA Method 16A or EPA Method 16B or EPA Method 16C shall also be required for instrument certification.

(e) Other Combustion Devices used to Incinerate TRS.

1. The particulate emissions test method for scrubber controlled emissions units shall be EPA Method 5, as described at 40 C.F.R. Part 60, Appendix A-3, adopted and incorporated by reference at Rule 62-204.800, F.A.C. The minimum sample volume shall be 32 dry standard cubic feet. A water wash shall be used.

2. The particulate emissions test method for dry control emissions units shall be EPA Method 5, as described at 40 C.F.R. Part 60, Appendix A-3, adopted and incorporated by reference at Rule 62-204.800, F.A.C. The minimum sample volume shall be 32 dry standard cubic feet. An acetone wash shall be used.

3. The test method for TRS shall be EPA Method 16 or EPA Method 16A or EPA Method 16B or EPA Method 16C, as described at 40 C.F.R. Part 60, Appendix A-6, adopted and incorporated by reference at Rule 62-204.800, F.A.C. EPA Method 16 or EPA Method 16A or EPA Method 16B or EPA Method 16C shall also be required for instrument certification.

(f) Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.

(5) Continuous Emissions Monitoring Requirements. Each owner or operator of a tall oil plant or kraft (sulfate) pulp mill shall install continuous monitoring systems for monitoring total reduced sulfur (TRS) emissions, or the performance of total reduced sulfur air pollution control systems as specified in this subsection.

(a) Straight kraft recovery furnaces, whether new or old design, cross recovery furnaces, lime kilns and calciners, shall be equipped with total reduced sulfur continuous emissions monitoring systems as specified in paragraph 62-296.404(5)(b), F.A.C. All digester systems and multiple effect evaporator systems, shall be equipped with total reduced sulfur continuous emissions monitoring systems as specified in paragraph 62-296.404(5)(b), F.A.C. (Continuous Emission Monitoring), if a technology other than incineration is used.

(b) Continuous determination of total reduced sulfur emissions.

1. A total reduced sulfur continuous emissions monitoring system shall be installed, calibrated, certified and operated pursuant to all of the following provisions:

a. The continuous emissions monitoring system shall monitor and record the concentration of total reduced sulfur (TRS) emissions on a dry basis and the percentage of oxygen by volume on a dry basis.

b. The continuous emissions monitoring system shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.

c. The continuous emissions monitoring system shall be located downstream of the control device such that representative measurements of process parameters can be obtained.

d. The continuous emissions monitoring system shall be located, installed and certified pursuant to the provisions of 40 C.F.R. Part 60, Appendix B, Performance Specification 2 and Performance Specification 3, and 40 C.F.R. Part 60, Appendix B, Performance Specification 5, which are adopted and incorporated by reference at Rule 62-204.800, F.A.C. The exception is that the phrase "or other approved alternative" in Section 3.2 of Performance Specification 5 is not adopted. For the purposes of emissions testing and certification of continuous emissions monitoring systems, EPA Method 16, EPA Method 16A, EPA Method 16B, or EPA Method 16C as described at 40 C.F.R. Part 60, Appendix A-6, adopted and incorporated by reference at Rule 62-204.800, F.A.C., shall be used.

e. The continuous emissions monitoring system shall be in continuous operation, except when the emissions unit is not operating, or during system breakdowns, repairs, calibration checks, and zero and span adjustments.

f. During any initial emissions tests conducted pursuant to Rule 62-296.404, F.A.C., or within 30 days thereafter, and at such times as there is reason to believe the system does not conform to the performance specifications under this rule (for example, equipment repairs, replacements, excessive drift and such), the owner or operator of any affected emissions unit shall conduct

continuous monitoring system performance evaluations and furnish the Department, within sixty days thereof, a written report of the results of such tests. The report may be submitted electronically to the Department as specified in Rule 62-210.370, F.A.C. These continuous emissions monitoring systems performance evaluations shall be conducted in accordance with the requirements and procedures contained in sub-subparagraph 62-296.404(5)(b)1.d., F.A.C.

g. The continuous emissions monitoring system shall have a maximum span value not to exceed:

(i) A total reduced sulfur concentration of 30 ppm for the total reduced sulfur continuous emissions monitoring system on any new design direct-fired kraft recovery furnace that is not direct-fired, new design suspension-burning kraft recovery furnace, incinerator, digester system or multiple effect evaporator system.

(ii) A total reduced sulfur concentration of 50 ppm for the total reduced sulfur continuous emissions monitoring system on any old design kraft recovery furnace, new design kraft recovery furnace that is not direct-fired, new design direct-fired suspension-burning kraft recovery furnace, cross recovery furnace, lime kiln or calciner.

(iii) 20 percent oxygen for the continuous oxygen monitoring system.

h. The continuous emissions monitoring system shall be checked by the owner or operator in accordance with a written procedure at least once daily and after any maintenance to the system. The owner or operator shall check the zero (or low level value between 0 and 20 percent of span value) and span (90 to 100 percent of span value) calibration drifts. The zero and span shall be adjusted, as a minimum, whenever the 24-hour zero drift or 24-hour span drift exceeds two times the limits of the applicable performance specifications referenced in sub-subparagraph 62-296.404(5)(b)1.d., F.A.C. The system must allow the amount of excess zero and span drift measured at the 24-hour interval checks to be recorded and quantified.

2. The owner or operator of any total reduced sulfur emissions unit who is required to install a total reduced sulfur continuous emissions monitoring system pursuant to paragraph 62-296.404(5)(a), F.A.C., shall:

a. Reduce all data to one-hour averages for each 60-minute period beginning on the hour. One-hour averages shall be computed from a minimum of four data points equally spaced over each one-hour period. Data recorded during periods of system breakdowns, repairs, calibration checks, and zero and span adjustments shall not be included in the computation. Either an arithmetic or integrated average shall be used. The data output of the continuous emissions monitoring system may, at the owner's or operator's option, include a numerical format showing individual numerical readings and averages in addition to the required strip chart format with legible ink tracings and calibration information. All data output shall be clearly and properly identified by the operator. All system breakdowns, repairs, calibration checks, span adjustments and periods of excess emissions shall legibly appear on all data output.

b. Calculate and record on a daily basis the 12-hour average total reduced sulfur concentrations for two consecutive 12-hour periods of each operating day. Each 12-hour average shall be determined as the arithmetic mean of the appropriate 12 contiguous one-hour average total reduced sulfur concentrations provided by the continuous emissions monitoring system.

c. Calculate and record on a daily basis 12-hour average oxygen concentrations for two consecutive 12-hour periods of each operating day. These 12-hour averages shall correspond to the 12-hour average total reduced sulfur concentrations from sub-subparagraph 62-296.404(5)(b)2.b., F.A.C., and shall be determined as an arithmetic mean of the appropriate 12 contiguous one-hour average oxygen concentrations provided by each continuous emissions monitoring system.

d. Correct all 12-hour average total reduced sulfur (TRS) concentrations using the following equation:

$$C_{corr} = C_{meas} (21 - X) / (21 - Y)$$

where:

C_{corr} = the TRS concentration corrected for oxygen.

C_{meas} = the TRS concentration uncorrected for oxygen.

X = the volumetric oxygen concentration in percentage that the measured TRS concentration is to be corrected to (8 percent for all recovery furnaces and 10 percent for all lime kilns, incinerators or other devices, except those emissions units subject to subparagraph 62-296.404(3)(a)2. and paragraph 62-296.404(3)(b), F.A.C., which shall be corrected to the actual oxygen content of the untreated flue gas stream).

Y = the measured 12-hour average volumetric oxygen concentration.

e. The data shall be rounded to the same number of significant digits as the standard.

(c) Incinerators subject to paragraph 62-296.404(3)(f), F.A.C., shall be equipped with devices to continuously monitor temperature at the point of combustion and oxygen. The temperature devices shall be certified by the manufacturer to be accurate to within + 1 percent of the temperature being measured. The oxygen monitors shall be certified by the manufacturer to be accurate to

within 0.1 percent oxygen by volume.

(d) The owner or operator of any tall oil plant or kraft pulp mill shall provide the Department with a list of physical and chemical parameters for each regulated total reduced sulfur emissions unit that is not required to be equipped with a total reduced sulfur continuous monitor, which will be regularly monitored to demonstrate that the emissions unit is being operated in a manner that can reasonably be expected to result in compliance with the applicable total reduced sulfur emission limiting standards. The owner or operator shall provide information showing the correlation between the specific magnitudes of the specific surrogate parameters and the associated emissions of total reduced sulfur. The owner or operator shall recommend the frequency and method of monitoring for each parameter. The Department shall issue notice to the company pursuant to Chapter 62-103, F.A.C., that specifies the parameters that are to be monitored, the frequency of monitoring, and the parameter limits that must be maintained. The parameters, parameter limits and frequency of monitoring shall become a modification to the permit for each affected emissions unit. Excess emissions shall be deemed to occur if the parameters exceed the parameter limits specified in the permit. Such parameter limits may be in the form of the applicable total reduced sulfur emission standard, if an equation is used that estimates the 12-hour average total reduced sulfur emission rate based on the surrogate parameter values during each 12-hour averaging period; or the parameter limits may be in the form of specific parameter values that are not to be exceeded (or dropped below) more often than a specified period of time during each 12-hour averaging period.

(6) Quarterly Reporting Requirements. The owner or operator of any digester system, multiple effect evaporator system, condensate stripper system, tall oil plant, kraft recovery furnace, lime kiln, calciner or other emissions unit subject to the provisions of subsection 62-296.404(5), F.A.C. (Continuous Monitoring Requirements), shall submit a written total reduced sulfur emissions and surrogate parameter data report to the Department or local program, as specified in the facility's permit, by the 30th day following the end of each calendar quarter. The report may be submitted electronically.

(a) The report shall include the following information:

1. The magnitude of excess emissions and the date and time of commencement and completion of each time period in which excess emissions occurred.

2. Specific identification of each period of excess emissions that occurs including startups, shutdowns, and malfunctions of the affected emissions unit. An explanation of the cause of each period of excess emissions, and any corrective action taken or preventive measures adopted. Excess emissions shall be all 12-hour periods for which the appropriate surrogate parameter data or total reduced sulfur continuous emissions monitoring data indicates that an applicable 12-hour average total reduced sulfur emission limiting standard for the emissions unit was exceeded.

3. The date and time identifying each period during which each continuous emissions monitoring system used to measure total reduced sulfur emissions or surrogate parameters was inoperative except for zero and span checks, and the nature of the system repairs or adjustments.

4. When no excess emissions have occurred or the continuous emissions monitoring system(s) have not been operative, or have been repaired or adjusted, such information shall be stated in the report.

(b) Any owner or operator subject to the provisions of subsections 62-296.404(5) and (6), F.A.C., shall maintain a complete file of any measurements, including continuous emissions monitoring system, monitoring device, and performance testing measurements; any continuous emissions monitoring system performance evaluations; any continuous emissions monitoring system or monitoring device calibration checks; any adjustments and maintenance performed on these systems or devices; and any other information required, recorded in a permanent legible form available for inspection. The file shall be retained for at least three years following the date of such measurements, maintenance, reports and records.

(c) Evaluation of Excess Emissions. The Department shall consider periods of excess emissions from any kraft recovery furnace, lime kiln, calciner or any other regulated TRS emissions unit to be evidence of improper operation and maintenance of the monitored emissions unit provided that:

1. For kraft recovery furnaces subject to the emissions limits of paragraph 62-296.404(3)(c), F.A.C., the excess emissions occur during more than one percent of the total number of possible contiguous 12-hour periods of excess emissions in a calendar quarter rounded to the nearest whole number (excluding only the actual 12-hour periods during which a startup, shutdown or malfunction of the kraft recovery furnace occurred and only the actual 12-hour periods when the kraft recovery furnace was not operating), or

2. For lime kilns and calciners subject to the emissions limits of paragraph 62-296.404(3)(e), F.A.C., the excess emissions occur during more than two percent of the total number of possible contiguous 12-hour periods of excess emissions in a calendar quarter rounded to the nearest whole number (excluding only the actual 12-hour periods during which a startup, shutdown or malfunction of

the lime kiln, calciner, or their control equipment occurred and only the actual 12-hour periods when the lime kiln or calciner was not operating), or

3. For other regulated non-NSPS total reduced sulfur emissions units, the excess emissions as indicated by the appropriate surrogate parameters occur during more than one percent of the total number of possible contiguous 12-hour periods of excess emissions in a calendar quarter rounded to the nearest whole number (excluding only the actual 12-hour periods during which a startup, shutdown, or malfunction of the emissions unit or its control equipment occurred and only the actual 12-hour periods when the source was not operating), and

4. The Department determines that the affected emissions unit, including air pollution control equipment, is not maintained and operated in a manner which is consistent with good air pollution control practices for minimizing emissions. Such determination shall be based on the failure of the owner or operator of the facility to provide records of maintenance and operation of the emissions unit and related equipment showing operation consistent with good air pollution control practices. Good air pollution control practices shall include:

- a. Operation of all equipment within permit limits for loading rates and other process parameters,
- b. An adequate preventive maintenance program based on manufacturer's recommendations or other accepted industry practices,
- c. Training of personnel in the operation and maintenance of equipment,
- d. Visual and instrument inspections of equipment on a regular basis, and
- e. Maintenance of an adequate on-site, or readily available, supply of equipment for routine repairs.

(d) The owner or operator of any tall oil plant or kraft pulp mill shall notify the Department or local program, as specified in the facility's permit, in writing within fourteen days of the date on which periods of excess emissions exceed the percentages allowed by subparagraphs 62-296.404(6)(c)1. through 3., F.A.C. The notification may be submitted electronically.

Rulemaking Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061, 403.087 FS. History—Formerly 17-2.600(4), 17-296.404, Amended 11-23-94, 1-1-96, 3-13-96, 7-10-14.

62-296.405 Fossil Fuel Steam Generators with More Than 250 Million Btu Per Hour Heat Input.

(1) Existing Emissions Units Emissions Limits.

(a) Visible emissions – 20 percent opacity except for one six-minute period per one-hour period during which opacity shall not exceed 27 percent. Emissions units governed by this visible emissions limit shall test for particulate emissions annually and as otherwise required by Chapter 62-297, F.A.C. Emissions units electing to test for particulate matter emissions quarterly shall be allowed visible emissions of 40 percent opacity. The results of such tests shall be submitted to the Department or local program, as specified in the facility's permit. Upon demonstration that the particulate standard has been regularly complied with, the Secretary, upon petition by the applicant, shall reduce the frequency of particulate testing to no less than once annually.

(b) Particulate Matter – 0.1 pound per million Btu heat input, as measured by applicable compliance methods.

(c) Sulfur Dioxide, as measured by applicable compliance methods.

1. Emissions units burning liquid fuel.

Stations – 2.5 pounds per million Btu heat input.

a. Emissions units in Duval County with a nameplate generating capacity of greater than 250 MW which commenced operation prior to August 1, 1977 – 1.98 pounds per million Btu heat input.

b. Emissions units in Duval County with a nameplate generating capacity of less than 160 MW which commenced operation prior to October 1, 1964 – 1.10 pounds per million Btu heat input.

c. All other emissions units in Duval County – 1.65 pounds per million Btu heat input.

d. Hillsborough County, emissions units south of State Highway 60 with a nameplate generating capacity of less than 100 MW which commenced operation prior to June 1, 1955 – 1.1 pounds per million Btu heat input.

e. Escambia County, emissions units north of Interstate 10 with a nameplate generating capacity of less than 50 MW which commenced operation prior to October 1, 1952 – 1.98 pounds per million Btu heat input.

f. Escambia County, no emissions unit north of Interstate 10 with a rated heat input of 515 million Btu per hour or less for which a valid Department operating permit was issued prior to September 30, 1972 shall emit in the aggregate more than 57.5 tons per any 24 hour period.

g. Manatee County, emissions units with a nameplate generating capacity of greater than 700 MW for which a valid Department

operating permit was issued prior to January 1, 1979 – 1.1 pounds per million Btu heat input.

h. Leon and Wakulla Counties, emissions units with a nameplate generating capacity of less than 260 MW for which a valid Department operating permit was issued prior to November 1, 1977 – 1.87 pounds per million Btu heat input.

i. Dade, Broward, and Palm Beach Counties, emissions units with a nameplate generating capacity of less than 170 MW which commenced operation prior to May 1, 1958 – 1.1 pounds per million Btu heat input, except in the event of a fuel or energy crisis declared by the Governor of Florida or the President of the United States – 2.75 pounds per million Btu heat input. Notification concerning the quantity and estimated duration of the increase in emissions shall be given to the Department prior to burning the higher sulfur fuel.

j. All other areas of the State – 2.75 pounds per million Btu heat input.

2. Emissions units burning solid fuel.

a. Hillsborough County, no emissions unit with a nameplate generating capacity of greater than 120 MW which commenced operation prior to November 1, 1967, shall emit more than 2.4 pounds of sulfur dioxide per million Btu heat input on a weekly average nor shall a group of such emissions units located on one or more contiguous or adjacent properties and which are under common control emit more than 10.6 tons per hour of sulfur dioxide on a weekly average. A plan for assuring compliance with Florida Ambient Air Quality Standards will be incorporated into the revised operating permit for such emissions units.

b. Hillsborough County, no emissions unit with a nameplate generating capacity of greater than 400 MW which commenced operation after November 1, 1967, and prior to June 1, 1976, shall emit in total more than 6.5 pounds of sulfur dioxide per million Btu heat input on a two hour average nor shall a group of such emissions units located on one or more contiguous or adjacent properties and which are under common control emit more than 31.5 tons per hour of sulfur dioxide on a three hour average and 25 tons per hour of sulfur dioxide on a 24 hour average.

c. Escambia County, emissions units north of Interstate 10 with a nameplate generating capacity of more than 50 MW which commenced operation prior to September 1, 1973 – 5.90 pounds per million Btu heat input.

d. All other areas of the State – 6.17 pounds per million Btu heat input.

3. Owners of fossil fuel steam generators shall monitor their emissions and the effects of the emissions on ambient concentrations of sulfur dioxide, in a manner, frequency, and locations approved, and deemed reasonably necessary and ordered by the Department.

(d) Nitrogen Oxides (expressed as NO₂) – as measured by applicable compliance methods.

1. Duval County, emissions units with a nameplate generating capacity of greater than 450 MW which commenced operation prior to August 1, 1977 – 0.30 pounds per million Btu heat input.

2. Manatee County, emissions units with a nameplate generating capacity of greater than 700 MW for which a valid Department operating permit was issued prior to January 1, 1979 – 0.30 pounds per million Btu heat input.

3. Leon County, emissions units with a nameplate generating capacity of greater than 200 MW for which a valid Department operating permit was issued prior to November 1, 1977 – 0.30 pounds per million Btu heat input.

4. Hillsborough County, emissions units with a nameplate generating capacity of greater than 400 MW which commenced operation after January 1, 1976 and prior to January 1, 1985 – 0.70 pounds per million Btu heat input.

(e) Test Methods and Procedures. All emissions tests performed pursuant to the requirements of this rule shall comply with the following requirements.

1. The test method for visible emissions shall be EPA Method 9, described at 40 C.F.R. Part 60, Appendix A-4, adopted and incorporated by reference at Rule 62-204.800, F.A.C. In lieu of Method 9 testing, a transmissometer utilizing a six-minute block average for opacity measurement may be used, provided such transmissometer is installed, certified, calibrated, operated and maintained in accordance with the provisions of 40 C.F.R. Part 75, adopted and incorporated by reference at Rule 62-204.800, F.A.C.

2. The test methods for particulate emissions shall be EPA Methods 17, 5, 5B, or 5F. The minimum sample volume shall be 30 dry standard cubic feet. EPA Method 5 may be used with filter temperature at no more than 320 degrees Fahrenheit. For EPA Method 17, stack temperature shall be less than 375 degrees Fahrenheit. EPA Method 3 or 3A with Orsat analysis shall be used when the oxygen base F-factor computed according to EPA Method 19 is used in lieu of heat input. Acetone wash shall be used with EPA Method 5 or 17. Methods 3 and 3A are described at 40 C.F.R. Part 60, Appendix A-2; EPA Methods 5, 5B, and 5F are described at 40 C.F.R. Part 60, Appendix A-3; EPA Method 17 is described at 40 C.F.R. Part 60, Appendix A-6; and EPA Method 19 is described at 40 C.F.R. Part 60, Appendix A-7; adopted and incorporated by reference at Rule 62-204.800, F.A.C.

3. The test methods for sulfur dioxide emissions shall be EPA Methods 6, 6A, 6B or 6C, as described at 40 C.F.R. Part 60, Appendix A-4, adopted and incorporated by reference at Rule 62-204.800, F.A.C. Fuel sampling and analysis may be used as an alternate sampling procedure if such a procedure was incorporated in the operation permit for the emissions unit prior to April 23, 1985. Otherwise, fuel sampling and analysis may be used if the emissions unit obtains an alternate procedure under the provisions of Rule 62-297.620, F.A.C. Such alternate procedure shall become a condition of the emissions unit's permit. The Department will retain the authority to require EPA Method 6 or 6C if it has reason to believe that exceedances of the sulfur dioxide emissions limiting standard are occurring. Results of an approved fuel sampling and analysis program or continuous emissions monitoring program shall have the same effect as EPA Method 6 test results for purposes of demonstrating compliance or noncompliance with sulfur dioxide standards.

4. For emission units not subject to nitrogen oxides continuous monitoring requirements, the test methods for nitrogen oxides emissions shall be EPA Methods 7, 7A, or 7E, as described at 40 C.F.R. Part 60, Appendix A-4 adopted and incorporated by reference at Rule 62-204.800, F.A.C. Four grab samples at 15 minute intervals (± 2 min.) per run shall be required for EPA Methods 7 and 7A. For emission units that are subject to continuous monitoring requirements under 42 U.S.C. sections 7661 – 7661f or 40 C.F.R. Part 75, emissions of nitrogen oxides shall be determined based on a 30-day rolling average, except as specifically provided by 40 C.F.R. Parts 60 or 76. 40 C.F.R. Parts 60, 75, and 76 are adopted and incorporated by reference at Rule 62-204.800, F.A.C.

5. Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.

(f) Continuous Emissions Monitoring Requirements. Each owner or operator of an emissions unit subject to subsection 62-296.405(1), F.A.C., shall install, calibrate, operate and maintain a continuous monitoring system for continuously monitoring the pollutants specified in this subsection. Performance specifications, location of monitor, data requirements, data reduction and reporting requirements shall conform with the requirements of 40 C.F.R. Part 51, Appendix P, adopted and incorporated by reference in subsection 62-204.800(2), F.A.C., and 40 C.F.R. Part 60, Appendix B, adopted by reference in subsection 62-204.800(7), F.A.C., for existing and new emissions units provided, however, any alternative procedure (as specified in Section 3.9, 40 C.F.R. Part 51, Appendix P) or special consideration (as specified in Section 6.0, 40 C.F.R. Part 51, Appendix P) shall be incorporated in the Department's air permit for the emissions unit and submitted to the U.S. Environmental Protection Agency as a proposed revision to the State Implementation Plan.

1. Existing fossil fuel steam generators with more than 250 million BTU per hour heat input and with a capacity factor of greater than 30 percent for the latest year of record or as otherwise documented to the Department by the owner or operator, shall install continuous monitoring systems as set forth in this subparagraph. Any reactivated or previously exempted unit whose operated capacity factor for the previous six months is greater than 30 percent must install continuous monitoring systems as set forth in this subparagraph no later than twelve months following the previous six month period of achieving a capacity factor greater than 30 percent.

a. Opacity. All emissions units as set forth in subparagraph 62-296.405(1)(f)1., F.A.C., shall install continuous monitoring systems for monitoring opacity. Exempted are:

(i) Emissions units burning only gas, oil, or gas and oil which comply with the applicable state visible emission limiting standard without the use of emission control equipment.

(ii) Any emissions unit using a wet scrubber.

b. Sulfur dioxide. All emissions units as set forth in subparagraph 62-296.405(1)(f)1., F.A.C., shall install sulfur dioxide continuous monitoring equipment on units which have installed sulfur dioxide control equipment. Those emissions units not having an operating flue gas desulfurization device may monitor sulfur dioxide emissions by fuel sampling and analysis according to methods approved by EPA.

c. Nitrogen Oxides. All new emissions units as set forth in subparagraph 62-296.405(1)(f)1., F.A.C., with more than 1000 million BTU per hour heat input shall, during construction, install continuous monitoring systems for monitoring nitrogen oxides.

d. Oxygen or Carbon Dioxide. A continuous monitoring system shall be installed at each emissions unit, as set forth in subparagraph 62-296.405(1)(f)1., F.A.C., where measurements of oxygen or carbon dioxide in the flue gas are utilized to convert either sulfur dioxide or nitrogen oxides continuous emission monitoring data to units of the emission limiting standards for proof of compliance as set forth in subsection 62-296.405(1), F.A.C.

2. The exemption from opacity monitoring under sub-sub-subparagraph 62-296.405(1)(f)1.a.(i), F.A.C., shall not apply to any emissions unit which has been found to be in violation of the visible emission limiting standard pursuant to administrative proceedings conducted under Chapter 120, Florida Statutes, or judicial proceedings after January 1, 1978. No later than ninety days

following the date an order establishing such violation becomes final, the owner or operator of such emissions unit shall submit to the Department a proposed compliance schedule for installing a continuous opacity monitoring system. Following incorporation of a compliance schedule into the emission unit's air permit, the owner or operator shall install the continuous monitoring system in accordance with the schedule.

(g) Quarterly Reporting Requirements. The owners or operators of facilities for which monitoring is required shall submit to the Department a written report of emissions in excess of emission limiting standards as set forth in subsection 62-296.405(1), F.A.C., for each calendar quarter. The nature and cause of the excessive emissions shall be explained. This report does not relieve the owner or operator of the legal liability for violations. All recorded data shall be maintained on file by the Source for a period of two years.

(2) New Emissions Units Emissions Limits.

(a) Visible Emissions – (See subsection 62-204.800(7), F.A.C., and 40 C.F.R. 60.42 and 60.42a).

(b) Particulate Matter – (See subsection 62-204.800(7), F.A.C., and 40 C.F.R. 60.42 and 60.42a).

(c) Sulfur Dioxide – (See subsection 62-204.800(7), F.A.C., and 40 C.F.R. 60.43 and 60.43a).

(d) Nitrogen Oxides – (See subsection 62-204.800(7), F.A.C., and 40 C.F.R. 60.44 and 60.44a).

(3) For the purposes of this rule, nameplate generating capacity means the manufacturer's capacity rating of electrical generating output (expressed in MWe) as designed.

Rulemaking Authority 403.061 FS. Law Implemented 403.031, 403.061, 403.087 FS. History—Formerly 17-2.600(5), Amended 6-29-93, Formerly 17-296.405, Amended 11-23-94, 1-1-96, 3-13-96, 3-2-99, 7-10-14.

62-296.406 Fossil Fuel Steam Generators with Less Than 250 Million Btu Per Hour Heat Input, New and Existing Emissions Units.

The following standards apply to new and existing emissions units, except for emissions units that would otherwise be exempt from permitting pursuant to subsection 62-210.300(3), F.A.C., and emissions units that would otherwise be considered insignificant pursuant to subparagraph 62-213.300(2)(a)1. or paragraph 62-213.430(6)(b), F.A.C. These standards apply unless otherwise specified by rule, or by order or permit issued by the Department prior to July 15, 1989.

(1) Visible Emissions – shall not exceed 20 percent opacity except for one six-minute period per one-hour period during which opacity shall not exceed 27 percent. An opacity of 30 percent shall be allowed for emissions units rated at 241 million Btu per hour heat input for which a valid Department operating permit was issued prior to October 1, 1972 in Escambia County, while burning fuel oil in conjunction with waste material derived from waste streams previously discharged into underground wells.

(2) Particulate Matter – Best available control technology.

(3) Sulfur Dioxide – Best available control technology.

Rulemaking Authority 403.061 FS. Law Implemented 403.031, 403.061, 403.087 FS. History—Formerly 17-2.600(6), Amended 6-29-93, Formerly 17-296.406, Amended 11-23-94, 3-13-96, 3-2-99, 7-10-14.

62-296.407 Portland Cement Plants.

Rulemaking Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061, 403.087 FS. History—Formerly 17-2.600(7), 17-296.407, Amended 11-23-94, 1-1-96, Repealed 2-16-12.

62-296.408 Nitric Acid Plants.

These limits are applicable to new and existing emissions units producing weak nitric acid (50 to 70 percent) by pressure or atmospheric pressure process.

(1) Visible emissions – shall not exceed 10 percent opacity.

(2) Nitrogen Oxides – emissions shall not exceed 3 pounds per ton of acid produced (100 percent basis).

(3) Test Methods and Procedures. All emissions tests performed pursuant to the requirements of this rule shall comply with the following requirements.

(a) The test method for visible emissions shall be EPA Method 9, as described at 40 C.F.R. Part 60, Appendix A-4, adopted and incorporated by reference at Rule 62-204.800, F.A.C.

(b) The test methods for nitrogen oxides emissions shall be EPA Methods 7, 7A, 7B, 7C, or 7D, as described at 40 C.F.R. Part 60, Appendix A-4, adopted and incorporated by reference at Rule 62-204.800, F.A.C. The minimum sample volume shall be as

specified in EPA Method 7. Four grab samples at 15 minute intervals (±2 minutes) per run required.

(c) Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.

Rulemaking Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061, 403.087 FS. History—Formerly 17-2.600(8), 17-296.408, Amended 11-23-94, 1-1-96, 7-10-14.

62-296.409 Sulfur Recovery Plants.

(1) New Plants recovering sulfur from crude oil gas – emissions shall not exceed 0.004 pounds of sulfur dioxide per pound of sulfur input to the recovery system or 0.004 pounds of sulfur dioxide per pound of sulfur removed from an oil well.

(2) Existing Plants (for which a valid Department Construction permit was issued prior to July 1, 1973) recovering sulfur from crude oil gas – emissions shall not exceed 0.08 pounds of sulfur dioxide per pound of sulfur input to the recovery system or 0.08 pounds of sulfur dioxide per pound of sulfur removed from crude oil or gas processed.

(3) Test Methods and Procedures. All emissions tests performed pursuant to the requirements of this rule shall comply with the following requirements.

(a) The test method for sulfur dioxide shall be EPA Method 6, as described at 40 C.F.R. Part 60, Appendix A-4, adopted and incorporated by reference at Rule 62-204.800, F.A.C. The minimum sample volume shall be 0.71 dry standard cubic feet. Two 20-minute samples (+ or – five minutes) per run required.

(b) Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.

Rulemaking Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061, 403.087 FS. History—Formerly 17-2.600(9), 17-296.409, Amended 11-23-94, 1-1-96, 7-10-14.

62-296.410 Carbonaceous Fuel Burning Equipment.

(1) Emissions units for which a valid Department operation or construction permit was issued prior to July 1, 1974.

(a) Burners with a capacity less than 30 million Btu per hour heat input – Visible emissions shall not exceed 20 percent opacity except that visible emissions not exceeding 27 percent opacity shall be allowed for one six-minute period in any one-hour period.

(b) Burners with a capacity equal to or greater than 30 million Btu per hour heat input.

1. Visible Emissions – shall not exceed 30 percent opacity except that visible emissions not exceeding 33 percent opacity shall be allowed for one six-minute period in any one-hour period.

2. Particulate Matter – shall not exceed 0.3 pounds per million Btu of heat input of carbonaceous fuel plus 0.1 pounds per million Btu heat input of fossil fuel.

(2) New Emissions Units.

(a) Burners of capacity less than 30 million Btu per hour total heat input – Visible emissions shall not exceed 20 percent opacity except that visible emissions not exceeding 27 percent opacity shall be allowed for one-six minute period in any one-hour period.

(b) Burners of capacity equal to or greater than 30 million Btu per hour total heat input.

1. Visible Emissions – shall not exceed 30 percent opacity except that visible emissions not exceeding 33 percent opacity shall be allowed for one six-minute period in any one-hour period.

2. Particulate Matter – shall not exceed 0.2 pounds per million Btu of heat input of carbonaceous fuel plus 0.1 pounds per million Btu heat input of fossil fuel.

(3) Test Methods and Procedures. All emissions tests performed pursuant to the requirements of this rule shall comply with the following requirements.

(a) The test method for visible emissions shall be EPA Method 9, as described at 40 C.F.R. Part 60, Appendix A-4, adopted and incorporated by reference at Rule 62-204.800, F.A.C.

(b) The test method for particulate emissions shall be EPA Method 5, as described at 40 C.F.R. Part 60, Appendix A-3, adopted and incorporated by reference at Rule 62-204.800, F.A.C.

(c) Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.

Rulemaking Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061, 403.087 FS. History—Formerly 17-2.600(10), 17-296.410, Amended 11-23-94, 1-1-96, 7-10-14.

62-296.411 Sulfur Storage and Handling Facilities.

Rulemaking Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061, 403.087 FS. History—Formerly 17-2.600(11), 17-296.411, Amended 11-23-94, 1-1-96, Repealed 2-16-12.

62-296.412 Dry Cleaning Facilities.

(1) All new and existing perchloroethylene dry cleaning facilities are subject to the requirements (including compliance deadlines) of the national emission standard for perchloroethylene dry cleaning facilities at 40 C.F.R. Part 63, Subpart M, adopted and incorporated by reference in Rule 62-204.800, F.A.C. Until compliance is achieved with the requirements of 40 C.F.R. Part 63, Subpart M, existing (as of December 9, 1991) perchloroethylene dry cleaning facilities with a solvent consumption of 1,475 gallons per year or more must also comply with the requirements of subsection 62-296.412(2), F.A.C. The requirements of subsection 62-296.412(2), F.A.C., shall not apply to any perchloroethylene dry cleaning facility after it has achieved compliance with the requirements of 40 C.F.R. Part 63, Subpart M.

(2) The owner or operator of any existing perchlorethylene dry cleaning facility as specified in subsection 62-296.412(1), F.A.C., with total rated dryer capacity of 10 pounds of articles or greater, shall:

(a) Vent the entire dryer exhaust through a carbon adsorption system or refrigerated condensation unit which meets the following conditions:

1. The dryer/condenser system must be closed to the atmosphere at all times except when articles are being loaded or unloaded through the door of the machine; and

2. The dryer/condenser system must not vent to the atmosphere until the air-vapor stream temperature on the outlet side of the refrigerated condenser is equal to or less than 45 degrees Fahrenheit.

(b) Emit no more than 100 parts per million by volume of organic compounds from the dryer control device before dilution;

(c) Cook or treat all diatomaceous earth filters so that the residue contains 55 pounds or less of organic compounds per 220 pounds of wet waste material;

(d) Reduce the organic compounds from all solvent stills to 132 pounds or less per 220 pounds of wet waste material;

(e) Drain all filtration cartridges in the filter housing for at least 24 hours before discarding the cartridge; or dry all drained cartridges without emitting organic compounds to the atmosphere; and

(f) Repair all perceptible leaks of organic compounds within three working days or, if repair parts are necessary, order such parts within three working days.

(g) Keep monthly records of solvent consumption.

(3) New or existing (as of October 1, 1986) perchloroethylene dry cleaning facilities, located outside of ozone nonattainment or air quality maintenance areas as defined in Chapter 62-204, F.A.C., and their respective metropolitan statistical areas, with total rated dryer capacity equal to or greater than 10 pounds of articles shall be exempt from the requirements of subsection 62-296.412(2), F.A.C., if the owner or operator demonstrates to the Department that the solvent mileage (pounds of articles cleansed per drum of solvent consumed) is equal to or greater than 20,000 or 15,000 pounds of articles cleansed per 52-gallon drum of perchloroethylene consumed for new or existing facilities, respectively. Such facilities are not exempt from the requirements of the national emission standard for perchloroethylene dry cleaning facilities promulgated in 40 C.F.R. Part 63 and adopted by reference in Rule 62-204.800, F.A.C.

(4) Petroleum solvent dry cleaning facilities located in areas designated as air quality maintenance areas for ozone under Rule 62-204.340, F.A.C., (including the respective metropolitan statistical areas) and all such facilities located in ozone attainment areas with solvent consumption equal to or greater than 9,750 and 15,000 gallons per year, respectively, shall comply with the following:

(a) Each affected petroleum solvent dry cleaning dryer that is installed at a petroleum dry cleaning plant shall be a solvent recovery dryer. The solvent recovery dryer(s) shall be properly installed, operated, and maintained.

(b) Each affected petroleum solvent filter that is installed at a petroleum dry cleaning plant shall be a cartridge filter. Cartridge filters shall be drained in their sealed housings for at least eight hours prior to their removal.

(c) Each owner or operator of an affected petroleum solvent dryer shall include leak inspection and leak repair cycle information in the operating manual and on a clearly visible label posted on each affected facility. Such information should state: "To protect against fire hazards, loss of valuable solvents and emissions of solvent to the atmosphere, periodic inspection of this equipment for evidence of leaks and prompt repair of any leaks is required. The equipment must be inspected every 15 days and all vapor or liquid leaks be repaired within the subsequent 15 day period."

- (d) Keep monthly records of solvent consumption.
- (5) Test Methods and Procedures. All emissions tests performed pursuant to the requirements of this rule shall comply with the following requirements.
- (a) Leak Detection. Liquid leakage shall be detected by visual inspection of the sources identified in p. 6-3 of EPA 450/ 2-78-050, incorporated and adopted by reference in Chapter 62-297, F.A.C.
- (b) The concentration of organic compounds in the filter residue, per paragraph 62-296.412(2)(c), F.A.C., shall be determined by the procedure specified in EPA-340/1-80-007, "RACT Compliance Guidance for Carbon Adsorbers on Perchloroethylene Drycleaners," adopted and incorporated by reference at 62-297.440(2)(e)2., F.A.C.
- (c) The mass reduction of organic compounds from solvent stills shall be determined using EPA Method 21, as described at 40 C.F.R. Part 60, Appendix A-7, adopted and incorporated by reference at Rule 62-204.800, F.A.C.
- (d) The concentration of organic compounds in the exhaust vent of single bed carbon adsorbers shall be determined per the equipment specifications in "RACT Compliance for Carbon Adsorbers," Task No. 119, or stack test per Attachment 3 of EPA 450/ 2-78-041, incorporated and adopted by reference in Chapter 62-297, F.A.C.
- (e) The concentration of organic compounds in the exhaust vent of multiple bed carbon adsorbers and others shall be determined using the equipment specifications per the manufacturer's specifications, or stack testing per Attachment 3 of EPA 450/ 2-78-041, incorporated and adopted by reference in Chapter 62-297, F.A.C.
- (f) Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.

Rulemaking Authority 403.061, 403.8055 FS. Law Implemented 403.021, 403.031, 403.061, 403.087 FS. History--Formerly 17-2.600(12), 17-296.412, Amended 11-23-94, 4-18-95, 1-1-96, 3-13-96, 6-25-96, 10-7-96, 3-11-10, 7-10-14.

62-296.413 Synthetic Organic Fiber Production.

Rulemaking Authority 403.061 FS. Law Implemented 403.031, 403.061, 403.087 FS. History--Formerly 17-2.600(13), 17-296.413, Amended 11-23-94, 1-1-96, 3-13-96, 2-12-06, Repealed 2-16-12.

62-296.414 Concrete Batching Plants.

The following requirements apply to new and existing emissions units producing concrete and concrete products by batching or mixing cement and other materials. This rule also applies to facilities processing cement and other materials for the purposes of producing concrete, and to equipment used to mix cement and soil for onsite soil augmentation or stabilization.

- (1) Stack Emissions. Emissions from silos, weigh hoppers (batchers), and other enclosed storage and conveying equipment shall be controlled to the extent necessary to limit visible emissions to 5 percent opacity.
- (2) Unconfined Emissions. The owner or operator shall take reasonable precautions to control unconfined emissions from hoppers, storage and conveying equipment, conveyor drop points, truck loading and unloading, roads, parking areas, stock piles, and yards as required by paragraph 62-296.320(4)(c), F.A.C. For concrete batching plants the following shall constitute reasonable precautions:
- (a) Management of roads, parking areas, stock piles, and yards, which shall include one or more of the following:
1. Paving and maintenance of roads, parking areas, and yards.
 2. Application of water or environmentally safe dust-suppressant chemicals when necessary to control emissions
 3. Removal of particulate matter from roads and other paved areas under control of the owner or operator to mitigate reentrainment, and from building or work areas to reduce airborne particulate matter.
 4. Reduction of stock pile height or installation of wind breaks to mitigate wind entrainment of particulate matter from stock piles.
- (b) Use of spray bar, chute, or partial enclosure to mitigate emissions at the drop point to the truck.
- (3) Test Methods and Procedures. All emissions tests performed pursuant to the requirements of this subsection shall comply with the following requirements.
- (a) The reference test method for visible emissions shall be EPA Method 9, as described at 40 CFR, Part 60, Appendix A-4, adopted and incorporated by reference at Rule 62-204.800, F.A.C.
- (b) Test procedures shall conform to the procedures specified in Rule 62-297.310, F.A.C. All test results shall be reported to the Department in accordance with the provisions of Rule 62-297.310, F.A.C.
- (c) Visible emissions tests of silo dust collector exhaust points shall be conducted while loading the silo at a rate that is

representative of the normal silo loading rate. The minimum loading rate shall be 25 tons per hour unless such rate is unachievable in practice. If emissions from the weigh hopper (batcher) operation are also controlled by the silo dust collector, the batching operation shall be in operation during the visible emissions test. The batching rate during the emissions test shall be representative of the normal batching rate and duration. Each test report shall state the actual silo loading rate during emissions testing and, if applicable, whether or not batching occurred during emissions testing.

(d) If emissions from the weigh hopper (batcher) operation are controlled by a dust collector which is separate from the silo dust collector, visible emissions tests of the weigh hopper (batcher) dust collector exhaust point shall be conducted while batching at a rate that is representative of the normal batching rate and duration. Each test report shall state the actual batching rate during emissions testing.

(4) Frequency of Testing.

(a) The owner or operator of any concrete batching plant using an air general permit shall have a performance test conducted for visible emissions for each dust collector exhaust point no later than thirty (30) days after commencing operation, and annually thereafter.

(b) The owner or operator of any concrete batching plant operating under the authority of an air construction permit or air operation permit shall have a performance test conducted for visible emissions for each dust collector exhaust point prior to submitting the application for an initial air operation permit, and annually thereafter.

Rulemaking Authority 403.061 FS. Law Implemented 403.031, 403.061, 403.087 FS. History--Formerly 17-2.600(14), 17-296.414, Amended 11-23-94, 1-1-96, 11-13-97, 1-10-07, 7-10-14.

62-296.415 Soil Thermal Treatment Facilities.

This rule prescribes air pollution control requirements for soil thermal treatment facilities. Soil thermal treatment facilities are only authorized to treat petroleum contaminated soil as defined in Chapter 62-775, F.A.C., Soil Thermal Treatment Facilities. The following requirements apply to all new, modified, and existing soil thermal treatment facilities.

(1) Volatile Organic Compounds (VOC).

(a) A soil thermal treatment facility shall be designed and operated to expose the organic vapors from the soil during thermal treatment to one of the following combinations:

Minimum Temperature (Fahrenheit)		Minimum Time (Seconds)
1,500	and	1.0
1,600	and	0.5
1,800	and	0.3

The minimum temperature shall be determined by a continuous temperature monitor pursuant to the applicable continuous emissions monitoring requirements of subsection 62-296.415(6), F.A.C. When soil is being treated, the minimum temperature shall be met or exceeded at all times except for 4 minutes in any 60 minute period, provided that the temperature does not fall below 100 degrees Fahrenheit of the required minimum temperature for the corresponding residence time. The minimum residence time shall be met or exceeded at all times while soil is being treated.

(b) The average carbon monoxide (CO) emissions shall not exceed 100 parts per million (ppm) by volume, dry basis, during all 60-consecutive-minute periods of plant operation. The average CO emissions is the arithmetic mean of all CO concentration measurements during any consecutive 60 minutes of plant operation that were recorded by the continuous emissions monitor required pursuant to subsection 62-296.415(6), F.A.C.

(c) A soil thermal treatment facility shall continually monitor the temperature and carbon monoxide content of the flue gases leaving the high temperature zone pursuant to the applicable continuous emissions monitoring requirements of subsection 62-296.415(6), F.A.C. Temperature and carbon monoxide monitors shall be co-located unless otherwise approved by the Department.

(d) Soil thermal treatment facilities must possess an air permit authorizing the processing of soils containing polychlorinated biphenyls (PCBs), if soil contaminated with PCBs is to be thermally treated.

(2) Visible Emissions. Visible emissions (VE) from a stack shall not exceed 5% opacity as determined by the test method specified in subsection 62-296.415(5), F.A.C., when thermally treating soil.

(3) Particulate Matter Emissions. The particulate matter emissions shall not exceed 0.04 grains per dry standard cubic foot (gr/dscf) as determined by the test method specified in subsection 62-296.415(5), F.A.C.

(4) Unconfined Emissions. A soil thermal treatment facility is subject to Rule 62-296.320, F.A.C., Unconfined Emissions of Particulate Matter. As a minimum, before and after thermal soil treatment is accomplished, unconfined emissions of particulate matter from the soil shall be controlled by application of water or containment.

(5) Test Methods and Procedures. All emissions tests performed pursuant to the requirements of this rule shall comply with the following requirements.

(a) The test method for visible emissions shall be EPA Method 9, as described at 40 C.F.R. Part 60, Appendix A-4, adopted and incorporated by reference at Rule 62-204.800, F.A.C.

(b) The test method for particulate emissions shall be EPA Method 5, as described at 40 C.F.R. Part 60, Appendix A-3, adopted and incorporated by reference at Rule 62-204.800, F.A.C. The minimum sample volume shall be 30 dry standard cubic feet.

(c) The test method for carbon monoxide shall be EPA Method 10, as described at 40 C.F.R. Part 60, Appendix A-4, adopted and incorporated by reference at Rule 62-204.800, F.A.C.

(d) Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.

(6) Continuous Emissions Monitoring Requirements. Any facility subject to this rule shall be equipped with instruments to continuously monitor and record the temperature and the carbon monoxide concentration of the flue gases leaving the high temperature zone, but before any dilution air is mixed with the flue gases. The temperature monitor shall be certified by the manufacturer to be accurate to within 1% of the temperature being measured. The temperature monitoring system shall be calibrated at least annually by the procedure recommended by the manufacturer. The calibration shall be at a minimum of three temperatures and over a range from 10% below to 10% above the designed flue gas hot zone temperature of the soil thermal treatment facility. Calibration records shall be kept for a minimum of three years. The carbon monoxide monitor shall be certified by the manufacturer to be accurate to within 10% of the carbon monoxide concentration by volume, mean value, or 5% of the applicable standard of 100 ppm, whichever is greater, as determined by EPA Test Method 10, as described at 40 C.F.R. Part 60, Appendix A-4, adopted and incorporated by reference in Rule 62-204.800, F.A.C. The carbon monoxide continuous emission monitoring device shall be certified, calibrated, and operated according to Performance Specification 4 of 40 C.F.R. Part 60, Appendix B, adopted and incorporated by reference in Rule 62-204.800, F.A.C., excluding Section 5.2, Calibration Drift Test Period, of Performance Specification 2.

Rulemaking Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061, 403.087 FS. History—New 11-17-92, Formerly 17-296.415, Amended 11-23-94, 1-1-96, 3-13-96, 7-10-14.

62-296.416 Waste-to-Energy Facilities.

(1) Applicability. The requirements of this rule apply to all waste-to-energy facilities with charging rates of 40 tons per day or more. For those facilities subject to this rule and paragraph 62-204.800(8)(b), F.A.C., the mercury emissions limiting standards in this rule shall apply in place of the less restrictive mercury emission limiting standard set forth at paragraph 62-204.800(8)(b), F.A.C. However, the mercury percent reduction standard (85 percent) in paragraph 62-204.800(8)(b), F.A.C., shall apply in place of the less restrictive mercury percent reduction standard (80 percent) set forth in this rule.

(2) Relationship to Best Available Control Technology. The emission limitations in this rule supersede any less stringent emission limitations including those based on a best available control technology (BACT) determination made pursuant to Rule 62-212.400, F.A.C., or 40 C.F.R. 52.21. The application of BACT shall not result in emissions of any air contaminant which exceeds the emission limits set forth in this rule.

(3) Mercury Emissions Limiting Standards. Waste-to-energy facilities subject to the requirements of this rule shall comply with the mercury emission limiting standards of paragraph 62-296.416(3)(a) or (b), F.A.C., depending on whether the facility chooses to control mercury emissions through the use of post-combustion control equipment designed to remove mercury from flue gases or mercury waste separation, respectively. Facilities choosing to control mercury emissions through the use of mercury control equipment must also comply with the flue gas temperature standard of subsection 62-296.416(4), F.A.C.

(a) Emissions Standard for Facilities Using Mercury Control Equipment.

1. Mercury emissions from facilities using post-combustion control equipment designed to remove mercury from flue gases shall not exceed 70 micrograms per dry standard cubic meter of flue gas, corrected to 7 percent O₂, or 20 percent by weight of the mercury in the flue gas upstream of the mercury control device (80 percent reduction by weight), whichever occurs first.

2. Facilities with sulfur dioxide and hydrogen chloride control equipment in place or under construction as of July 1, 1993, and which choose to control mercury emissions through the use of mercury control equipment, shall comply with the mercury emissions

limiting standard of subparagraph 62-296.416(3)(a)1., F.A.C., by July 1, 1995. All other facilities choosing to control mercury emissions through the use of mercury control equipment shall comply with the mercury emissions limiting standard of subparagraph 62-296.416(3)(a)1., F.A.C., by the date that the facility is required to demonstrate compliance with sulfur dioxide and hydrogen chloride emission limits, which limits are established at paragraph 62-204.800(8)(b), F.A.C.

3. Facilities subject to the mercury emissions limiting standard of subparagraph 62-296.416(3)(a)1., F.A.C., shall demonstrate individual emissions unit compliance by the compliance date specified in subparagraph 62-296.416(3)(a)2., F.A.C., and annually thereafter.

(b) Emissions Standards for Facilities Using Waste Separation. The Department recognizes that reduction of mercury emissions from waste-to-energy facilities may be achieved by implementation of mercury waste separation programs. Such programs would require removal of objects containing mercury from the waste stream before the waste is used as a fuel.

1. Facilities with sulfur dioxide and hydrogen chloride control equipment in place or under construction as of July 1, 1993, and which choose to control mercury emissions exclusively through the use of a waste separation program, shall submit a program plan to the Department by March 1, 1994, and shall comply with the following emissions limiting schedule.

a. After July 1, 1995, mercury emissions shall not exceed 140 micrograms per dry standard cubic meter of flue gas, corrected to 7 percent O₂.

b. After July 1, 1997, mercury emissions shall not exceed 70 micrograms per dry standard cubic meter of flue gas, corrected to 7 percent O₂.

2. Beginning no later than July 1, 1994, facilities subject to subparagraph 62-296.416(3)(b)1., F.A.C., shall perform semiannual individual emissions unit mercury emissions tests. Facilities shall stagger the semiannual testing of individual emissions units such that at least one test is performed quarterly. All tests conducted after July 1, 1995, shall be used to demonstrate compliance with the mercury emissions limiting standards of subparagraph 62-296.416(3)(b)1., F.A.C.

3. Facilities which do not have sulfur dioxide and hydrogen chloride control equipment in place or under construction as of July 1, 1993, and which choose to control mercury emissions exclusively through the use of a waste separation program, shall comply with a mercury emission limitation of 70 micrograms per dry standard cubic meter of flue gas, corrected to 7 percent O₂, by the later of July 1, 1997, or the date that the facility is required to demonstrate compliance with sulfur dioxide and hydrogen chloride emission limits, which limits are established after July 1, 1993. If the facility is required to demonstrate compliance with sulfur dioxide and hydrogen chloride emission limits by a date prior to July 1, 1997, it shall comply with a mercury emission limitation of 140 micrograms per dry standard cubic meter of flue gas, corrected to 7 percent O₂, by that date and until July 1, 1997.

4. Facilities subject to subparagraph 62-296.416(3)(b)3., F.A.C., shall demonstrate individual emissions unit compliance with the mercury emission limiting standard by the date specified therein and semiannually thereafter. Facilities shall stagger the semiannual testing of individual emissions units such that at least one test is performed quarterly.

(c) Mercury Emissions Inventory. For emissions inventory purposes, all waste-to-energy facilities with charging rates of 40 tons or more per day shall perform annual individual emissions unit mercury emissions tests and report the results to the Department. This testing shall begin during calendar year 1993 and end upon initiation of mercury testing pursuant to paragraph 62-296.416(3)(a) or (b), F.A.C.

(d) Mercury Emissions Test Method and Procedures. All mercury emissions tests performed pursuant to the requirements of this rule shall comply with the following provisions.

1. The test method for mercury shall be EPA Method 29, as described at 40 C.F.R. Part 60, Appendix A-8, adopted and incorporated by reference at Rule 62-204.800, F.A.C.

2. Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.

(4) Flue Gas Temperature Standard. Waste-to-energy facilities choosing to control mercury emissions through the use of post-combustion control equipment designed to remove mercury from flue gases shall comply with the flue gas temperature standard of paragraph 62-296.416(4)(a), F.A.C.

(a) Temperature Standard. The flue gas temperature standard set forth in 40 C.F.R. 60.53b(c), incorporated by reference in Rule 62-204.800, F.A.C., shall apply.

(b) Temperature Monitoring. The temperature monitoring requirements set forth in 40 C.F.R. 60.58b(i), incorporated by reference in Rule 62-204.800, F.A.C., shall apply.

(5) Carbon Usage Rate. The carbon injection rate operating standard and monitoring requirements set forth in 40 C.F.R. 60.58b(m), incorporated by reference in Rule 62-204.800, F.A.C., shall apply.

Rulemaking Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061, 403.087 FS. History--New 10-5-93, Formerly 17-296.416, Amended 11-23-94, 1-1-96, 10-20-96, 7-10-14.

62-296.417 Volume Reduction, Mercury Recovery and Mercury Reclamation.

The terms “mercury recovery process” and “mercury reclamation process” are intended to have the same meanings as “mercury recovery facility” and “mercury reclamation facility,” respectively, as defined in Rule 62-737.200, F.A.C. The term “volume reduction process” means a facility where operations or processes are performed or equipment is used to receive and process spent mercury-containing lamps or devices in a manner such as crushing, grinding, compacting, or physically altering the state of the lamps or devices and which does not produce separation of the residuals, and is used for the size or volume reduction of lamps or mercury-containing devices. The term “facility” as used in this rule is intended to have the meaning as defined in Rule 62-210.200, F.A.C. The following standards apply to all new and existing volume reduction, mercury recovery and mercury reclamation processes except those exempted in paragraph 62-210.300(3)(a), F.A.C.

(1) Operating Requirements. Facilities subject to this rule shall meet all operating requirements set forth herein, except that a facility may choose to control mercury emissions through the use of dual air handling systems or a single air handling system with redundant mercury controls, pursuant to either paragraph 62-296.417(1)(c) or (d), F.A.C., respectively.

(a) Permissible Exposure Limit. The United States Occupational Safety and Health Administration (OSHA) permissible exposure limit for mercury vapor, set forth in 29 C.F.R. 1910.1000, is hereby adopted and incorporated by reference.

(b) Negative Pressure Requirement for Processing Area. The area in which the processing equipment is located shall be fully enclosed and kept under negative pressure while processing mercury-containing lamps or devices. The term processing equipment is intended to have the meaning as defined in Rule 62-737.200, F.A.C.

(c) Facilities with Dual Air Handling Systems.

1. The owner or operator shall install a primary air handling system with air pollution control equipment in order to reduce the mercury content of the air collected during the volume reduction and mercury recovery and reclamation processes.

2. The air collected by the primary system shall be vented within a fully enclosed area of the facility after the air is filtered through the air pollution control equipment.

3. Once each day the facility processes any mercury-containing lamps or devices and while mercury-containing lamps or devices are being processed, a sample of air shall be collected within the fully enclosed area of the facility in which the air collected by the primary air handling system is vented. The mercury content of the sample shall be determined for comparison with the OSHA permissible exposure limit. The terms mercury-containing lamps and mercury-containing devices are intended to have the meanings as defined in Rule 62-737.200, F.A.C.

4. The owner or operator shall operate, monitor and maintain the primary system air pollution control equipment in such a manner as not to exceed the OSHA permissible exposure limit for mercury vapor within the fully enclosed area of the facility in which the air collected by the primary air handling system is vented.

5. The owner or operator shall install a secondary air handling system in order to maintain negative pressure in the fully enclosed area of the facility in which the air collected by the primary system is vented.

6. The owner or operator shall install, operate, monitor and maintain air pollution control equipment in order to reduce the mercury content of the air collected by the secondary air handling system.

7. The primary system with air pollution controls shall be independent and separate from the secondary system with air pollution controls. The primary and secondary system air pollution controls shall incorporate carbon filters or equivalent technology.

(d) Facilities Using a Single Air Handling System with Redundant Mercury Controls.

1. The owner or operator shall operate, monitor and maintain an air handling system with redundant air pollution control equipment in order to reduce the mercury content of the air collected during the volume reduction and mercury recovery and reclamation processes.

2. Redundant air pollution control equipment shall incorporate at least two carbon filters or equivalent technology arranged in series so that the air passes through both filters before being released. Each filter shall be designed as to ensure compliance with the OSHA permissible exposure limit for mercury vapor at the emission point in the event of a single filter failure.

3. Once each day the facility processes any mercury-containing lamps or devices and while mercury-containing lamps or devices are being processed, a sample of air shall be collected downstream of the first carbon filter (or equivalent technology) and upstream of the second. The mercury content of the sample shall be determined for comparison with the OSHA permissible

exposure limit.

4. The owner or operator shall operate, monitor and maintain the air pollution control equipment in such a manner as not to exceed the OSHA permissible exposure limit for mercury vapor downstream of the first carbon filter (or equivalent technology) and upstream of the second.

(2) Recordkeeping Requirements. The owner or operator of a facility subject to this rule shall maintain records of monitoring information that specify the date, place, and time of measurement; the methodology used; and the analytical results. These shall include all calibration and maintenance records of monitoring equipment. The owner or operator shall retain records of all monitoring data and supporting information, available for Department inspection, for a period of at least five years from the date of collection.

Rulemaking Authority 403.061, 403.087 FS. Law Implemented 403.031, 403.061, 403.087 FS. History--New 10-16-95, Amended 3-13-96, 3-2-99.

62-296.418 Bulk Gasoline Plants.

(1) The owner or operator of a bulk gasoline plant that has begun operation prior to August 1, 2007, is located in an area designated as an air quality maintenance area for ozone under Rule 62-204.340, F.A.C., and has an average annual daily throughput of more than 2,000 gallons (7,570 liters) shall comply with the following requirements.

(a) Gasoline shall not be loaded into a stationary storage tank at the bulk gasoline plant unless the storage tank is equipped for submerged filling, and such equipment is used as designed.

(b) Gasoline shall not be loaded into a gasoline cargo tank at the bulk gasoline plant unless the gasoline cargo tank is equipped for submerged filling, and such equipment is used as designed.

(2) The owner or operator of a bulk gasoline plant that begins operation on or after August 1, 2007, at any location in the state and with any throughput rate shall comply with the following requirements.

(a) Gasoline shall not be loaded into a stationary storage tank at the bulk gasoline plant unless the storage tank is equipped for submerged filling, and such equipment is used as designed.

(b) Gasoline shall not be loaded into a gasoline cargo tank at the bulk gasoline plant unless:

1. The gasoline cargo tank is equipped for submerged filling, and such equipment is used as designed;

2. The loading rack is equipped with a vapor collection and control system designed to minimize emissions of vapors displaced from the gasoline cargo tank during product loading; and

3. The loading rack vapor collection and control system is designed and operated to prevent any vapors collected at the loading rack from passing to another loading rack.

Rulemaking Authority 403.061 FS. Law Implemented 403.031, 403.061, 403.087 FS. History--New 5-9-07, Amended 3-11-10.

62-296.470 Implementation of Federal Clean Air Interstate Rule.

(1) Definitions and Provisions Adopted by Reference.

(a) All provisions of 40 CFR Part 96 cited within this rule are adopted and incorporated by reference in Rule 62-204.800, F.A.C.

(b) For purposes of subsection 62-296.470(2), F.A.C., the terms “CAIR NO_x allowance,” “CAIR NO_x Ozone Season allowance,” “CAIR NO_x Ozone Season unit,” “CAIR NO_x unit,” and “CAIR source” shall have the meanings given at Rule 62-210.200, F.A.C.

(c) For purposes of the verbatim application of the cited subparts of 40 CFR Part 96, as modified by the substitute language set forth in this rule, the definitions contained within 40 CFR Part 96, Subparts AA, AAA, and AAAA, shall apply, with the understanding that, where context dictates, the term “permitting authority” shall mean the Department, the term “State” shall mean the State of Florida, and the phrase “permitting authority’s title V operating permits regulations” shall mean Chapter 62-213, F.A.C. When used in the 40 CFR Part 96 substitute language set forth in this rule the terms “best available control technology (BACT)” and “biomass” shall have the meanings given at Rule 62-210.200, F.A.C.

(2) Orders.

(a) Prior to submitting any CAIR NO_x allowance allocations to the Administrator pursuant to 40 CFR 96.141(a), (b), or (c), or 40 CFR 96.143, the Department shall issue an administrative order pursuant to Chapter 120, F.S., to all CAIR sources giving notice and opportunity for hearing with regard to the amount of CAIR NO_x allowances the Department intends to submit to the Administrator for each CAIR NO_x unit.

(b) Prior to submitting any CAIR NO_x Ozone Season allowance allocations to the Administrator pursuant to 40 CFR 96.341(a),

(b), or (c), the Department shall issue an administrative order to all CAIR sources giving notice and opportunity for hearing with regard to the amount of CAIR Ozone Season allowances the Department intends to submit to the Administrator for each CAIR NO_x Ozone Season unit.

(3) CAIR NO_x Annual Trading Program. Except as otherwise provided herein, all provisions of the following subparts of 40 CFR Part 96 shall apply verbatim. The provisions of Subpart II, CAIR NO_x Opt-In Units, shall not apply.

(a) Subpart AA, CAIR NO_x Annual Trading Program General Provisions.

(b) Subpart BB, CAIR Designated Representative for CAIR NO_x Sources.

(c) Subpart CC, Permits.

(d) Subpart EE, CAIR NO_x Allowance Allocations, provided that substitute language, as set forth below, shall apply in lieu of the indicated provisions.

1. In lieu of the language at 40 CFR 96.141(a), substitute:

“By October 31, 2006, the permitting authority will submit to the Administrator the CAIR NO_x allowance allocations, in a format prescribed by the Administrator and in accordance with sections 96.142(a) and (b), for the control periods in 2009, 2010, 2011, and 2012.”

2. In lieu of the language at 40 CFR 96.141(b), substitute:

“By October 31, 2009, and October 31 of each third year thereafter, the permitting authority will submit to the Administrator the CAIR NO_x allowance allocations, in a format prescribed by the Administrator and in accordance with sections 96.142(a) and (b), for the control periods in the fourth, fifth, and sixth years after the year of the applicable deadline for submission under this paragraph.”

3. In lieu of the language at 40 CFR 96.142(a)(1), substitute:

“The baseline heat input (in mmBtu) used with respect to CAIR NO_x allowance allocations under paragraph (b) of this section for each CAIR NO_x unit will be:

(i) For units commencing operation before January 1, 2000: the average of the 3 highest amounts of the unit’s adjusted control period heat input for 2000 through 2004; for units commencing operation on or after January 1, 2000, and before January 1, 2007: the average of the 3 highest amounts of the unit’s adjusted control period heat input over the first 5 calendar years following the year in which the unit commenced operation, or the average of the 2 highest amounts of the unit’s adjusted control period heat input over the first 4 calendar years following the year in which the unit commenced operation, or the maximum adjusted control period heat input over the first 1 to 3 calendar years following the year in which the unit commenced operation, depending on the maximum number (1 to 5) of such calendar years of data available to the permitting authority for determination of allowance allocations pursuant to sections 96.141(a) or 96.141(b); with the adjusted control period heat input for each year calculated as follows:

(A) If the unit is 85 percent or more (on a Btu basis) biomass-fired during the year and is subject to best available control technology (BACT) for NO_x emissions, the unit’s control period heat input for such year is multiplied by 150 percent;

(B) If the unit is coal-fired during the year, and not subject to sub-subparagraph (a)(1)(i)(A) of this section for the year, the unit’s control period heat input for such year is multiplied by 100 percent;

(C) If the unit is oil-fired during the year, the unit’s control period heat input for such year is multiplied by 60 percent; and

(D) If the unit is not subject to sub-subparagraph (a)(1)(i)(A), (B), or (C) of this section, the unit’s control period heat input for such year is multiplied by 40 percent.

(ii) For units commencing operation on or after January 1, 2007: the average of the 3 highest amounts of the unit’s total converted control period heat input over the first 5 calendar years following the year in which the unit commenced operation, or the average of the 2 highest amounts of the unit’s total converted control period heat input over the first 4 calendar years following the year in which the unit commenced operation, or the maximum total converted control period heat input over the first 1 to 3 calendar years following the year in which the unit commenced operation, depending on the maximum number (1 to 5) of such calendar years of data available to the permitting authority for determination of allowance allocations pursuant to section 96.141(b).

(iii) Notwithstanding subparagraphs (a)(1)(i) and (ii) of this section, for any unit that is permanently retired and has not operated during the most recent five-year period for which the permitting authority has data upon which to base allocations: zero (0).”

4. In lieu of the language at 40 CFR 96.142(a)(2)(i), substitute:

“A unit’s control period heat input, and a unit’s status as biomass-fired, coal-fired or oil-fired, for a calendar year under subparagraph (a)(1)(i) of this section, and a unit’s total tons of NO_x emissions during a calendar year under paragraph (c)(3) of this section, will be determined in accordance with part 75 of this chapter, to the extent the unit was otherwise subject to the

requirements of part 75 of this chapter for the year, or will be based on the best available data reported to the permitting authority for the unit, to the extent the unit was not otherwise subject to the requirements of part 75 of this chapter for the year.”

5. In lieu of the language at 40 CFR 96.142(a)(2)(ii)(A), substitute:

“Except as provided in sub-subparagraph (a)(2)(ii)(B) or (C) of this section, the control period gross electrical output of the generator or generators served by the unit multiplied by 7,900 Btu/kWh if the unit is biomass-fired (85 percent or more on a Btu basis) for the year, 7,900 Btu/kWh if the unit is coal-fired for the year, or 6,675 Btu/kWh if the unit is not biomass-fired or coal-fired for the year, and divided by 1,000,000 Btu/mmBtu, provided that if a generator is served by 2 or more units, then the gross electrical output of the generator will be attributed to each unit in proportion to the unit’s share of the total control period heat input of such units for the year;”

6. In lieu of the language at 40 CFR 96.142(b)(1), substitute:

“For each control period in 2009 and thereafter, the permitting authority will allocate to all CAIR NO_x units in the State that have a baseline heat input (as determined under paragraph (a) of this section) a total amount of CAIR NO_x allowances equal to 95 percent of the tons of NO_x emissions in the State trading budget under section 96.140 (except as provided in paragraph (d) of this section).”

7. In lieu of the language at 40 CFR 96.142(c)(1), substitute:

“The permitting authority will establish a separate new unit set-aside for each control period. Each new unit set-aside will be allocated CAIR NO_x allowances equal to 5 percent of the amount of tons of NO_x emissions in the State trading budget under section 96.140, adjusted as necessary to ensure that the sum of all allocations made by the permitting authority does not exceed the State trading budget.”

8. In lieu of the language at 40 CFR 96.142(c)(4)(iv), substitute:

“If the amount of CAIR NO_x allowances in the new unit set-aside for the control period is less than the sum under subparagraph (c)(4)(ii) of this section, then the permitting authority will allocate to each CAIR NO_x unit covered by an allowance allocation request accepted under subparagraph (c)(4)(i) of this section the amount of the CAIR NO_x allowances requested (as adjusted under subparagraph (c)(4)(i) of this section), multiplied by the amount of CAIR NO_x allowances in the new unit set-aside for the control period, divided by the sum determined under subparagraph (c)(4)(ii) of this section, and rounded to the nearest whole allowance using such rounding convention that results in allocation of the precise number of allowances in the new unit set-aside.”

9. In lieu of the language at 40 CFR 96.142(d), substitute:

“If, after completion of the procedures under paragraph (c)(4) of this section for a control period, any unallocated CAIR NO_x allowances remain in the new unit set-aside for the control period, the permitting authority will allocate to each CAIR NO_x unit that was allocated CAIR NO_x allowances under paragraph (b) of this section an amount of CAIR NO_x allowances equal to the total amount of such remaining unallocated CAIR NO_x allowances, multiplied by the unit’s allocation under paragraph (b) of this section, divided by 95 percent of the amount of tons of NO_x emissions in the State trading budget under section 96.140, and rounded to the nearest whole allowance using such rounding convention that results in allocation of the precise number of allowances remaining in the new unit set-aside.”

10. In lieu of the language at 40 CFR 96.143(a), substitute:

“The permitting authority will establish a separate compliance supplement pool for the control period in 2009 and will allocate CAIR NO_x allowances equal to 8,335 tons to such pool. These allowances are in addition to the CAIR NO_x allowances allocated under section 96.142.”

11. In lieu of the language at 40 CFR 96.143(b), substitute:

“For any CAIR NO_x unit in the State, if the unit’s average annual NO_x emission rate for 2007 or 2008 is less than 0.25 lb/mmBtu and, where such unit is included in a NO_x averaging plan under section 76.11 of the chapter under the Acid Rain Program for such year, the unit’s NO_x averaging plan has an actual weighted average NO_x emission rate for such year equal to or less than the actual weighted average NO_x emission rate for the year before such year and if the unit achieves NO_x emission reductions in 2007 and 2008, the CAIR designated representative of the unit may request early reduction credits, and allocation of CAIR NO_x allowances from the compliance supplement pool under paragraph (a) of this section for such early reduction credits, in accordance with the following:”

12. In lieu of the language at 40 CFR 96.143(b)(2), substitute:

“The CAIR designated representative of such CAIR NO_x unit shall submit to the permitting authority by May 1, 2009, a request, in a format specified by the permitting authority, for allocation of an amount of CAIR NO_x allowances from the compliance supplement pool not exceeding the sum of the unit’s heat input for the control period in 2007 multiplied by the difference (if any greater than

zero) between 0.25 lb/mmBtu and the unit's NO_x emission rate for the control period in 2007 plus the unit's heat input for the control period in 2008 multiplied by the difference (if any greater than zero) between 0.25 lb/mmBtu and the unit's NO_x emission rate for the control period in 2008, determined in accordance with subpart HH of this part and with the sum divided by 2,000 lb/ton and rounded to the nearest whole number of tons as appropriate."

(e) Subpart FF, CAIR NO_x Allowance Tracking System.

(f) Subpart GG, CAIR NO_x Allowance Transfers.

(g) Subpart HH, Monitoring and Reporting.

(4) CAIR SO₂ Trading Program. All provisions of the following subparts of 40 CFR Part 96 shall apply verbatim. The provisions of Subpart III, CAIR SO₂ Opt-In Units, shall not apply.

(a) Subpart AAA, CAIR SO₂ Trading Program General Provisions.

(b) Subpart BBB, CAIR Designated Representative for CAIR SO₂ Sources.

(c) Subpart CCC, Permits.

(d) Subpart FFF, CAIR SO₂ Allowance Tracking System.

(e) Subpart GGG, CAIR SO₂ Allowance Transfers.

(f) Subpart HHH, Monitoring and Reporting.

(5) CAIR NO_x Ozone Season Trading Program. Except as otherwise provided herein, all provisions of the following subparts of 40 CFR Part 96 shall apply verbatim. The provisions of Subpart IIII, CAIR NO_x Ozone Season Opt-In Units, shall not apply.

(a) Subpart AAAA, CAIR NO_x Ozone Season Trading Program General Provisions.

(b) Subpart BBBB, CAIR Designated Representative for CAIR NO_x Ozone Season Sources.

(c) Subpart CCCC, Permits.

(d) Subpart EEEE, CAIR NO_x Ozone Season Allowance Allocations, provided that substitute language, as set forth below, shall apply in lieu of the indicated provisions.

1. In lieu of the language at 40 CFR 96.341(a), substitute:

"By October 31, 2006, the permitting authority will submit to the Administrator the CAIR NO_x Ozone Season allowance allocations, in a format prescribed by the Administrator and in accordance with sections 96.342(a) and (b), for the control periods in 2009, 2010, 2011, and 2012."

2. In lieu of the language at 40 CFR 96.341(b), substitute:

"By October 31, 2009, and October 31 of each third year thereafter, the permitting authority will submit to the Administrator the CAIR NO_x Ozone Season allowance allocations, in a format prescribed by the Administrator and in accordance with sections 96.342(a) and (b), for the control periods in the fourth, fifth, and sixth years after the year of the applicable deadline for submission under this paragraph."

3. In lieu of the language at 40 CFR 96.342(a)(1), substitute:

"The baseline heat input (in mmBtu) used with respect to CAIR NO_x Ozone Season allowance allocations under paragraph (b) of this section for each CAIR NO_x Ozone Season unit will be:

(i) For units commencing operation before January 1, 2000: the average of the 3 highest amounts of the unit's adjusted control period heat input for 2000 through 2004; for units commencing operation on or after January 1, 2000, and before January 1, 2007: the average of the 3 highest amounts of the unit's adjusted control period heat input over the first 5 calendar years following the year in which the unit commenced operation, or the average of the 2 highest amounts of the unit's adjusted control period heat input over the first 4 calendar years following the year in which the unit commenced operation, or the maximum adjusted control period heat input over the first 1 to 3 calendar years following the year in which the unit commenced operation, depending on the maximum number (1 to 5) of such calendar years of data available to the permitting authority for determination of allowance allocations pursuant to sections 96.341(a) or 96.341(b); with the adjusted control period heat input for each year calculated as follows:

(A) If the unit is 85 percent or more (on a Btu basis) biomass-fired during the year and is subject to best available control technology (BACT) for NO_x emissions, the unit's control period heat input for such year is multiplied by 150 percent;

(B) If the unit is coal-fired during the year, and not subject to paragraph (a)(1)(i)(A) of this section for the year, the unit's control period heat input for such year is multiplied by 100 percent;

(C) If the unit is oil-fired during the year, the unit's control period heat input for such year is multiplied by 60 percent; and

(D) If the unit is not subject to paragraph (a)(1)(i)(A), (B), or (C) of this section, the unit's control period heat input for such year is multiplied by 40 percent.

(ii) For units commencing operation on or after January 1, 2007: the average of the 3 highest amounts of the unit's total converted control period heat input over the first 5 calendar years following the year in which the unit commenced operation, or the average of the 2 highest amounts of the unit's total converted control period heat input over the first 4 calendar years following the year in which the unit commenced operation, or the maximum total converted control period heat input over the first 1 to 3 calendar years following the year in which the unit commenced operation, depending on the maximum number (1 to 5) of such calendar years of data available to the permitting authority for determination of allowance allocations pursuant to section 96.341(b).

(iii) Notwithstanding subparagraphs (a)(1)(i) and (ii) of this section, for any unit that is permanently retired and has not operated during the most recent five-year period for which the permitting authority has data upon which to base allocations: zero (0)."

4. In lieu of the language at 40 CFR 96.342(a)(2)(i), substitute:

"A unit's control period heat input, and a unit's status as biomass-fired, coal-fired or oil-fired, for a calendar year under paragraph (a)(1)(i) of this section, and a unit's total tons of NO_x emissions during a control period in a calendar year under paragraph (c)(3) of this section, will be determined in accordance with part 75 of this chapter, to the extent the unit was otherwise subject to the requirements of part 75 of this chapter for the year, or will be based on the best available data reported to the permitting authority for the unit, to the extent the unit was not otherwise subject to the requirements of part 75 of this chapter for the year."

5. In lieu of the language at 40 CFR 96.342(a)(2)(ii)(A), substitute:

"Except as provided in paragraph (a)(2)(ii)(B) or (C) of this section, the control period gross electrical output of the generator or generators served by the unit multiplied by 7,900 Btu/kWh if the unit is biomass-fired (85 percent or more on a Btu basis) for the year, 7,900 Btu/kWh if the unit is coal-fired for the year, or 6,675 Btu/kWh if the unit is not biomass-fired or coal-fired for the year, and divided by 1,000,000 Btu/mmBtu, provided that if a generator is served by 2 or more units, then the gross electrical output of the generator will be attributed to each unit in proportion to the unit's share of the total control period heat input of such units for the year;"

6. In lieu of the language at 40 CFR 96.342(b)(1), substitute:

"For each control period in 2009 and thereafter, the permitting authority will allocate to all CAIR NO_x Ozone Season units in the State that have a baseline heat input (as determined under paragraph (a) of this section) a total amount of CAIR NO_x allowances equal to 95 percent of the tons of NO_x emissions in the State trading budget under section 96.340 (except as provided in paragraph (d) of this section)."

7. In lieu of the language at 40 CFR 96.342(c)(1), substitute:

"The permitting authority will establish a separate new unit set-aside for each control period. Each new unit set-aside will be allocated CAIR NO_x Ozone Season allowances equal to 5 percent of the amount of tons of NO_x emissions in the State trading budget under section 96.340, adjusted as necessary to ensure that the sum of all allocations made by the permitting authority does not exceed the State trading budget."

8. In lieu of the language at 40 CFR 96.342(c)(4)(iv), substitute:

"If the amount of CAIR NO_x Ozone Season allowances in the new unit set-aside for the control period is less than the sum under paragraph (c)(4)(ii) of this section, then the permitting authority will allocate to each CAIR NO_x Ozone Season unit covered by an allowance allocation request accepted under paragraph (c)(4)(i) of this section the amount of the CAIR NO_x Ozone Season allowances requested (as adjusted under paragraph (c)(4)(i) of this section), multiplied by the amount of CAIR NO_x Ozone Season allowances in the new unit set-aside for the control period, divided by the sum determined under paragraph (c)(4)(ii) of this section, and rounded to the nearest whole allowance using such rounding convention that results in allocation of the precise number of allowances in the new unit set-aside."

9. In lieu of the language at 40 CFR 96.342(d), substitute:

"If, after completion of the procedures under paragraph (c)(4) of this section for a control period, any unallocated CAIR NO_x Ozone Season allowances remain in the new unit set-aside for the control period, the permitting authority will allocate to each CAIR NO_x Ozone Season unit that was allocated CAIR NO_x Ozone Season allowances under paragraph (b) of this section an amount of CAIR NO_x Ozone Season allowances equal to the total amount of such remaining unallocated CAIR NO_x Ozone Season allowances, multiplied by the unit's allocation under paragraph (b) of this section, divided by 95 percent of the amount of tons of NO_x emissions in the State trading budget under section 96.340, and rounded to the nearest whole allowance using such rounding convention that results in allocation of the precise number of allowances remaining in the new unit set-aside."

(e) Subpart FFFF, CAIR NO_x Ozone Season Allowance Tracking System.

(f) Subpart GGGG, CAIR NO_x Ozone Season Allowance Transfers.

(g) Subpart HHHH, Monitoring and Reporting.

Rulemaking Authority 403.061, 403.087 FS. Law Implemented 403.031, 403.061, 403.087 FS. History--New 9-4-06, Amended 4-1-07, 10-6-08.

62-296.480 Implementation of Federal Clean Air Mercury Rule.

Rulemaking Authority 403.061, 403.087 FS. Law Implemented 403.031, 403.061, 403.087 FS. History--New 9-6-06, Repealed 1-7-10.

62-296.500 Reasonably Available Control Technology (RACT) – Volatile Organic Compounds (VOC) and Nitrogen Oxides (NOx) Emitting Facilities.

(1) Applicability.

(a) The specific emission limiting standards and other requirements of Rules 62-296.500 through 62-296.516, F.A.C., shall apply to existing VOC-emitting facilities in areas designated as air quality maintenance areas for ozone under Rule 62-204.340, F.A.C. In addition, the emission limiting standards of these rules shall apply to new and modified VOC-emitting facilities in areas designated as air quality maintenance areas for ozone under Rule 62-204.340, F.A.C., except those new and modified VOC-emitting facilities which have been or would be subject to review pursuant to 40 C.F.R. 52.21 or Rule 17-2.17 (repealed), 17-2.500 (transferred), 17-2.510 (transferred), 62-212.400 or 62-212.500, F.A.C.

(b) In addition to the applicable requirements of this rule the specific emission limiting standards and other requirements of Rule 62-296.570, F.A.C., shall apply in Broward, Dade, and Palm Beach counties to major VOC-emitting facilities not regulated in whole under Rules 62-296.501 through 62-296.516, F.A.C., and major NOx-emitting facilities, except those new and modified major VOC- and NOx-emitting facilities which have been or would be subject to review pursuant to 40 C.F.R. 52.21 or Rule 17-2.17 (repealed), 17-2.500 (transferred), 17-2.510 (transferred), 62-212.400, or 62-212.500, F.A.C.

(2) Permit, Recordkeeping, and Compliance Reporting Requirements.

(a) Permits – Special Considerations.

1. Permits to construct or operate are required for all emissions units subject to a specific emission limiting standard or other requirement of Rules 62-296.501 through 62-296.516, F.A.C., or Rule 62-296.570, F.A.C., except those emissions units subject to Rule 62-296.512, F.A.C., Cutback Asphalt.

2. Permits to operate shall contain conditions relating to operation, emission levels, control equipment, use of low solvent technology or other resource characteristics necessary to insure compliance with the applicable rules.

(b) Recordkeeping.

1. An owner or operator of a stationary emissions unit using adhesives, coating, solvents, and/or graphic arts materials and subject to a specific emission limiting standard or other requirement of Rules 62-296.501 through 62-296.516, F.A.C., or Rule 62-296.570, F.A.C., shall maintain daily records of operations for the most recent two year period. The records shall be made available to the local, state, or federal air pollution agency upon request. The records shall include, but not be limited to, the following:

- The rule number applicable to the operation for which the records are being maintained.
- The application method and substrate type (metal, plastic, paper, etc.).
- The amount and type of adhesive, coatings (including catalyst and reducer for multicomponent coatings), solvent, and/or graphic arts material used at each point of application, including exempt compounds.
- The VOC content as applied in each adhesive coating, solvent, and/or graphic arts material.
- The date for each application of adhesive coating, solvent, and/or graphic arts material.
- The amount of surface preparation, clean-up, wash-up of solvent (including exempt compounds) used and the VOC content of each.
- Oven temperature (where applicable).
- VOC content shall be calculated using a percent solids basis (less water and exempt solvents) for adhesives, coating, and inks, using EPA Reference Method 24.
- VOC content and density of rotogravure publication inks shall be determined by EPA Reference Method 24A.
- The Department may accept, instead of the coating analysis methods required under paragraphs 62-296.500(2)(b)2. and 3., F.A.C., a certification by the coating manufacturer of the composition of the coating if it is supported by actual batch formulation records. The manufacturer's certification shall be consistent with EPA's document number 450/3-84-019, titled, "Procedures for Certifying Quantity of Volatile Organic Compounds Emitted by Paint, Ink, and Other Coatings".
- When an emissions unit utilizes add-on controls to achieve compliance, documentation will be necessary to assure proper

operation. Examples of some controls and related information are:

a. Thermal incinerator – combustion temperature, inlet and outlet VOC concentration from emission tests, how and when these concentrations were determined, destruction or removal efficiency, and manufacturer data.

b. Catalytic incinerator – exhaust gas temperature, change in temperature across catalyst bed, date of last change of catalyst bed, inlet and outlet VOC concentration from emission tests, how and when these concentrations were determined, destruction or removal efficiency, and manufacturer data.

c. Condenser – inlet temperature of cooling medium, outlet temperature of cooling medium, inlet and outlet VOC concentration from emission tests, how and when these concentrations were determined, removal efficiency, and manufacturer data.

(c) Reporting. Annually, in accordance with a schedule and reporting format provided by the Department, the owner or operator of any emissions unit having a Department air operation permit and subject to a specific emission limitation under Rules 62-296.501 through 62-296.516, F.A.C., shall provide the Department with proof of compliance with such limitation. Compliance with the requirements of Rule 62-296.570, F.A.C., shall be demonstrated in accordance with the provisions of that rule.

(3) Exceptions.

(a) Emissions units which in combination with all other emissions units at the facility subject to the same specific emission limitation under Rules 62-296.501 through 62-296.516, F.A.C., emit VOC at rates of not more than 15 pounds (6.8 kilograms) in any one day and not more than 3 pounds (1.4 kilograms) in any one hour.

(b) Emissions units used exclusively for chemical or physical analysis, or for the determination of product quality and commercial acceptance, provided:

1. The operation of the emissions unit is not an integral part of any production process; and,

2. The emissions from the emissions unit do not exceed 800 pounds (363 kilograms) in any one calendar month.

(4) Consideration of Exempt Solvents – Compliance calculations for coatings containing solvents exempted under the definition of VOC shall be determined as follows:

Given the mass of VOC and mass of exempt solvent per unit volume of coating, determine the mass of VOC per unit volume of coating less exempt solvent.

Let

x = mass of exempt solvent per unit volume of coating

y = mass of VOC per unit volume of coating

d = density of exempt solvent

z = mass of VOC per unit volume of coating less exempt solvent.

Then

$$z = [y / (1 - x/d)] \text{ or}$$

If more than one solvent is present and the individual volumes and densities are known, use:

$$d = d_1 V_1 + d_2 V_2 + \dots d_n V_n$$

$$V_1 + V_2 + \dots V_n$$

where

V = volume of each component solvent

(5) Compliance may be demonstrated for surface coating and graphic arts facilities on a 24-hour weighted average basis for a single emissions unit point with a single emission limit.

(6) Specific Emission Limitations. The specific volatile organic compounds emission limiting standards set forth in Rules 62-296.401 through 62-296.416, F.A.C., have been found to represent the application of RACT for each emissions unit category listed in those rules except for those emissions unit categories listed in Rules 62-296.501 through 62-296.516, F.A.C., and Rule 62-296.570, F.A.C. For those emissions unit categories the volatile organic compounds emission standards of Rules 62-296.501 through 62-296.516, F.A.C., and Rule 62-296.570, F.A.C., have been found to represent the application of RACT. Emission limitations for surface coating operations shall be expressed in units of pounds VOC/gallon of solids as applied rather than pounds VOC/gallon of coating (less water and exempt solvents) when crossline averaging or compliance using add-on control equipment such as incineration is involved. The method of calculating pounds VOC/gallon of solids as applied from the pounds VOC/gallon of coating is shown in Table 296.500-1.

TABLE 296.500-1 CALCULATION OF POUNDS VOC/GALLON OF SOLIDS

FROM POUNDS VOC/GALLON OF COATING

These calculations shall be determined as follows:

EXAMPLE CONVERSION

GIVEN: COATING OF 3 POUNDS VOC/GALLON OF COATING (LESS WATER AND EXEMPT SOLVENTS) AND VOC DENSITY OF 7.36 POUNDS VOC/GALLON.

PROBLEM: CONVERT POUNDS VOC/GALLON OF COATING TO POUNDS VOL/GALLON OF SOLIDS.

STEP 1 – WHAT IS THE VOLUME OF VOC IN 1 GALLON OF COATING?

$$\frac{3 \text{ POUNDS VOC}}{\text{GALLON COATING}} \times \frac{1 \text{ GALLON VOC}}{7.36 \text{ POUNDS VOC}} = \frac{0.408 \text{ GALLON VOC}}{\text{GALLON COATING}}$$

STEP 2 – WHAT IS THE VOLUME OF SOLIDS IN 1 GALLON COATING?

1 GALLON COATING – VOLUME VOC = VOLUME SOLIDS

1 – 0.408 = 0.592 GALLON SOLIDS

STEP 3 – HOW MANY GALLONS OF COATING DOES IT TAKE TO GET A GALLON OF SOLIDS? (INVERSE OF STEP 2)

$$\frac{1 \text{ GALLON COATING}}{0.592 \text{ GALLON SOLIDS}} = \frac{1.689 \text{ GALLON COATING}}{\text{GALLON SOLIDS}}$$

STEP 4 – CONVERT 3 POUNDS VOC/GALLON OF COATING TO POUNDS VOC/GALLON OF SOLIDS

$$\frac{3 \text{ POUNDS GALLON}}{\text{GALLON COATING}} \times \frac{1.689 \text{ GALLON COATING}}{1.689 \text{ GALLON COATING}} = \frac{5.07 \text{ POUNDS VOC}}{\text{GALLON SOLIDS}}$$

ANSWER: 3 POUNDS VOC/GALLON OF COATING (LESS WATER AND EXEMPT SOLVENTS) = 5.07 POUNDS VOC/GALLON OF SOLIDS

Rulemaking Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061, 403.087 FS. History--Formerly 17-2.650(1) – (1)(f), Amended 2-2-93, 3-17-94, Formerly 17-296.500, Amended 11-23-94, 1-1-96, 3-11-10.

62-296.501 Can Coating.

(1) Applicability. The emission limiting standards set forth in Rule 62-296.501, F.A.C., will apply to:

(a) Coating applicators and ovens of sheet, can, or end coating lines involved in sheet basecoat (exterior and interior) and overvarnish;

(b) Two-piece can exterior (basecoat and overvarnish);

(c) Two- and three-piece can interior body spray;

(d) Two-piece can exterior end (spray or roll coat);

(e) Three-piece can side-seam and end sealing compound operation.

(2) Emission Limiting Standards. No owner or operator of can coating lines subject to Rule 62-296.501, F.A.C., may cause, allow, or permit the discharge into the atmosphere of any volatile organic compounds in excess of the total discharge that would occur if each coating line complied with the emission limitations contained in paragraphs 62-296.501(2)(a) through (d), F.A.C. below. Compliance with these limitations for any given day's operation shall be determined by using the method contained in 45 FR80824. A copy of the above referenced document is available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D. C., and may be inspected at the Department's Tallahassee office.

(a) 2.8 pounds per gallon of coating (0.34 kilograms per liter), excluding water, delivered to the coating applicator of;

1. Sheet basecoat (exterior and interior) and overvarnish, or

2. Two-piece can exterior (basecoat and overvarnish) operation.

(b) 4.2 pounds per gallon of coating (0.50 kilograms per liter), excluding water delivered to the coating applicator from two- and three-piece can interior body spray and two-piece can exterior end (spray or roll coat) operations.

(c) 5.5 pounds per gallon of coating (0.66 kilograms per liter), excluding water, delivered to the coating applicator from three-piece can side-seam spray operations.

(d) 3.7 pounds per gallon of coating (0.44 kilograms per liter) excluding water delivered to the coating applicator from can side-seams and end sealing compound operations.

(3) Control Technology. The emission limits in subsection 62-296.501(2), F.A.C., shall be achieved by:

(a) The application of low solvent content coating technology; or,

(b) Incineration, provided that 90 percent of the volatile organic compounds (VOC measured as total combustible carbon) which enter the incinerator are oxidized to carbon dioxide and water.

(4) Test Methods and Procedures. All emissions tests performed pursuant to the requirements of this rule shall comply with the following requirements.

(a) Low Solvent Technology. The test method for volatile organic compounds shall be EPA Method 24, as described at 40 C.F.R. Part 60, Appendix A-7, adopted and incorporated by reference at Rule 62-204.800, F.A.C., or EPA 450/3-84-019, Procedures for Certifying Quantity of Volatile Organic Compounds Emitted by Paint, Ink, and Other Coatings (<http://www.flrules.org/Gateway/reference.asp?No=Ref-04298>), hereby adopted and incorporated by reference.

(b) Add-on Control Device.

1. Destructive. The test method for volatile organic compounds shall be EPA Method 25, as described at 40 C.F.R. Part 60, Appendix A-7, adopted and incorporated by reference at Rule 62-204.800, F.A.C., or Attachment 3 of EPA 450/2-78-041, Alternate Test Method for Direct Measurement of Total Gaseous Organic Compounds Using a Flame Ionization Analyzer adopted and incorporated by reference in Chapter 62-297, F.A.C.

2. Non-destructive. The test method for volatile organic compounds shall be VOC Capture Efficiency Test Procedures as described at Rule 62-297.450, F.A.C. The sampling time for each capture efficiency test run shall be at least 8 hours, unless otherwise approved by the Department pursuant to Rule 62-297.620, F.A.C.

(c) Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.

Rulemaking Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061, 403.087 FS. History--Formerly 17-2.650(1)(f)1., 17-296.501, Amended 11-23-94, 1-1-96, 7-10-14.

62-296.502 Coil Coating.

(1) Applicability. The emission limiting standard set forth in Rule 62-296.502, F.A.C., will apply to coating applicators, coating lines with or without ovens, and quench areas of coil coating lines involved in prime and topcoat or single-coat operations.

(2) Emission Limiting Standard. No owner or operator of a coil coating line subject to Rule 62-296.502, F.A.C., may cause, allow, or permit the discharge into the atmosphere of any volatile organic compounds in excess of 2.6 pounds per gallon of coating (0.31 kilograms per liter), excluding water delivered to a coating applicator from prime and topcoat or single-coat operations.

(3) Control Technology. The emission limit under subsection 62-296.502(2), F.A.C., shall be achieved by:

(a) The application of low solvent content coating technology; or,

(b) Incineration, provided that 90 percent of the volatile organic compounds (VOC measured as a total combustible carbon) which enter the incinerator are oxidized to carbon dioxide and water.

(4) Test Methods and Procedures. All emissions tests performed pursuant to the requirements of this rule shall comply with the following requirements.

(a) Low Solvent Technology. The test method for volatile organic compounds shall be EPA Method 24, as described at 40 C.F.R. Part 60, Appendix A-7, adopted and incorporated by reference at Rule 62-204.800, F.A.C., or EPA 450/3-84-019, Procedures for Certifying Quantity of Volatile Organic Compounds Emitted by Paint, Ink, and Other Coatings (<http://www.flrules.org/Gateway/reference.asp?No=Ref-04298>), hereby adopted and incorporated by reference.

(b) Add-on Control Device.

1. Destructive. The test method for volatile organic compounds shall be EPA Method 25, as described at 40 C.F.R. Part 60, Appendix A-7, adopted and incorporated by reference at Rule 62-204.800, F.A.C., or Attachment 3 of EPA 450/2-78-041, Alternate Test Method for Direct Measurement of Total Gaseous Organic Compounds Using a Flame Ionization Analyzer, adopted and incorporated by reference in Chapter 62-297, F.A.C.

2. Non-destructive. The test method for volatile organic compounds shall be VOC Capture Efficiency Test Procedures as described in Rule 62-297.450, F.A.C. The sampling time for each capture efficiency test run shall be at least 8 hours, unless otherwise approved by the Department pursuant to Rule 62-297.620, F.A.C.

(c) Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.

Rulemaking Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061, 403.087 FS. History—Formerly 17-2.650(1)(f)2., 17-296.502, Amended 11-23-94, 1-1-96, 7-10-14.

62-296.503 Paper Coating.

(1) Applicability. The emission limiting standards set forth in Rule 62-296.503, F.A.C., will apply to roll, knife, or rotogravure coaters and drying ovens of paper coating lines. The following standards shall also apply to saturation operations.

(2) Emission Limiting Standards. No owner or operator of a paper coating line subject to Rule 62-296.503, F.A.C., may cause, allow, or permit the discharge into the atmosphere of any volatile organic compounds in excess of 2.9 pounds per gallon of coating (0.35 kilograms per liter), excluding water, delivered to the coating applicator from a paper coating line.

(3) Control Technology. The emission limit under subsection 62-296.503(2), F.A.C., shall be achieved by:

(a) The application of low solvent content coating technology; or,

(b) Incineration, provided that 90 percent of the volatile organic compounds (VOC measured as total combustible carbon) which enter the incinerator are oxidized to carbon dioxide and water.

(4) Test Methods and Procedures. All emissions tests performed pursuant to the requirements of this rule shall comply with the following requirements.

(a) Low Solvent Technology. The test method for volatile organic compounds shall be EPA Method 24, as described at 40 C.F.R. Part 60, Appendix A-7, adopted and incorporated by reference at Rule 62-204.800, F.A.C., or EPA 450/3-84-019, Procedures for Certifying Quantity of Volatile Organic Compounds Emitted by Paint, Ink, and Other Coatings (<http://www.flrules.org/Gateway/reference.asp?No=Ref-04298>), hereby adopted and incorporated by reference.

(b) Add-on Control Device.

1. Destructive. The test method for volatile organic compounds shall be EPA Method 25, as described at 40 C.F.R. Part 60, Appendix A-7, adopted and incorporated by reference at Rule 62-204.800, F.A.C., or Attachment 3 of EPA 450/ 2-78-041, Alternate Test Method for Direct Measurement of Total Gaseous Organic Compounds Using a Flame Ionization Analyzer, adopted and incorporated by reference in Chapter 62-297, F.A.C.

2. Non-destructive. The test method for volatile organic compounds shall be VOC Capture Efficiency Test Procedures as described at Rule 62-297.450, F.A.C. The sampling time for each capture efficiency test run shall be at least 8 hours, unless otherwise approved by the Department pursuant to Rule 62-297.620, F.A.C.

(c) Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.

Rulemaking Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061, 403.087 FS. History—Formerly 17-2.650(1)(f)3., 17-296.503, Amended 11-23-94, 1-1-96, 7-10-14.

62-296.504 Fabric and Vinyl Coating.

(1) Applicability. The emission limiting standards set forth in Rule 62-296.504, F.A.C., will apply to roll, knife, or rotogravure coaters and drying ovens of fabric and vinyl coating lines. The following standards shall also apply to saturation operations.

(2) Emission Limiting Standards.

(a) No owner or operator of a fabric coating line or a vinyl coating line subject to Rule 62-296.504, F.A.C., may cause, allow, or permit the discharge into the atmosphere of any volatile organic compounds in excess of:

1. 2.9 pounds per gallon of coating (0.35 kilograms per liter), excluding water, delivered to a coating applicator from a fabric coating line.

2. 3.8 pounds per gallon of coating (0.46 kilograms per liter), excluding water, delivered to a coating applicator from a vinyl coating line.

(3) Control Technology.

The emission limits under subsection 62-296.504(2), F.A.C., shall be achieved by:

(a) The application of low solvent content coating technology; or,

(b) Incineration, provided that 90 percent of the volatile organic compounds (VOC measured as total combustible carbon) which enter the incinerator are oxidized to carbon dioxide and water.

(4) Test Methods and Procedures. All emissions tests performed pursuant to the requirements of this rule shall comply with the following requirements.

(a) Low Solvent Technology. The test method for volatile organic compounds shall be EPA Method 24, as described at 40

C.F.R. Part 60, Appendix A-7, adopted and incorporated by reference at Rule 62-204.800, F.A.C., or EPA 450/3-84-019, Procedures for Certifying Quantity of Volatile Organic Compounds Emitted by Paint, Ink, and Other Coatings (<http://www.flrules.org/Gateway/reference.asp?No=Ref-04298>), hereby adopted and incorporated by reference.

(b) Add-on Control Device.

1. Destructive. The test method for volatile organic compounds shall be EPA Method 25 as described at 40 C.F.R. Part 60, Appendix A-7, adopted and incorporated by reference at Rule 62-204.800, F.A.C., or Attachment 3 of EPA 450/ 2-78-041, Alternate Test Method for Direct Measurement of Total Gaseous Organic Compounds Using a Flame Ionization Analyzer, adopted and incorporated by reference in Chapter 62-297, F.A.C.

2. Non-destructive. The test method for volatile organic compounds shall be VOC Capture Efficiency Test Procedures as described at Rule 62-297.450, F.A.C. The sampling time for each capture efficiency test run shall be at least 8 hours, unless otherwise approved by the Department pursuant to Rule 62-297.620, F.A.C.

(c) Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.

Rulemaking Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061, 403.087 FS. History—Formerly 17-2.650(1)(f)4., 17-296.504, Amended 11-23-94, 1-1-96, 7-10-14.

62-296.505 Metal Furniture Coating.

(1) Applicability. The emission limiting standards set forth in Rule 62-296.505, F.A.C., will apply to the application areas, flash-off areas, and ovens of metal furniture coating lines involved in prime and topcoat or single-coating operations.

(2) Emissions Limiting Standards. No owner or operator of a metal furniture coating line subject to Rule 62-296.505, F.A.C., may cause, allow, or permit the discharge into the atmosphere of any volatile organic compounds in excess of 3.0 pounds per gallon of coating (0.36 kilograms per liter), excluding water, delivered to the coating applicator from prime and topcoat or single-coat operations. Credit for transfer efficiency above the baseline of 60% for spray coating operations can be granted according to the following formula:

$$X = (te)(z)(y)$$

$$\frac{Y + (TE)(Z)}{}$$

where

X = allowable maximum VOC content (kg VOC/liter of coating less water)

Y = density of the VOC in the maximum VOC content coating (kg/liter)

Z = applicable emission limit (kg VOC/liter of coating solids deposited)

TE = transfer efficiency

An EPA and state approved test method for determination of transfer efficiency above the baseline is required.

(3) Control Technology. The emission limit under subsection 62-296.505(2), F.A.C., shall be achieved by:

(a) The application of low solvent content coating technology; or,

(b) Incineration, provided that 90 percent of the volatile organic compounds (VOC measured as total combustible carbon) which enter the incinerator are oxidized to carbon dioxide and water.

(4) Test Methods and Procedures. All emissions tests performed pursuant to the requirements of this rule shall comply with the following requirements.

(a) Low Solvent Technology. The test method for volatile organic compounds shall be EPA Method 24, as described at 40 C.F.R. Part 60, Appendix A-7, adopted and incorporated by reference at Rule 62-204.800, F.A.C., or EPA 450/3-84-019, Procedures for Certifying Quantity of Volatile Organic Compounds Emitted by Paint, Ink, and Other Coatings (<http://www.flrules.org/Gateway/reference.asp?No=Ref-04298>), hereby adopted and incorporated by reference.

(b) Add-on Control Device.

1. Destructive. The test method for volatile organic compounds shall be EPA Method 25, as described at 40 C.F.R. Part 60, Appendix A-7, adopted and incorporated by reference at Rule 62-204.800, F.A.C., or Attachment 3 of EPA 450/ 2-78-041, Alternate Test Method for Direct Measurement of Total Gaseous Organic Compounds Using a Flame Ionization Analyzer, adopted and

incorporated by reference in Chapter 62-297, F.A.C.

2. Non-destructive. The test method for volatile organic compounds shall be VOC Capture Efficiency Test Procedures as described at Rule 62-297.450, F.A.C. The sampling time for each capture efficiency test run shall be at least 8 hours, unless otherwise approved by the Department pursuant to Rule 62-297.620, F.A.C.

(c) Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.

Rulemaking Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061, 403.087 FS. History—Formerly 17-2.650(1)(f)5., 17-296.505, Amended 11-23-94, 1-1-96, 7-10-14.

62-296.506 Surface Coating of Large Appliances.

(1) Applicability.

(a) The emission limiting standards set forth in Rule 62-296.506, F.A.C., shall apply to application areas, flash-off areas, and ovens of large appliance coating lines involved in prime, single, or topcoat coating operations. Credit for transfer efficiency above the baseline of 60% for spray coating operations can be granted according to the following formula:

$$X = \frac{(te)(z)(y)}{Y + (TE)(Z)}$$

where

- X = allowable maximum VOC content (kg VOC/liter of coating less water)
Y = density of the VOC in the maximum VOC content coating (kg/liter)
Z = applicable emission limit (kg VOC/liter of coating solids deposited)
TE = transfer efficiency

An EPA and state approved test method for determination of transfer efficiency above the baseline is required.

(b) Rule 62-296.506, F.A.C., does not apply to the use of quick-drying lacquers for repair of scratches and nicks that occur during assembly, provided that the volume of coating does not exceed one quart (0.95 liters) in any one 8-hour period.

(2) Emission Limiting Standard. No owner or operator of a large appliance coating line subject to Rule 62-296.506, F.A.C., may cause, allow or permit the discharge into the atmosphere of any volatile organic compounds in excess of 0.34 kilograms per liter of coating (2.8 pounds per gallon), excluding water, delivered to the coating applicator from prime, single, or topcoat coating operations.

(3) Control Technology. The emission limit under subsection 62-296.506(2), F.A.C., shall be achieved by:

(a) The application of low solvent content coating technology; or,

(b) Incineration, provided that 90 percent of the volatile organic compounds (VOC measured as total combustible carbon) which enter the incinerator are oxidized to carbon dioxide and water.

(4) Test Methods and Procedures. All emissions tests performed pursuant to the requirements of this rule shall comply with the following requirements.

(a) Low Solvent Technology. The test method for volatile organic compounds shall be EPA Method 24, as described at 40 C.F.R. Part 60, Appendix A-7, adopted and incorporated by reference at Rule 62-204.800, F.A.C., or EPA 450/3-84-019, Procedures for Certifying Quantity of Volatile Organic Compounds Emitted by Paint, Ink, and Other Coatings (<http://www.flrules.org/Gateway/reference.asp?No=Ref-04298>), hereby adopted and incorporated by reference.

(b) Add-on Control Device.

1. Destructive. The test method for volatile organic compounds shall be EPA Method 25, as described at 40 C.F.R. Part 60, Appendix A-7, adopted and incorporated by reference at Rule 62-204.800, F.A.C., or Attachment 3 of EPA 450/ 2-78-041, Alternate Test Method for Direct Measurement of Total Gaseous Organic Compounds Using a Flame Ionization Analyzer, adopted and incorporated by reference in Chapter 62-297, F.A.C.

2. Non-destructive. The test method for volatile organic compounds shall be VOC Capture Efficiency Test Procedures as described at Rule 62-297.450, F.A.C. The sampling time for each capture efficiency test run shall be at least 8 hours, unless otherwise approved by the Department pursuant to Rule 62-297.620, F.A.C.

(c) Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.

Rulemaking Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061, 403.087 FS. History—Formerly 17-2.650(1)(f)6., 17-296.506, Amended 11-23-94, 1-1-96, 7-10-14.

62-296.507 Magnet Wire Coating.

(1) Applicability. The emission limiting standard set forth in Rule 62-296.507, F.A.C., shall apply to the ovens of magnet wire coating operations.

(2) Emission Limiting Standards. No owner or operator of a magnet wire coating oven subject to Rule 62-296.507, F.A.C., may cause, allow, or permit the discharge into the atmosphere of any volatile organic compounds in excess of 1.7 pounds per gallon of coating (0.20 kilograms per liter), excluding water, delivered to the coating applicator from magnet wire coating operations.

(3) Control Technology. The emission limit under subsection 62-296.507(2), F.A.C., shall be achieved by:

(a) The application of low solvent content coating technology; or,

(b) Incineration, provided that 90 percent of the volatile organic compounds (VOC measured as total combustible carbon) which enter the incinerator are oxidized to carbon dioxide and water.

(4) Test Methods and Procedures. All emissions tests performed pursuant to the requirements of this rule shall comply with the following requirements.

(a) Low Solvent Technology. The test method for volatile organic compounds shall be EPA Method 24, as described at 40 C.F.R. Part 60, Appendix A-7, adopted and incorporated by reference at Rule 62-204.800, F.A.C., or EPA 450/3-84-019, Procedures for Certifying Quantity of Volatile Organic Compounds Emitted by Paint, Ink, and Other Coatings (<http://www.flrules.org/Gateway/reference.asp?No=Ref-04298>), hereby adopted and incorporated by reference.

(b) Add-on Control Device.

1. Destructive. The test method for volatile organic compounds shall be EPA Method 25, as described at 40 C.F.R. Part 60, Appendix A-7, adopted and incorporated by reference at Rule 62-204.800, F.A.C., or Attachment 3 of EPA 450/ 2-78-041, Alternate Test Method for Direct Measurement of Total Gaseous Organic Compounds Using a Flame Ionization Analyzer, adopted and incorporated by reference in Chapter 62-297, F.A.C.

2. Non-destructive. The test method for volatile organic compounds shall be VOC Capture Efficiency Test Procedures as described at Rule 62-297.450, F.A.C. The sampling time for each capture efficiency test run shall be at least 8 hours, unless otherwise approved by the Department pursuant to Rule 62-297.620, F.A.C.

(c) Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.

Rulemaking Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061, 403.087 FS. History—Formerly 17-2.650(1)(f)7., 17-296.507, Amended 11-23-94, 1-1-96, 7-10-14.

62-296.508 Petroleum Liquid Storage.

(1) Applicability.

(a) The control technology set forth in Rule 62-296.508, F.A.C., shall apply to all fixed roof storage vessels with capacities equal to or greater than 42,000 gallons (159,000 liters; nominal design 1,000 barrels (bbls.) containing petroleum liquids whose true vapor pressure is greater than 1.50 psia (10.3 kilopascals) but shall not be used if the petroleum liquid has a true vapor pressure of 11.0 psia (76 kilopascals) or greater under actual storage conditions.

(b) Rule 62-296.508, F.A.C., shall not apply to volatile petroleum liquid storage vessels:

1. Equipped with external floating roofs before the effective date of this rule; or,

2. Having capacities equal to or less than 420,000 gallons (1,590,000 liters; nominal design 10,000 bbls.) located at oil field production sites and used to store produced oil and condensate prior to lease custody transfer.

(2) Control Technology. Except as provided under paragraph 62-296.508(1)(b), F.A.C., no owner or operator of an affected emissions unit under paragraph 62-296.508(1)(a), F.A.C., shall permit the use of such emissions unit unless:

(a) The emissions unit has been retrofitted with an internal floating roof equipped with a closure seal, or seals, to close the space between the roof edge and tank wall, or the emissions unit has been retrofitted with an equally effective alternative control; and,

(b) The emissions unit is maintained such that there are no visible holes, tears, or other openings in the seal or any seal fabric or materials; and,

(c) All openings, except stub drains are equipped with covers, lids, or seals such that:

1. The cover, lid, or seal is in the closed position at all times except on demand for sampling, maintenance, repair, or necessary operational practices; and,
2. Automatic bleeder vents are closed at all times except when the roof is floated off or landed on the roof leg supports; and,
3. Rim vents, if provided, are set to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting.

(3) Test Methods and Procedures. All emissions tests performed pursuant to the requirements of this rule shall comply with the following requirements.

(a) Internal Floating Roof and Roof Seals. The test method for volatile organic compounds shall be p. 6-2 of EPA 450/2-77-036, incorporated and adopted by reference in Chapter 62-297, F.A.C.

(b) Add-on Control Device.

1. Destructive. The test method for volatile organic compounds shall be EPA Method 25, as described at 40 C.F.R. Part 60, Appendix A-7, adopted and incorporated by reference at Rule 62-204.800, F.A.C., or Attachment 3 of EPA 450/ 2-78-041, Alternate Test Method for Direct Measurement of Total Gaseous Organic Compounds Using a Flame Ionization Analyzer, adopted and incorporated by reference in Chapter 62-297, F.A.C.

2. Non-destructive. The test method for volatile organic compounds shall be VOC Capture Efficiency Test Procedures as described at Rule 62-297.450, F.A.C. The sampling time for each capture efficiency test run shall be at least 8 hours, unless otherwise approved by the Department pursuant to Rule 62-297.620, F.A.C.

(c) Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.

Rulemaking Authority 403.061 FS. Law Implemented 403.031, 403.061, 403.087 FS. History--Formerly 17-2.650(1)(f)8., 17-296.508, Amended 11-23-94, 1-1-96, 10-6-08, 7-10-14.

62-296.509 Bulk Gasoline Plants.

Rulemaking Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061, 403.087 FS. History--Formerly 17-2.650(1)(f)9., 17-296.509, Repealed 5-9-07.

62-296.510 Bulk Gasoline Terminals.

(1) Applicability. The emission limiting standards or control technology set forth in Rule 62-296.510, F.A.C., applies to bulk gasoline terminals and the appurtenant equipment necessary to load the tank truck or trailer compartments.

(2) Emission Limiting Standards. Emissions units affected under subsection 62-296.510(1), F.A.C., shall not allow mass emissions of volatile organic compounds from control equipment to exceed 4.7 grains per gallon (80 milligrams per liter) of gasoline loaded.

(3) Control Technology. No person shall load gasoline into any tank, trucks or trailers from any bulk gasoline terminal unless:

(a) Displaced vapors are vented only to the vapor control system; and,

(b) A means is provided to prevent liquid waste from the loading device to exceed the quantity specified for the self sealing coupler or adapter according to API regulation RP 1004 (or equivalent) upon the loading device being disconnected or when it is not in use (the above referenced are available from the American Petroleum Institute, 2101 "L" Street N. W., Washington, D.C. 20037); and,

(c) All loading and vapor lines equipped with fittings are vapor tight; and,

(d) The bulk gasoline terminal is equipped with a properly installed and operated vapor control system complying with Rule 62-296.510, F.A.C., and which recovers vapors from the equipment being controlled or which directs all vapors to a combustion or incineration system.

(4) Test Methods and Procedures. All emissions tests performed pursuant to the requirements of this rule shall comply with the following requirements.

(a) Vapor Control Emissions. The test methods for volatile organic compounds shall be EPA Methods 2A and 2B, as described at 40 C.F.R. Part 60, Appendix A-1; and EPA Methods 25A and 25B, as described at 40 C.F.R. Part 60, Appendix A-7; adopted and incorporated by reference at Rule 62-204.800, F.A.C. Sub-subparagraph 62-297.440(2)(b)1.a., F.A.C., shall also apply.

(b) Equipment Vapor-Leak Detection. The test methods for volatile organic compounds shall be EPA Methods 21, as described at 40 C.F.R. Part 60, Appendix A-7; and EPA Method 27, as described at 40 C.F.R. Part 60, Appendix A-8; adopted and incorporated by reference at Rule 62-204.800, F.A.C. Sub-subparagraph 62-297.440(2)(b)2.a., F.A.C., shall also apply.

(c) Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.

Rulemaking Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061, 403.087 FS. History--Formerly 17-2.650(1)(f)10., 17-296.510, Amended 11-23-94, 1-1-96, 7-10-14.

62-296.511 Solvent Metal Cleaning.

(1) Applicability.

(a) The emission limiting standards and control technology set forth in Rule 62-296.511, F.A.C., shall apply to cold cleaning, open-top vapor degreasing, and conveyORIZED degreasing operations. All new and existing degreasing facilities using the following halogenated solvents are subject to the requirements (including compliance deadlines) of the national emission standard for halogenated solvent degreasers at 40 C.F.R. Part 63, Subpart T, adopted and incorporated by reference in Rule 62-204.800, F.A.C.: carbon tetrachloride, chloroform, tetrachloroethylene, 1,1,1-trichloroethane, trichloroethylene, and methylene chloride. Until compliance is achieved with the requirements of 40 C.F.R. Part 63, Subpart T, existing (as of November 29, 1993) halogenated solvent degreasing facilities must also comply with the requirements of this rule. The requirements of this rule shall not apply to any halogenated solvent degreasing facility after it has achieved compliance with the requirements of 40 C.F.R. Part 63, Subpart T.

(b) The provisions of Rule 62-296.511, F.A.C., shall apply with the following exceptions:

1. Open-top vapor degreasers with an open area smaller than 10.8 square feet (one square meter) shall be exempt from paragraph 62-296.511(3)(c), F.A.C.;

2. ConveyORIZED degreasers with an air/vapor interface smaller than 21.5 square feet (2.0 square meters) shall be exempt from paragraph 62-296.511(4)(b), F.A.C.

(2) Cold Cleaning Control Technology. Except as provided under subsection 62-296.511(1), F.A.C., the owner or operator of a cold cleaning facility shall comply with each of the following requirements:

(a) Equip the cleaner with a cover. The cover shall be so designed that it can be easily operated with one hand if:

1. The solvent volatility is greater than 0.3 pounds per square inch (15 millimeters of mercury or 2 kilopascals) measured at 100 degrees Fahrenheit (38 degrees Celsius);

2. The solvent is agitated;

3. The solvent is heated.

(b) Equip the cleaner with a facility for draining cleaned parts. The drainage facility shall be constructed internally so that parts are enclosed under the cover while draining if the solvent volatility is greater than 0.6 pounds per square inch (31 millimeters of mercury or 4.1 kilopascals) measured at 100 degrees Fahrenheit (38 degrees Celsius), except that the drainage facility may be external for the applications where an internal type cannot fit into the cleaning system.

(c) Install one of the following control devices if the solvent volatility is greater than 0.6 pounds per square inch (31 millimeters of mercury or 4.1 kilopascals) measured at 100 degrees Fahrenheit (38 degrees Celsius), or if the solvent is heated above 120 degrees Fahrenheit (50 degrees Celsius):

1. Freeboard that gives a freeboard ratio greater than or equal to 0.7; or,

2. Water cover (solvent must be insoluble in and heavier than water); or,

3. Other systems of equivalent control such as refrigerated chiller or carbon absorption.

(d) Provided a permanent, conspicuous label summarizing the operating requirements.

(e) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, such that greater than 20 percent of the waste solvent (by weight) can evaporate into the atmosphere.

(f) Close the cover whenever parts are not being handled in the cleaner.

(g) Drain the cleaned parts for at least 15 seconds or until dripping ceases.

(h) If used, supply a solvent spray that is a solid fluid stream (not a fine, atomized, or shower-type spray) at a pressure which does not cause excessive splashing.

(3) Open Top Vapor Degreaser Control Technology. Except as provided under Rule 62-296.511, F.A.C., the owner or operator of an open top vapor degreaser shall comply with each of the following requirements:

(a) Equip the vapor degreaser with a cover that can be opened and closed easily without disturbing the vapor zone.

(b) Provide the following safety switches:

1. A condenser flow switch and thermostat which shut off the heat if the condenser coolant is either not circulating or too warm; and,

2. A spray safety switch which shuts off the spray pump if the vapor level drops more than 4 inches (10 centimeters) below the bottom condenser coil; and,

3. A vapor level control thermostat which shuts off the heat when the vapor level rises too high.

(c) Install one of the following control devices:

1. A freeboard ratio greater than or equal to 0.75, and a powered or mechanically assisted cover if the degreaser opening is greater than 10.8 square feet (1.0 square meter); or,
2. Refrigerated chiller; or,
3. An enclosed design (cover or door opens only when the dry part is actually entering or exiting the degreaser); or,
4. A carbon adsorption system, with ventilation greater than or equal to 50 cubic feet per minute per square foot (15 cubic meters per minute per square meter) of air/vapor area (when cover is open), and exhausting less than 25 parts per million of solvent averaged over one complete adsorption cycle.

(d) Keep the cover closed at all times except when processing work loads through the degreaser.

(e) Minimize solvent carryout by:

1. Racking parts to allow complete drainage; and,
2. Moving parts in and out of the degreaser at less than 11 feet per minute (3.3 meters per minute); and,
3. Holding the parts in the vapor zone at least 30 seconds or until condensation ceases; and,
4. Decanting any pools of solvent on the cleaned parts before removal from the vapor zone; and,
5. Allowing parts to dry within the degreaser for at least 15 seconds or until visually dry.

(f) Not degrease porous or absorbent materials, such as cloth, leather, wood, or rope.

(g) Not occupy more than half of the degreaser's open-top area with a workload.

(h) Not load the degreaser to the point where the vapor level would drop more than 4 inches (10 centimeters) below the bottom condenser coil when the workload is removed from the vapor zone.

(i) Always spray below the vapor level.

(j) Repair solvent leaks immediately, or shut down the degreaser.

(k) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, such that greater than 20 percent of the waste solvent (by weight) can evaporate into the atmosphere.

(l) Not operate the cleaner so as to allow water to be visually detectable in solvent exiting the water separator.

(m) Not use ventilation fans near the degreaser opening, nor provide exhaust ventilation exceeding 66 cubic feet per minute per square foot (20 cubic meters per minute per square meter) of degreaser open area, unless necessary to meet OSHA requirements.

(n) Provide a permanent, conspicuous label, summarizing the operating procedure of paragraph 62-296.511(3)(d) through (l), F.A.C.

(4) Conveyorized Degreaser Control Technology. Except as provided under subsection 62-296.511(1), F.A.C., the owner or operator of a conveyorized degreaser shall comply with the following requirements:

(a) Not use work-place fans near the degreaser opening, nor provide exhaust ventilation exceeding 66 cubic feet per minute per square foot (20 cubic meters per minute per square meter) of degreaser opening, unless necessary to meet Occupational Safety and Health Administration (OSHA) requirements. OSHA regulations are available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C., and may be inspected at the Department's Tallahassee office.

(b) Install one of the following control devices:

1. Refrigerated chiller; or,
2. Carbon absorption system, with ventilation greater than or equal to 49 cubic feet per minute per square foot (15 cubic meters per square meter) of air/vapor area (when downtime covers are open), and exhausting less than 25 parts per million of solvent by volume averaged over a complete absorption cycle.

(c) Equip the cleaner with equipment, such as a drying tunnel or rotating (tumbling) basket, sufficient to prevent cleaned parts from carrying out solvent or liquid vapor.

(d) Provide the following safety switches:

1. A condenser flow switch and thermostat which shut off the sump heat if the condenser coolant is either not circulating or too warm; and,
2. A spray safety switch which shuts off the spray pump or the conveyor if the vapor level drops more than 4 inches (10 centimeters) below the bottom condenser coil; and,

3. A vapor level control thermostat which shuts off the heat when the vapor level rises too high.

(e) Minimize openings during operation so that entrances and exits will silhouette workloads with an average clearance between the parts and the edge of the degreaser opening of less than 4 inches (10 centimeters) or less than 10 percent of the width of the opening.

(f) Provide downtime covers for closing off the entrance and exit during shutdown hours.

(g) Minimize carryout emissions by:

1. Racking parts for best drainage; and,
2. Maintaining the vertical conveyor speed at less than 11 feet per minute (3.3 meters per minute).

(h) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, such that greater than 20 percent of the waste solvent (by weight) can evaporate into the atmosphere.

(i) Repair solvent leaks immediately, or shut down the degreaser.

(j) Not operate the cleaner so as to allow water to be visually detectable in solvent exiting the water separator.

(k) Place downtime covers over entrances and exits of conveyorized degreasers immediately after the conveyors and exhausts are shutdown and do not remove them until just before a startup.

(5) Test Methods and Procedures. All emissions tests performed pursuant to the requirements of this rule shall comply with the following requirements.

(a) The test method for volatile organic compound emissions from the specified equipment shall be EPA Method 21, as described at 40 C.F.R. Part 60, Appendix A-7, adopted and incorporated by reference at Rule 62-204.800, F.A.C.

(b) The test method for non-halogenated organic solvent emissions from a destructive add-on control device shall be EPA Method 25, as described at 40 C.F.R. Part 60, Appendix A-7, adopted and incorporated by reference at Rule 62-204.800, F.A.C., or Attachment 3 of EPA 450/2-78-041, Alternate Test Method for Direct Measurement of Total Gaseous Organic Compounds Using a Flame Ionization Analyzer, adopted and incorporated by reference in Chapter 62-297, F.A.C.

(c) The test method for organic solvent emissions from a non-destructive add-on control device shall be VOC Capture Efficiency Test Procedures as described at Rule 62-297.450, F.A.C. The sampling time for each capture efficiency test run shall be at least 8 hours, unless otherwise approved by the Department pursuant to Rule 62-297.620, F.A.C.

(d) Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.

Rulemaking Authority 403.061, 403.8055 FS. Law Implemented 403.021, 403.031, 403.061, 403.087 FS. History--Formerly 17-2.650(1)(f)12., 17-296.511, Amended 11-23-94, 1-1-96, 6-25-96, 10-7-96, 7-10-14.

62-296.512 Cutback Asphalt.

(1) Applicability. The emission limiting standard or control technology set forth in subsection 62-296.512(2), F.A.C., shall apply to the manufacture and use of cutback asphalts for paving or maintaining roads, streets, highways, and parking lots.

(2) Control Standards. No person shall cause, allow, or permit the manufacture, mixing, storage, use, or application of cutback asphalts except where:

- (a) Long-life storage of liquid asphalt is necessary; or,
- (b) Stockpile storage of cold mixed asphaltic concrete patching material is necessary; or,
- (c) The use or application at ambient temperature less than 50 degrees Fahrenheit (10 degrees Celsius) as determined by the nearest National Weather Service Station is necessary; or,
- (d) The cutback asphalt is to be used solely as a penetrating prime coat; or,
- (e) The cutback asphalt is to be used in a sand seal coat; or,
- (f) The cutback asphalt is to be used as a tack coat in the routine maintenance of public roads, or the minor betterment of public roads.

(3) Test Methods and Procedures. All emissions tests performed pursuant to the requirements of this rule shall comply with the following requirements.

(a) The test method for particulate emissions shall be EPA Method 5, as described at 40 C.F.R. Part 60, Appendix A-3, adopted and incorporated by reference at Rule 62-204.800, F.A.C. The minimum sample volume shall be 30 dry standard cubic feet.

(b) Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.

Rulemaking Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061, 403.087 FS. History--Formerly 17-2.650(1)(f)13., 17-296.512, Amended 11-23-94, 1-1-96, 7-10-14.

62-296.513 Surface Coating of Miscellaneous Metal Parts and Products.

(1) Applicability.

(a) The emission limiting standards set forth in subsection 62-296.513(2), F.A.C., shall apply to surface coating of the following metal parts and products:

1. Large farm machinery, such as harvesting, fertilizing and planting machines, tractors and combines;
2. Small farm machinery, such as lawn and garden tractors, lawn mowers and rototillers;
3. Small appliances, such as fans, mixers, blenders, crock pots, dehumidifiers and vacuum cleaners;
4. Commercial machinery, such as office equipment, computers and auxiliary equipment, typewriters, calculators and vending machines;
5. Industrial machinery, such as pumps, compressors, conveyor components, fans, blowers and transformers;
6. Fabricated metal products, such as metal covered doors, frames, etc.; and,
7. Any other industrial category which coats metal parts or products under the Standard Industrial Classification Code of Major Group 33 (primary metal industries), Major Group 34 (fabricated metal products), Major Group 35 (nonelectric machinery), Major Group 36 (electrical machinery), Major Group 37 (transportation equipment), Major Group 38 (miscellaneous instruments), and Major Group 39 (miscellaneous manufacturing industries). The Standard Industrial Classification Code is available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C., 20402, and may be examined at the Department of Environmental Protection, Tallahassee.

(b) The provisions of Rule 62-296.513, F.A.C., shall not apply to the surface coating of the following metal parts and products:

1. Automobiles and light-duty trucks;
2. Metal cans;
3. Flat metal sheets and strips in the form of rolls or coils;
4. Magnet wire for use in electrical machinery;
5. Metal furniture;
6. Large appliances;
7. Exterior of airplanes;
8. Automobile refinishing;
9. Customized top coating of automobiles and trucks if production is less than 35 vehicles per day; and,
10. Exterior of marine vessels.

(c) The provisions of Rule 62-296.513, F.A.C., apply to the application area(s), flashoff area(s), air and forced air dryer(s), and oven(s) used in the surface coating of the metal parts and products listed in paragraph 62-296.513(1)(a), F.A.C. These provisions also apply to prime coat, top coat, and single coat operations. Credit for transfer efficiency above the baseline of 60% for spray coating operations can be granted according to the following formula:

$$X = \frac{(TE)(Z)(Y)}{Y + (TE)(Z)}$$

where

X = allowable maximum VOC content (kg VOC/liter of coating less water)

Y = density of the VOC in the maximum VOC content coating (kg/liter)

Z = applicable emission limit (kg VOC/liter of coating solids deposited)

TE = transfer efficiency

An EPA and state approved test method for determination of transfer efficiency above the baseline is required.

(2) Emission Limiting Standards.

(a) No owner or operator of a coating line for miscellaneous metal parts and products shall cause, allow, or permit the discharge into the atmosphere of any volatile organic compounds in excess of:

1. 4.3 pounds per gallon of coating (0.52 kilograms per liter), excluding water, delivered to a coating applicator that applies clear coatings;

2. 3.5 pounds per gallon of coating (0.42 kilograms per liter), excluding water, delivered to a coating applicator in a coating application system that is air dried or forced warm air dried at temperatures up to 194 degrees Fahrenheit (90 degrees Celsius);

3. 3.5 pounds per gallon of coating (0.42 kilograms per liter), excluding water, delivered to a coating applicator that applies extreme performance coatings; or,

4. 3.0 pounds per gallon of coating (0.36 kilograms per liter), excluding water, delivered to a coating applicator for all other coatings and coating application systems.

(b) If more than one emission limitation in paragraph 62-296.513(2)(a), F.A.C., applies to a specific coating, then the least stringent emission limitation shall be applied.

(c) All volatile organic compound emissions from solvent washings shall be considered in the emission limitations in paragraph 62-296.513(2)(a), F.A.C., unless the solvent is directed into containers that prevent evaporation into the atmosphere.

(3) Control Technology. The emission limits in paragraph 62-296.513(2)(a), F.A.C., shall be achieved by:

(a) The application of low solvent coating technology; or,

(b) Incineration, provided that 90 percent of the volatile organic compounds (VOC measured as total combustible carbon) which enter the incinerator are oxidized to carbon dioxide and water.

(4) Test Methods and Procedures. All emissions tests performed pursuant to the requirements of this rule shall comply with the following requirements.

(a) Low Solvent Technology. The test method for volatile organic compounds shall be EPA Method 24, as described at 40 C.F.R. Part 60, Appendix A-7, adopted and incorporated by reference at Rule 62-204.800, F.A.C., or EPA 450/3-84-019, Procedures for Certifying Quantity of Volatile Organic Compounds Emitted by Paint, Ink, and Other Coatings (<http://www.flrules.org/Gateway/reference.asp?No=Ref-04298>), hereby adopted and incorporated by reference.

(b) Add-on Control Device.

1. Destructive. The test method for volatile organic compounds shall be EPA Method 25, as described at 40 C.F.R. Part 60, Appendix A-7, adopted and incorporated by reference at Rule 62-204.800, F.A.C., or Attachment 3 of EPA 450/ 2-78-041, Alternate Test Method for Direct Measurement of Total Gaseous Organic Compounds Using a Flame Ionization Analyzer, adopted and incorporated by reference in Chapter 62-297, F.A.C.

2. Non-destructive. The test method for volatile organic compounds shall be VOC Capture Efficiency Test Procedures as described at Rule 62-297.450, F.A.C. The sampling time for each capture efficiency test run shall be at least 8 hours, unless otherwise approved by the Department pursuant to Rule 62-297.620, F.A.C.

(c) Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.

Rulemaking Authority 403.061 FS. Low Implemented 403.021, 403.031, 403.061, 403.087 FS. History—Formerly 17-2.650(1)(f)14., 17-296.513, Amended 11-23-94, 1-1-96, 7-10-14.

62-296.514 Surface Coating of Flat Wood Paneling.

(1) Applicability.

(a) The emission limiting standards set forth in subsection 62-296.514(2), F.A.C., shall apply to all flat wood manufacturing and surface finishing facilities that manufacture the following products:

1. Printed interior panels made of hardwood, plywood and thin particle board;
2. Natural finish hardwood plywood panels, or
3. Hardboard paneling with Class II finishes.

(b) The provisions stated in subsection 62-296.514(2), F.A.C., do not apply to the manufacture of exterior siding, tileboard, or particle board used as a furniture component.

(2) Emission Limiting Standards. No owner or operator of a flat wood coating line subject to Rule 62-296.514, F.A.C., may cause, allow or permit the discharge into the atmosphere of any volatile organic compounds in excess of:

(a) 6.0 pounds per 1,000 square feet of coated finished product (2.9 kilograms per 100 square meters) from the coating of printed interior panels, regardless of the number of coats applied;

(b) 12.0 pounds per 1,000 square feet of coated finished product (5.8 kilograms per 100 square meters) from the coating of natural finish hardwood plywood panels, regardless of the number of coats applied; or,

(c) 10.0 pounds per 1,000 square feet of coated finished product (4.8 kilograms per 100 square meters) from the coating of Class II finishes on hardboard panels, regardless of the number of coats applied.

(3) Control Technology. The emission limits in subsection 62-296.514(2), F.A.C., shall be achieved by:

- (a) The application of low solvent coating technology; or,
- (b) Incineration, provided that 90% of the volatile organic compounds (VOC measured as total combustible carbon) which enter the incinerator are oxidized to carbon dioxide and water.

(4) Test Methods and Procedures. All emissions tests performed pursuant to the requirements of this rule shall comply with the following requirements.

(a) Low Solvent Technology. The test method for volatile organic compounds shall be EPA Method 24, as described at 40 C.F.R. Part 60, Appendix A-7, adopted and incorporated by reference at Rule 62-204.800, F.A.C., or EPA 450/3-84-019, Procedures for Certifying Quantity of Volatile Organic Compounds Emitted by Paint, Ink, and Other Coatings (<http://www.flrules.org/Gateway/reference.asp?No=Ref-04298>), hereby adopted and incorporated by reference.

(b) Add-on Control Device.

1. Destructive. The test method for volatile organic compounds shall be EPA Method 25, as described at 40 C.F.R. Part 60, Appendix A-7, adopted and incorporated by reference at Rule 62-204.800, F.A.C., or Attachment 3 of EPA 450/2-78-041, Alternate Test Method for Direct Measurement of Total Gaseous Organic Compounds Using a Flame Ionization Analyzer, adopted and incorporated by reference in Chapter 62-297, F.A.C.

2. Non-destructive. The test method for volatile organic compounds shall be VOC Capture Efficiency Test Procedures as described at Rule 62-297.450, F.A.C. The sampling time for each capture efficiency test run shall be at least 8 hours, unless otherwise approved by the Department pursuant to Rule 62-297.620, F.A.C.

(c) Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.

Rulemaking Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061, 403.087 FS. History—Formerly 17-2.650(1)(f)15., 17-296.514, Amended 11-23-94, 1-1-96, 7-10-14.

62-296.515 Graphic Arts Systems.

(1) Applicability. The control technology and provisions set forth in subsection 62-296.515(2), F.A.C., shall apply to all packaging rotogravure, publication rotogravure, or flexographic printing operations whose prior to control potential to emit volatile organic compounds is equal to or more than 100 tons per year (90 megagrams per year).

(2) Control Technology.

(a) No owner or operator of a packaging rotogravure, publication rotogravure, or flexographic printing operation subject to Rule 62-296.515, F.A.C., and employing solvent containing ink shall cause, allow or permit the operation of the facility unless:

1. The volatile fraction of ink as it is applied to the substrate, contains 25 percent by volume or less of organic solvent and 75 percent by volume or more of water; or,

2. The ink as it is applied to the substrate, less water, contains 60 percent by volume or more nonvolatile material; or,

3. An incineration system is employed which oxidizes at least 90 percent of the volatile organic compounds (VOC measured as total combustible carbon) to carbon dioxide and water.

(3) Test Methods and Procedures. All emissions tests performed pursuant to the requirements of this rule shall comply with the following requirements.

(a) Low Solvent Technology. The test method for volatile organic compounds shall be EPA Method 24 or 24A, as described at 40 C.F.R. Part 60, Appendix A-7, adopted and incorporated by reference at Rule 62-204.800, F.A.C., or EPA 450/3-84-019, Procedures for Certifying Quantity of Volatile Organic Compounds Emitted by Paint, Ink, and Other Coatings (<http://www.flrules.org/Gateway/reference.asp?No=Ref-04298>), hereby adopted and incorporated by reference.

(b) Add-on Control Device.

1. Destructive. The test method for volatile organic compounds shall be EPA Method 25, as described at 40 C.F.R. Part 60, Appendix A-7, adopted and incorporated by reference at Rule 62-204.800, F.A.C., or Attachment 3 of EPA 450/2-78-041, Alternate Test Method for Direct Measurement of Total Gaseous Organic Compounds Using a Flame Ionization Analyzer, adopted with equipment specifications per Industrial Ventilation Manual, and incorporated by reference in Chapter 62-297, F.A.C.

2. Non-destructive. The test method for volatile organic compounds shall be VOC Capture Efficiency Test Procedures as described at Rule 62-297.450, F.A.C. The sampling time for each capture efficiency test run shall be at least 8 hours, unless otherwise approved by the Department pursuant to Rule 62-297.620, F.A.C.

(c) Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.

Rulemaking Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061, 403.087 FS. History—Formerly 17-2.650(1)(f)16., 17-296.515, Amended 11-23-94, 1-1-96, 7-10-14.

62-296.516 Petroleum Liquid Storage Tanks with External Floating Roofs.

(1) Applicability.

(a) The control technology and provisions set forth in subsection 62-296.516(2), F.A.C., shall apply to all petroleum liquid storage vessels equipped with external floating roofs, having capacities equal to or greater than 42,000 gallons (159,000 liters, nominal design 1,000 barrels);

(b) Subsection 62-296.516(2), F.A.C., shall not apply to petroleum liquid storage vessels which:

1. Are used to store waxy, heavy pour crude oil; or,

2. Have capacities equal to or less than 420,000 gallons (1,590,000 liters, nominal 10,000 barrels) and are used to store crude oil and condensate prior to lease custody transfer; or,

3. Contain a petroleum liquid with a true vapor pressure of less than 1.5 psia (10.15 kPa); or,

4. Contain a petroleum liquid with a true vapor pressure of less than 4.0 psia (27.6 kPa) if such vessel is of welded construction and presently possesses a metallic-type shoe seal, a liquid-mounted foam seal, a liquid-mounted liquid-filled type of seal, or other closure device of demonstrated equivalence approved by the Department; or,

5. Are of welded construction, equipped with a metallic-type shoe primary seal and with a secondary seal from the top of the shoe seal to the tank wall (shoe-mounted secondary seal).

(2) Control Technology.

(a) No owner or operator of a petroleum liquid storage vessel subject to Rule 62-296.516, F.A.C., shall store a petroleum liquid in that vessel unless:

1. The vessel has been fitted with a continuous secondary seal extending from the floating roof to the tank wall (rim-mounted secondary seal); or another closure or device, approved by the Department, which is equally effective in controlling emissions; and,

2. All seal closure devices meet the following requirements:

a. The seal(s) are intact and uniformly in place around the circumference of the floating roof between the floating roof and the tank wall; and,

b. There are no visible holes, tears, or other openings in the seal(s) or seal fabric; and,

c. For vapor mounted (primary) seals, the accumulated area of gaps exceeding 1/8 inch (0.32 cm) in width between the secondary seal and the tank wall shall not exceed 1.0 square inch per foot of tank diameter (21.2 square centimeters per meter of tank diameter); and,

3. All openings in the external floating roof, except for automatic bleeder vents, rim space vents, and leg sleeves, are:

a. Equipped with covers, seals, or lids in the closed position except when the openings are in actual use; and,

b. Equipped with projections in the tank which remain below the liquid surface at all times; and,

4. Automatic bleeder vents are closed at all times except when the roof is floating off or landed on the roof leg supports; and,

5. Rim vents are set to open when the roof is being floated off the leg supports or at the manufacturer's recommended setting; and,

6. Emergency roof drains are provided with slotted membrane fabric covers or equivalent covers which cover at least 90 percent of the area of the opening.

(3) Test Methods and Procedures. All emissions tests performed pursuant to the requirements of this rule shall comply with the following requirements.

(a) The test method for volatile organic compounds shall be EPA Method 21, as described at 40 C.F.R. Part 60, Appendix A-7, adopted and incorporated by reference at Rule 62-204.800, F.A.C.; and as described in section 5.2 on p. 5-3 of EPA 450/2-78-047, adopted and incorporated by reference in Chapter 62-297, F.A.C.

(b) Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.

Rulemaking Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061, 403.087 FS. History—Formerly 17-2.650(1)(f)17., 17-296.516, Amended 11-23-94, 1-1-96, 7-10-14.

62-296.570 Reasonably Available Control Technology (RACT) – Requirements for Major VOC- and NOx-Emitting Facilities.

- (1) Applicability.
 - (a) The requirements of this rule shall apply to those major VOC- and NOx-emitting facilities specified in paragraph 62-296.500(1)(b), F.A.C.; specifically, to those VOC emissions units within such facilities which are not regulated for VOC under Rules 62-296.501 through 62-296.516, F.A.C., and those VOC and NOx emissions units which have not been exempted pursuant to paragraph 62-296.500(1)(b), F.A.C., or by a specific provision of Rules 62-296.500 through 62-296.516, F.A.C.
 - (b) The requirements of this rule shall not apply to emissions units that would otherwise be exempt from the air permitting requirements of the Department pursuant to subsection 62-210.300(3), F.A.C., or that would otherwise be considered insignificant pursuant to subparagraph 62-213.300(2)(a)1. or paragraph 62-213.430(6)(b), F.A.C.
 - (2) Compliance Requirements. Emissions units subject to the requirements of this rule shall comply with the operation permit requirements of subsection 62-296.570(3), F.A.C., and the RACT emission limiting standards of subsection 62-296.570(4), F.A.C. If, pursuant to an air operation or construction permit, the owner or operator of a emissions unit subject to the requirements of this rule assumes (or has assumed) a more stringent NOx or VOC emissions limit than the RACT emissions limit established in subsection 62-296.570(4), F.A.C., for the applicable emissions unit category, compliance with the emissions unit's NOx or VOC emissions limit in its air operation or construction permit shall be considered compliance with RACT for purposes of this rule.
 - (3) Operation Permit Requirements.
 - (a) The owner or operator of any emissions unit subject to the requirements of this rule shall apply for a new or revised permit to operate in accordance with the provisions of this rule by March 1, 1993, unless a later filing date is specified by the Department in writing.
 - (b) If the existing operation permit for any emissions unit subject to the requirements of this rule would expire between the effective date of this rule and March 1, 1993, or any later filing date specified by the Department, the expiration date of such permit is hereby extended until March 1, 1993, or such later date. This provision shall not apply in the case of a revocation or suspension of such permit pursuant to Chapter 62-4, F.A.C.
 - (4) RACT Emission Limiting Standards.
 - (a) Emissions Testing Dates and Monitoring.
 1. Each applicant for a new or revised operation permit for an emissions unit subject to the requirements of this rule shall propose a schedule for implementing the RACT emission limiting standards as expeditiously as practicable but no later than May 31, 1995. The emissions unit shall demonstrate compliance with the RACT emission limiting standards in accordance with a schedule specified in the emissions unit's air operation permit issued pursuant to subsection 62-296.570(3), F.A.C.
 2. Fuel-specific NOx and VOC emission limits established under this rule shall be incorporated into the new or revised operation permit for each emissions unit and become effective in accordance with the terms of the permit.
 3. For units that are not equipped with a continuous emission monitoring system (CEMS) for NOx or VOCs, annual emissions testing is required in accordance with applicable EPA Reference Methods as described in 40 C.F.R. Part 60, Appendices A-1 through A-8, adopted and incorporated by reference at Rule 62-204.800, F.A.C., or other methods approved by the Department in accordance with the requirements of Rule 62-297.620, F.A.C., except as otherwise provided in paragraph 62-296.570(4)(b), F.A.C. If required, such annual emission testing shall be conducted during each federal fiscal year (October 1 – September 30). Annual emissions testing while firing oil is unnecessary for units operating on oil for less than 400 hours in the current federal fiscal year.
 4. For units that are equipped with a CEMS, compliance shall be demonstrated based on a 30-day rolling average. The CEMS must meet the performance specifications contained in 40 Code of Federal Regulations Part 60, Appendix B, or 40 Code of Federal Regulations Part 75, hereby adopted and incorporated by reference.
 - (b) Emission Limiting Standards.
 1. Emissions of NOx from any rear wall fired, forced circulation, 16-burner, compact furnace shall not exceed 0.20 lb/million BTU while firing natural gas and 0.36 lb/million BTU while firing oil.
 2. Emissions of NOx from any front wall fired, natural circulation, 18-burner, compact furnace shall not exceed 0.40 lb/million BTU while firing natural gas and 0.53 lb/million BTU of NOx while firing oil.
 3. Emissions of NOx from any front wall fired, natural circulation, 24-burner, compact furnace shall not exceed 0.50 lb/million BTU while firing natural gas and 0.62 lb/million BTU of NOx while firing oil.
 4. Emissions of NOx from any tangentially fired, low heat release, large furnace shall not exceed 0.20 lb/million BTU while

firing natural gas.

5. Emissions of NOx from any gas turbine shall not exceed 0.50 lb/million BTU while firing natural gas and 0.90 lb/million BTU while firing oil. Unless compliance is demonstrated using a CEMS, compliance shall be demonstrated by a stack test on one representative turbine unit within a facility if the turbines are substantially similar.
6. Emissions of VOC and NOx from carbonaceous fuel burning facilities, other than waste-to-energy facilities, shall not exceed 5.0 lbs/million BTU and 0.9 lb/million BTU, respectively.
7. Emissions of NOx from any oil-fired diesel generator shall not exceed 4.75 lb/million BTU.
8. Emissions of NOx from any cement plant shall not exceed 2.0 lb/million BTU.
9. Emissions of NOx from any other external combustion emissions unit subject to the requirements of this rule, and not covered in subparagraph 62-296.570(4)(b)1. through 8., F.A.C., shall not exceed 0.50 lb/million BTU. Emissions shall be determined annually in accordance with the applicable EPA Method from 40 C.F.R. Part 60, Appendices A-1 through A-8, adopted and incorporated by reference at Rule 62-204.800, F.A.C., or other method approved by the Department in accordance with the requirements of Rule 62-297.620, F.A.C.
10. Emissions of VOC from resin coating operations shall be limited by the use of low-VOC resin or thermal oxidation of emissions from the purge cycle.
11. Emissions of VOC from any emissions unit subject to this rule but specifically exempted from any of the control technology requirements of Rules 62-296.501, through 62-296.516, F.A.C., shall not exceed the applicable exemption criteria.
- (c) Exception for Startup, Shutdown, or Malfunction. The emission limits in this rule shall apply at all times except during periods of startup, shutdown, or malfunction as provided by Rule 62-210.700, F.A.C.

Rulemaking Authority 403.061 FS. Law Implemented 403.031, 403.061, 403.087 FS. History—New 2-2-93, Amended 4-17-94, Formerly 17-296.570, Amended 11-23-94, 1-1-96, 3-2-99, 7-10-14.

62-296.600 Reasonably Available Control Technology (RACT) – Lead.

- (1) Applicability. Any new or existing lead processing operation that is located in an area designated under Chapter 62-275, F.A.C., as a lead nonattainment or air quality maintenance area, or in the area of influence of such an area, shall limit the emission of lead through the application of reasonably available control technology (RACT) as specified in Rules 62-296.601 through 62-296.605, F.A.C.
 - (2) Compliance Requirements. Lead processing operations subject to the requirements of this rule shall comply with the permit requirements, operation and maintenance plan requirements, recordkeeping and reporting requirements, and compliance demonstration requirements of subsections 62-296.600(3) through 62-296.600(6), F.A.C., respectively, the general requirements of Rule 62-296.601, F.A.C., and the specific emission limiting standards of Rules 62-296.602 through 62-296.605, F.A.C. For existing facilities, compliance with these requirements shall be achieved as expeditiously as possible, in accordance with a schedule of compliance established in the permit required pursuant to this rule.
 - (3) Permit Requirements. By September 30, 1994, the owner or operator of any existing facility subject to the requirements of this rule shall apply for a new or revised federally enforceable, as defined in Rule 62-210.200, F.A.C., air permit, pursuant to Chapter 62-4, F.A.C., addressing the requirements of this rule.
 - (4) Operation and Maintenance Plan. In any application for a permit, the owner or operator of any facility subject to the requirements of this rule shall submit to the Department an operation and maintenance plan for the lead emissions control devices, collection systems, and processing systems. The operation and maintenance plan shall include quarterly inspection methods for the lead emissions control devices, including black light leak detection tests or broken bag detectors in the baghouses, to prevent reduced lead collection efficiency. Lead oxide handling operations with the potential to emit 200 pounds or less of lead per year shall be exempt from this operation and maintenance plan provision.
 - (5) Recordkeeping and Reporting. The owner or operator of any facility subject to the requirements of this rule shall keep the following records for a minimum of two years, and make them available to any representative of the Department or an approved local air program upon request:
 - (a) Records of control equipment operating parameters.
 - (b) Maintenance records on the control equipment, including black-light tests, bag replacements, structural repairs, and motor replacements.
 - (c) Records of control system malfunctions or failures and corrective actions taken.

(6) Emissions Determination. The owner or operator of any facility subject to an emissions limiting standard pursuant to Rules 62-296.602 through 62-296.605, F.A.C., shall determine emissions by the initial compliance date established in the permit required pursuant to this rule, or in accordance with the terms of any construction permit addressing the requirements of this rule, and every five years thereafter unless a more frequent schedule is specified in the permit. Emissions shall be determined as follows:

(a) Lead emissions shall be determined by EPA Method 12, as described at 40 C.F.R. Part 60, Appendix A-5, adopted and incorporated by reference at Rule 62-204.800, F.A.C.

(b) Opacity shall be determined by EPA Method 9, as described at 40 C.F.R. Part 60, Appendix A-4, adopted and incorporated by reference at Rule 62-204.800, F.A.C.

Rulemaking Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061, 403.087 FS. History--New 8-8-94, Formerly 17-296.600, Amended 1-1-96, 3-13-96, 7-10-14.

62-296.601 Lead Processing Operations in General.

(1) Applicability. The provisions of this rule shall apply to all lead processing operations as specified in subsection 62-296.600(1), F.A.C.

(2) Prohibition.

(a) No owner or operator of a lead processing operation shall cause, allow, or permit the emissions of lead, including emissions of lead from vehicular movement, transportation of materials, construction, alteration, demolition or wrecking, or industrially-related activities such as loading, unloading, charging, melting, tapping, casting, storing or handling, unless reasonably available control technology is employed to control such lead emissions.

(b) Examples of measures that constitute RACT are:

1. Paving, curbing, and maintaining roads, parking areas and yards which are routinely used by vehicular traffic.
2. Applying water or chemicals to control emissions from such activities as demolition of buildings, grading roads, construction, and land clearing.
3. Installing a permanent sprinkler system to continuously moisten open stock piles.
4. Vacuuming the roads and other paved areas under the control of the owner or operator of the facility to prevent lead from becoming airborne.
5. Landscaping or vegetating unpaved roads, parking areas and yards.
6. Using hoods, fans, filters, and similar equipment to capture, contain, and control lead emissions.
7. Enclosing or covering conveyor systems.
8. Using walls or windbreaks to contain lead-bearing scrap, products, or raw materials.

(c) As part of any application for a permit, the owner or operator of any facility subject to the requirements of this rule shall submit to the Department a description of the reasonably available control technology that will be employed to meet the requirements of this rule.

Rulemaking Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061, 403.087 FS. History--New 8-8-94, Formerly 17-296.601, Amended 1-1-96.

62-296.602 Primary Lead-Acid Battery Manufacturing Operations.

(1) Emission Limiting Standards. No owner or operator of a primary lead-acid battery manufacturing operation subject to Rule 62-296.600, F.A.C., shall cause, allow, or permit the discharge into the atmosphere of lead in excess of the following emission standards, in grains of lead per dry standard cubic foot, nor shall visible emissions exceed the following standards, in percent opacity:

- (a) Grid casting sources: 0.000176 grains and 0% opacity.
- (b) Paste mixing sources: 0.00044 grains and 0% opacity.
- (c) Three-process operation sources: 0.00044 grains and 0% opacity.
- (d) Lead oxide manufacturing sources: 0.0005 grains and 0% opacity.
- (e) Lead reclamation sources: 0.00198 grains and 5% opacity.
- (f) Any other lead sources: 0.00044 grains and 0% opacity.

(2) Collection Systems. Collection systems representing RACT shall be installed and operated to capture, contain, and control lead emissions resulting from all lead-emitting processes including charging, melting, tapping, and casting. No lead emissions shall

be vented to the outside of any enclosed or partially enclosed process unless RACT is employed to control such emission.

(3) Attainment Demonstration. As part of the initial application for the permit required pursuant to subsection 62-296.600(3), F.A.C., the owner or operator of a facility subject to the requirements of this rule shall demonstrate to the Department that, after the application of RACT, the facility shall not cause or contribute to a violation of the national ambient air quality standard for lead. The demonstration shall be made using air quality models as provided in 40 C.F.R. Part 51, Appendix W, adopted and incorporated by reference at Rule 62-204.800, F.A.C., and shall address both stack and fugitive emissions.

Rulemaking Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061, 403.087 FS. History--New 8-8-94, Formerly 17-296.602, Amended 1-1-96, 3-13-96, 7-10-14.

62-296.603 Secondary Lead Smelting Operations.

(1) Emission Limiting Standards. No owner or operator of a secondary lead smelting operation subject to Rule 62-296.600, F.A.C., shall cause, allow, or permit the discharge into the atmosphere of lead in excess of the following emission standards, in grains of lead per dry standard cubic foot, nor shall visible emissions exceed the following standards, in percent opacity:

(a) Blast and slag furnaces: 0.010 grains and 3% opacity at the exit point of the emissions control device.

(b) Blast furnace charging: 0.002 grains and 3% opacity at the exit point of the emissions control device.

1. Visible emissions from the closed charge doors on the blast furnace shall not exceed 3% opacity during furnace operation.

2. Visible emissions from the charge doors on the blast furnace shall not exceed 6% opacity during charging operation.

(c) Blast and slag furnaces, slag and product tapping: 0.002 grains and 3% opacity at the exit point of the emissions control device.

(d) Melt kettles and pot furnaces: 0.0002 grains and 3% opacity.

(e) Battery cracking operations: 3% opacity.

(f) Slag handling and processing operations: 0.0000333 grains and 3% opacity.

(2) Collection Systems. Collection systems representing RACT shall be installed and operated to capture, contain, and control lead emissions resulting from the storage, transport, and processing of all lead-bearing materials and products at secondary lead smelting operations. No lead emissions shall be vented to the outside of any enclosed or partially enclosed process unless RACT is employed to control such emissions.

(3) Attainment Demonstration. As part of the initial application for the permit required pursuant to subsection 62-296.600(3), F.A.C., the owner or operator of a facility subject to the requirements of this rule shall demonstrate to the Department that, after the application of RACT, the facility shall not cause or contribute to a violation of the national ambient air quality standard for lead. The demonstration shall be made using air quality models as provided 40 C.F.R. Part 51, Appendix W, adopted and incorporated by reference at Rule 62-204.800, F.A.C., and shall address both stack and fugitive emissions.

Rulemaking Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061, 403.087 FS. History--New 8-8-94, Formerly 17-296.603, Amended 1-1-96, 7-10-14.

62-296.604 Electric Arc Furnace Equipped Secondary Steel Manufacturing Operations.

(1) Emission Limiting Standards. No owner or operator of a secondary steel manufacturing operation subject to Rule 62-296.600, F.A.C., shall cause, allow or permit the discharge of lead into the atmosphere in excess of the following emission standards, in grains of lead per dry standard cubic foot as a weighted average of the exhaust from the entire control equipment system, nor shall visible emissions exceed the following standards, in percent opacity:

(a) Electric arc furnace control device: 0.0002 grains and 3% opacity.

(b) Melt shop building roof ventilators: 6% opacity.

(2) Collection Systems. Collection systems representing RACT shall be installed and operated to capture, contain, and control lead emissions resulting from all lead-emitting processes including charging, melting, tapping, and casting. No lead emissions shall be vented to the outside of any enclosed or partially enclosed process unless RACT is employed to control such emission.

(3) Attainment Demonstration. As part of the initial application for the permit required pursuant to subsection 62-296.600(3), F.A.C., the owner or operator of a facility subject to the requirements of this rule shall demonstrate to the Department that, after the application of RACT, the facility shall not cause or contribute to a violation of the national ambient air quality standard for lead. The demonstration shall be made using air quality models as provided in 40 C.F.R. Part 51, Appendix W, adopted and incorporated by reference at Rule 62-204.800, F.A.C., and shall address both stack and fugitive emissions.

Rulemaking Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061, 403.087 FS. History—New 8-8-94, Formerly 17-296.604, Amended 1-1-96, 7-10-14.

62-296.605 Lead Oxide Handling Operations.

No owner or operator of a lead oxide handling operation subject to Rule 62-296.600, F.A.C., shall cause, allow, or permit visible emissions in excess of 3% opacity.

Rulemaking Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061, 403.087 FS. History—New 8-8-94, Formerly 17-296.605.

62-296.700 Reasonably Available Control Technology (RACT) Particulate Matter.

(1) Applicability.

(a) Any existing emissions unit that emits particulate matter and is located in a particulate matter air quality maintenance area or in the area of influence of such an air quality maintenance area, except an emissions unit which has received a determination of Best Available Control Technology pursuant to Rule 17-2.630 (repealed) or 62-296.330, F.A.C., or received a permit in connection with Rule 17-2.500 (transferred), 17-2.510 (transferred), 62-212.400 or 62-212.500, F.A.C., shall limit the emission of particulate matter through the application of Reasonably Available Control Technology (RACT) as specified in Rules 62-296.701 through 62-296.712, F.A.C., or Rules 62-296.401 through 62-296.415, F.A.C.

(b) [Reserved].

(2) Exemptions. The following facilities and emissions units which are located within a particulate matter air quality maintenance area or area of influence are exempt from the provisions of this rule:

(a) Any facility with total maximum allowable emissions of particulate matter of less than 15 tons per year and 5 pounds per hour.

(b) Any facility whose owner or operator demonstrates to the Department that the impact within the designated air quality maintenance area of the total maximum allowable particulate matter emissions from such facility will not exceed 1 ug/m³ , annual average, and 5 ug/m³ , 24-hour average.

(c) Any emissions unit which has total allowable emissions of particulate matter of less than one ton per year.

(d) Any emissions unit of unconfined particulate matter which is located more than five kilometers outside the boundary of a particulate matter air quality maintenance area.

(e) Any emissions unit of unconfined particulate matter from open stockpiling of materials, vehicular traffic and other emissions from roads and plant grounds, or construction activities.

(f) Any moveable drop transfer point where the discharge point and receiving point of the materials being handled must be moved in relationship to each other, either continuously or intermittently, such that enclosure of the drop transfer point with a device to control emissions of particulate matter is not practicable.

(3) Specific RACT Emission Limiting Standards for Stationary Emissions Units. The specific particulate matter emission limiting standards set forth in Rules 62-296.401 through 62-296.414, F.A.C., have been found to represent the application of RACT for each emissions unit category listed in those rules, except for those emissions unit categories listed in Rules 62-296.701 through 62-296.712, F.A.C. For those emissions unit categories the particulate matter emission standards in Rules 62-296.701 through 62-296.712, F.A.C., have been found to represent the application of RACT.

(4) Maximum Allowable Emission Rates.

(a) Emissions Unit Data. The new or revised operating permit for each emissions unit subject to the provisions of this rule shall specify:

1. The maximum heat input rate, charging rate, production rate, through-put rate, and/or materials handling rate, as appropriate; The maximum heat input rate, charging rate, production rate, through-put rate, or materials handling rate shall be the maximum rate at which the emissions unit is capable of being operated on a continuous basis.

2. The maximum dry standard volumetric flow rate for each emission point, when applicable:

The maximum dry standard volumetric flow rate for each emissions unit or component emissions unit operation shall be the minimum dry standard volumetric flow rate that is necessary to safely and properly vent or operate the emissions unit when it is operated at its maximum continuous operating rate.

3. The control device through which each gas stream is vented and the emission point from which each gas stream is discharged to the open air;

4. The height above ground, exit diameter, UTM coordinates, and nature of each emission point through which particulate is or may be vented;

5. The exit gas temperature, actual volumetric flow rate and moisture content of each particulate bearing gas stream that is or may be vented to the open air;

6. Pertinent operating or control equipment parameters, such as pH of scrubber solution, pressure drop in scrubber, pressure on spray nozzle, etc., when such information is needed to confirm the control device is operating normally;

7. The permitted operating schedule (hrs./day, days/wk., wk./yr.)

(b) Maximum Emission Rates. The new or revised operating permit for each emissions unit shall specify the maximum allowable emission rate for each emissions unit or group of commonly vented emissions units sources in accordance with the following provisions:

1. The maximum allowable emission rate expressed in lbs/hr, lbs/day and tons/yr (or other equivalent units) shall be determined for each emissions unit (for example, each drop transfer point, screening operation, kiln, or dryer) by applying the appropriate emission limitation contained in Rules 62-296.401 through 62-296.414, F.A.C., or Rules 62-296.701 through 62-296.712, F.A.C., to the maximum applicable emissions unit operation rate or dry standard volumetric flow rate and the permitted operating schedule as specified in the operating permit pursuant to the provisions of paragraph 62-296.700(4)(a), F.A.C.

2. If several emissions units are vented through a common control device or emission point, the maximum allowable emission rate for the common emission point shall be the sum of the individual maximum allowable emission rates for each emissions unit vented by the emission point.

3. The owner or operator of an emissions unit or a group of emissions units that is subject to an emission limitation set forth in Rules 62-296.701 through 62-296.712, F.A.C., and that is vented through more than one emission point, shall, subject to the approval of the Department, prorate the total allowable emission for such emissions unit among all emission points that vent the affected emissions unit such that a specific maximum allowable emission rate is assigned to each emission point. The operating permits for emissions units shall be revised in accordance with subsection 62-296.700(4), F.A.C., to reflect the maximum allowable emission rates for each emission point.

4. The operating permit shall specify whether compliance shall be determined by measuring the emissions vented from each individual emissions unit or by measuring the emissions from the common emission point. In determining whether compliance shall be determined for each emissions unit individually or for a group of commonly vented emissions units at the common emission point, the department shall consider the following factors:

a. If all emissions units that are vented through a common emission point are subject to the same type of emission limiting standard (i.e., grains per dry standard cubic foot (gr/dscf)) and are all part of the same system of unit operations such that when one emissions unit is in operation the other emissions units will also normally be in operation, the Department may specify that compliance be determined at the common point of emission.

b. If the various emissions units that are vented through a common emission point are parts of different operating systems or are subject to different types of emission limiting standards (i.e., gr/dscf, lbs/ton of feed, lbs/MMBTU, percent opacity, etc.). The Department may specify that compliance with the various emission standards be determined separately for each emissions unit operation.

(5) Circumvention. No owner or operator of an emissions unit subject to the requirements of Rules 62-296.401 through 62-296.414 or Rules 62-296.701 through 62-296.712, F.A.C., establishing maximum concentrations of emissions of particulate matter in the exhaust gas from the emissions unit shall circumvent the provisions of an applicable emission limitation by increasing the volume of gas in any exhaust or group of exhausts for the purpose of reducing the stack gas concentration. This includes allowing dilution air to enter the system through leaks, open vents, or similar means.

(6) Operation and Maintenance Plan. The new or revised operating permit for each emissions unit subject to the provisions of this rule shall specify an operation and maintenance plan for the particulate control devices, the collection systems and the processing systems.

(a) Air Pollution Control Devices and Collection Systems. The plan shall include a schedule for the maintenance and inspection of each control device and collection system and a schedule for recording performance parameters of the control devices, collection systems and auxiliary equipment. Records of inspections, maintenance and performance data of control devices and auxiliary equipment shall be retained by the emissions unit for a minimum of two years and shall be made available to the Department upon request. The performance parameters shall include such physical, chemical or electrical characteristics as are applicable to the

particular emissions unit and which are indicators of the condition, operating rates and efficiencies. Such parameters may include, but shall not be limited to, the following indicators for:

1. Scrubbers
 - Pressure drop, total
 - Pressure drop, scrubber
 - Pressure drop, mist eliminator
 - Liquor feed rate
 - Liquor feed composition and pH
 - Liquor feed solids and undissolved solids contents
 - Water makeup rate
 - Fan(s) current at rated voltage
 - Pump(s) current at rated voltage
 - Gas flowrate
 - Gas temperatures, inlet and outlet (minimum)
2. Baghouses
 - Bag pressure drop
 - Gas flowrate: direct method preferred; indirect method acceptable
 - Air to cloth ratio
 - Bag Weave
 - Bag material
 - Gas temperature, inlet and outlet
 - Bag cleaning conditions:
 - Pulse: Air pressure
 - Shake: shaker motor current
 - Reverse: reverse air fan current
 - Bag cleaning cycle:
 - Shake: duration, frequency, and delay periods
 - Reverse: duration, frequency, and delay periods
3. Electrostatic Precipitators.
 - The following information shall be recorded unless otherwise agreed to by the Department:
 - Primary voltage
 - Primary current
 - Secondary current
 - Spark rate

Additional information, including but not limited to the following, may be required to be included as descriptive information in the operation and maintenance plan, but shall not be required to be recorded routinely unless the Department determines that a precipitator's ability to achieve compliance with applicable emission limiting standards is questionable:

- Secondary voltage
- Rapper frequency, plate
- Rapper Vibrator frequency, wire
- Rapper duration, plate
- Rapper Vibrator duration, wire
- Gas temperature, inlet and outlet
- Estimated gas flowrate
- Static pressure

(b) Control Equipment Data. The Operation and Maintenance plan shall include identification of control device(s) for each emissions unit subject to provisions of this rule including but not limited to the following appropriate design specifications and other descriptive data:

1. Manufacturer;

2. Model name and number;
 3. Type: scrubber, baghouse, electrostatic precipitator, dry scrubber, etc.;
 4. Design flow rate (liquid and/or gas);
 5. For EPS's: primary and secondary voltage and current;
 6. Efficiency rating at design capacity;
 7. Pressure drop;
 8. Liquid to gas ratio;
 9. Scrubbing liquor composition.
- (c) Processing or Materials Handling Systems.

1. Appropriate parameters of processing or materials handling systems provide a measure of the rate of operations. The operation and maintenance plan shall include performance parameters which indicate the rate of operation, process weight throughput, the fuel or other energy source, the materials being processed or other physical or chemical characteristics, as applicable. Such parameters may include, but shall not be limited to the following:

- a. Weight per unit time of raw materials input;
- b. Process temperature or pressure;
- c. Fuel or fuel mixture;
- d. Chemical or physical data on product or raw materials;
- e. Air to fuel ratio or percent excess oxygen;
- f. Electrical power use rate by auxiliary equipment.

2. The plan shall contain inspection and maintenance schedules including periodic assessments of the condition of manholes, ducting, breaching, hoods, conveyor and elevator housing, loading sheds and other equipment, and a schedule for recording of performance parameter data.

(d) Fossil Fuel Steam Generators. The operation and maintenance plan for fossil fuel steam generators may include, but shall not be limited to, the following:

- Steam flow
- Fuel type (e.g., gas, oil, coal, or mixtures thereof)
- Consumption rate for type(s) of fuel(s) burned
- Fuel oil temperature (if applicable)

(e) Records of inspection, maintenance and performance parameter data shall be retained for a minimum of two years and shall be made available to the Department upon request.

Rulemaking Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061, 403.087 FS. Formerly 17-2.650(2)(a)-(g), 17-296.700, Amended 11-23-94, 1-1-96.

62-296.701 Portland Cement Plants.

(1) Applicability. The emission limitations set forth in Rule 62-296.701, F.A.C., shall apply to kilns and clinker coolers which are part of a Portland Cement Plant.

(2) Emission Limitations.

(a) Kilns – No owner or operator of a Portland Cement kiln shall cause, permit, or allow the emission of particulate matter in excess of 0.50 pounds per ton to the kiln (dry basis, excluding fuel), or visible emissions the density of which is greater than 20 percent opacity.

(b) Clinker coolers – No owner or operator of a Portland Cement clinker cooler shall cause, permit, or allow the emission of particulate matter in excess of 0.25 pounds per ton of feed to the kiln (dry basis, excluding fuel), or visible emissions the density of which is greater than 20 percent opacity.

(3) Alternate Emission Limitations.

(a) Applicability. The alternate emission limitations set forth in paragraph 62-296.701(3)(b), F.A.C., shall apply to the Portland Cement plants located in Hillsborough County south of State Highway 60 in Tampa.

(b) Emission Limitations.

1. Clinker Kilns All Portland Cement plants shall not cause, permit, or allow the emission of particulate matter from Clinker Kilns in excess of 95 lbs./hr. as determined by EPA Method 5 nor in excess of 40 lbs./hr. as determined by EPA Method 17, or

visible emissions the density of which is greater than 20 percent opacity as measured using a certified in-stack transmissometer. When method 17 is used the stack temperature shall not exceed 500 degrees Fahrenheit.

2. Clinker Coolers – All Portland Cement plants shall not cause, permit, or allow the emission of particulate matter from Clinker Coolers in excess of 45 lbs/hr as determined by EPA Method 5, or visible emissions the density of which is greater than 20 percent opacity as determined by EPA Method 9.

(4) Test Methods and Procedures. All emissions tests performed pursuant to the requirements of this rule shall comply with the following requirements.

(a) For emissions units subject to the visible emissions standard in subsection 62-296.701(2), F.A.C., the test method shall be EPA Method 9, as described at 40 C.F.R. Part 60, Appendix A-4, adopted and incorporated by reference at Rule 62-204.800, F.A.C.

(b) A transmissometer shall be used to determine the opacity of the visible emissions regulated by the standard in subsection 62-296.701(3), F.A.C. The transmissometer shall be calibrated with the opacity of in accordance with 40 C.F.R. Part 60, Appendix B, and 40 C.F.R. 60.13, adopted and incorporated by reference at Rule 62-204.800, F.A.C.

(c) The test method for particulate emissions shall be EPA Method 5, as described at 40 C.F.R. Part 60, Appendix A-3, adopted and incorporated by reference at Rule 62-204.800, F.A.C. The minimum sample volume shall be 30 dry standard cubic feet.

(d) Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.

Rulemaking Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061, 403.087 FS. History—Formerly 17-2.650(2)(c)1., Amended 6-29-93, Formerly 17-296.701, Amended 11-23-94, 1-1-96, 7-10-14.

62-296.702 Fossil Fuel Steam Generators.

(1) Applicability. The emission limitations set forth in Rule 62-296.702, F.A.C., shall apply to fossil fuel steam generating facilities including one or more boilers which individually or in combination have a heat input greater than or equal to 30 million British thermal units per hour.

(2) Emission Limitations.

(a) Particulate Matter. No owner or operator of a fossil fuel steam generator shall cause, permit, or allow the emission of particulate matter in excess of 0.10 pounds per million BTU except as provided for in Rule 62-296.405 or 62-296.406 and Rule 62-210.700, F.A.C.

(b) Visible Emissions. No owner or operator of a fossil fuel fired steam generator shall allow visible emissions the density of which is greater than 20 percent opacity except as provided for in Rule 62-210.700, F.A.C., Excess Emissions, and in Rule 62-296.405, F.A.C., for fossil-fuel steam generators with a heat input of greater than 250 million BTU per hour.

(3) Test Methods and Procedures. All emissions tests performed pursuant to the requirements of this rule shall comply with the following requirements.

(a) The test method for visible emissions shall be EPA Method 9, as described at 40 C.F.R. Part 60, Appendix A-4, adopted and incorporated by reference at Rule 62-204.800, F.A.C. A transmissometer may be used and calibrated in accordance with 40 C.F.R. Part 60, Appendix B.

(b) The test method for particulate matter emissions shall be EPA Method 17, as described at 40 C.F.R. Part 60, Appendix A-6, EPA Method 5B as described at 40 C.F.R. Part 60, Appendix A-3; or EPA Method 5F, as described at 40 C.F.R. Part 60, Appendix A-3; adopted and incorporated by reference at Rule 62-204.800, F.A.C. The minimum sample volume shall be 30 dry standard cubic feet. EPA Method 5, as described at 40 C.F.R. Part 60, Appendix A-3, adopted and incorporated by reference at Rule 62-204.800, F.A.C., may be used with the filter temperature at no more than 320 degrees Fahrenheit. For EPA Method 17, stack temperature shall be less than 375 degrees Fahrenheit. EPA Method 3 or 3A with Orsat analysis, as described at 40 C.F.R. Part 60, Appendix A-2, adopted and incorporated by reference at Rule 62-204.800, F.A.C., shall be used when oxygen based F factor computed according to EPA Method 19, as described at 40 C.F.R. Part 60, Appendix A-7, adopted and incorporated by reference at Rule 62-204.800, F.A.C., is used in lieu of heat input. Use Acetone wash with Method 5 or 17.

(c) Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.

Rulemaking Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061, 403.087 FS. Formerly 17-2.650(2)(c)2., 17-296.702, Amended 11-23-94, 1-1-96, 7-10-14.

62-296.703 Carbonaceous Fuel Burners.

(1) Applicability. The emission limitations set forth in Rule 62-296.703, F.A.C., shall apply to Carbonaceous Fuel Burning

Equipment that has a total heat input capacity of 30 million BTU's per hour or greater.

(2) Emission Limitations.

(a) Particulate Matter. No owner or operator of Carbonaceous fuel burning equipment shall cause, permit, or allow the emission of particulate matter from such equipment in excess of 0.2 pounds per million BTU heat input of Carbonaceous fuel plus 0.1 pounds per million BTU heat input of fossil fuel.

(b) Visible Emissions. No owner or operator of carbonaceous fuel burning equipment shall cause, permit, or allow visible emissions the density of which is greater than 30 percent opacity.

(3) Test Methods and Procedures. All emissions tests performed pursuant to the requirements of this rule shall comply with the following requirements.

(a) The test method for visible emissions shall be EPA Method 9, as described at 40 C.F.R. Part 60, Appendix A-4, adopted and incorporated by reference at Rule 62-204.800, F.A.C.

(b) The test method for particulate matter emissions shall be EPA Method 5, as described at 40 C.F.R. Part 60, Appendix A-3, adopted and incorporated by reference at Rule 62-204.800, F.A.C. The minimum sample volume shall be 30 dry standard cubic feet. For EPA Method 5, the filter temperature may not exceed 320 degrees Fahrenheit.

(c) Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.

Rulemaking Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061, 403.087 FS. History—Formerly 17-2.650(2)(c)3., 17-296.703, Amended 11-23-94, 1-1-96, 7-10-14.

62-296.704 Asphalt Concrete Plants.

(1) Applicability. The emission limitations set forth in Rule 62-296.704, F.A.C., shall apply to any facility used to manufacture asphalt concrete by heating and drying aggregate and mixing with asphalt cements, excluding unloading and storage of raw materials.

(2) Emission Limitations. No owner or operator of an asphalt concrete plant shall cause, permit, or allow the emission of particulate matter in excess of 0.06 gr/dscf, or visible emissions the density of which is greater than 20 percent opacity.

(3) Test Methods and Procedures. All emissions tests performed pursuant to the requirements of this rule shall comply with the following requirements.

(a) The test method for visible emissions shall be EPA Method 9, as described at 40 C.F.R. Part 60, Appendix A-4, adopted and incorporated by reference at Rule 62-204.800, F.A.C.

(b) The test method for particulate matter emissions shall be EPA Method 5 or EPA Method 5A, as described at 40 C.F.R. Part 60, Appendix A-3, adopted and incorporated by reference at Rule 62-204.800, F.A.C. The minimum sample volume shall be 30 dry standard cubic feet.

(c) Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.

Rulemaking Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061, 403.087 FS. History—Formerly 17-2.650(2)(c)4., 17-296.704, Amended 11-23-94, 1-1-96, 7-10-14.

62-296.705 Phosphate Processing Operations.

(1) Applicability. The emission limitations set forth in Rule 62-296.705, F.A.C., shall apply to all unit operations and auxiliary equipment which are an integral part of the process used to manufacture the finished products specified in paragraphs (a) through (f) below, including reactors, dryers, coolers, concentrators, screens, elevators, conveyor belts, grinders, and other unit operations, which exist as part of the manufacturing system from the point of introduction of raw materials feed into the process to the point of discharge of the finished product to the storage materials handling system;

(a) Diammonium phosphate (DAP);

(b) Run of pile triple super phosphate (ROPTSP);

(c) Granular triple super phosphate (GTSP);

(d) Normal super phosphate (NSP);

(e) Monoammonium phosphate (MAP);

(f) Phosphate animal feed ingredient (AFI).

(2) Emission Limitations.

(a) No owner or operator of a phosphate processing facility shall cause, permit or allow total emissions of particulate matter

from the affected unit operations and auxiliary equipment in excess of 0.30 pounds per ton of product or visible emissions the density of which is greater than 20 percent opacity from the above listed operations (paragraphs (a) through (f)).

(b) No owner or operator of a phosphate rock dryer or phosphate rock grinding operation which is not an integral part of the operations described in paragraphs 62-296.705(1)(a) through (f), F.A.C., shall cause, permit or allow total emissions of particulate matter from the dryer or grinder in excess of 0.20 lb/ton of products or visible emissions the density of which is greater than 20 percent opacity.

(c) No owner or operator of a concentrator which is part of a phosphate processing facility shall cause, permit or allow total emissions of particulate matter from the concentrator in excess of 15 pounds per hour or visible emissions the density of which is greater than 20 percent opacity.

(d) No owner or operator of a Diammonium Phosphate cooler producing less than 50 tons per hour of product shall cause, permit, or allow total emissions of particulate matter in excess of 0.60 pound per ton of product or visible emissions the density of which is greater than 20 percent opacity.

(3) Test Methods and Procedures. All emissions tests performed pursuant to the requirements of this rule shall comply with the following requirements.

(a) The test method for visible emissions shall be EPA Method 9, as described at 40 C.F.R. Part 60, Appendix A-4, adopted and incorporated by reference at Rule 62-204.800, F.A.C.

(b) The test method for particulate matter emissions shall be EPA Method 5 or EPA Method 5A, as described at 40 C.F.R. Part 60, Appendix A-3, adopted and incorporated by reference at Rule 62-204.800, F.A.C. The minimum sample volume shall be 30 dry standard cubic feet.

(c) Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.

Rulemaking Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061, 403.087 FS. History--Formerly 17-2.650(2)(c)5., 17-296.705, Amended 11-23-94, 1-1-96, 7-10-14.

62-296.706 Glass Manufacturing Process.

(1) Applicability. The emission limitations set forth in Rule 62-296.706, F.A.C., shall apply to glass melting furnaces producing container glass.

(2) Emission Limitations. No owner or operator of a glass melting furnace shall cause, permit, or allow emissions of particulate matter in excess of the following standards:

(a) Gas fired furnaces – 1.3 pounds per ton of glass produced.

(b) Oil fired furnaces – 1.5 pounds per ton of glass produced.

(c) Visible emissions – 20 percent opacity.

(3) Test Methods and Procedures. All emissions tests performed pursuant to the requirements of this rule shall comply with the following requirements.

(a) The test method for visible emissions shall be EPA Method 9, as described at 40 C.F.R. Part 60, Appendix A-4, adopted and incorporated by reference at Rule 62-204.800, F.A.C.

(b) The test method for particulate matter emissions shall be EPA Method 5 or EPA Method 5A, as described at 40 C.F.R. Part 60, Appendix A-3, adopted and incorporated by reference at Rule 62-204.800, F.A.C. The minimum sample volume shall be 30 dry standard cubic feet.

(c) Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.

Rulemaking Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061, 403.087 FS. History--Formerly 17-2.650(2)(c)6., 17-296.706, Amended 11-23-94, 1-1-96, 7-10-14.

62-296.707 Electric Arc Furnaces.

(1) Applicability. The emission limitations set forth in Rule 62-296.707, F.A.C., shall apply to all furnaces that heat materials with electric arcs from carbon electrodes, including phosphorus electric arc furnaces.

(2) Emission Limitations. No owner or operator of an electric arc furnace shall cause, permit, or allow emissions of particulate matter in excess of the following standards:

(a) Phosphorus electric arc furnaces – 0.035 gr/dscf or any visible emissions (greater than five percent opacity) from a control device, except during tapping periods. No visible emissions greater than 60 percent opacity shall be allowed during the tapping

period.

(b) All other electric arc furnaces – 0.010 gr/dscf or any visible emissions (greater than five percent opacity) from a control device, except during charging and tapping periods. No visible emissions greater than 20 percent opacity shall be allowed from the shop during charging periods. No visible emissions greater than 40 percent opacity shall be allowed during tapping periods.

(3) Test Methods and Procedures. All emissions tests performed pursuant to the requirements of this rule shall comply with the following requirements.

(a) The test method for visible emissions shall be EPA Method 9, as described at 40 C.F.R. Part 60, Appendix A-4, adopted and incorporated by reference at Rule 62-204.800, F.A.C.

(b) The test method for particulate matter emissions shall be EPA Method 5 or EPA Method 5D, as described at 40 C.F.R. Part 60, Appendix A-3, adopted and incorporated by reference at Rule 62-204.800, F.A.C. The minimum sample volume shall be 30 dry standard cubic feet.

(c) Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.

Rulemaking Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061, 403.087 FS. History--Formerly 17-2.650(2)(c)7., 17-296.707, Amended 11-23-94, 1-1-96, 7-10-14.

62-296.708 Sweat or Pot Furnaces.

(1) Applicability. The emission limitations set forth in Rule 62-296.708, F.A.C., shall apply to indirectly heated furnaces which are temperature controlled for the differential melting of scrap or combined metal products or which melt metals for coating or reclamation.

(2) Emission Limitations. No owner or operator of a sweat or pot furnace shall cause, permit, or allow emissions of particulate matter in excess of 0.05 gr/dscf, or visible emissions greater than 10 percent opacity.

(3) Test Methods and Procedures. All emissions tests performed pursuant to the requirements of this rule shall comply with the following requirements.

(a) The test method for visible emissions shall be EPA Method 9, as described at 40 C.F.R. Part 60, Appendix A-4, adopted and incorporated by reference at Rule 62-204.800, F.A.C.

(b) The test method for particulate matter emissions shall be EPA Method 5, as described at 40 C.F.R. Part 60, Appendix A-3, adopted and incorporated by reference at Rule 62-204.800, F.A.C. The minimum sample volume shall be 30 dry standard cubic feet.

(c) Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.

Rulemaking Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061, 403.087 FS. History--Formerly 17-2.650(2)(c)8., 17-296.708, Amended 11-23-94, 1-1-96, 7-10-14.

62-296.709 Lime Kilns.

(1) Applicability. The emission limitations set forth in Rule 62-296.709, F.A.C., shall apply to all lime kilns associated with a kraft pulp mill.

(2) Emission Limitations. No owner or operator of a lime kiln shall cause, permit, or allow emissions of particulate matter in excess of that calculated by applying the formula $E = 3.59P^{0.62}$ for each kiln, where E is the emission rate in pounds per hour for each and P is the process weight in tons per hour; or visible emissions greater than 10 percent opacity.

(3) Test Methods and Procedures. All emissions tests performed pursuant to the requirements of this rule shall comply with the following requirements.

(a) The test method for visible emissions shall be EPA Method 9, as described at 40 C.F.R. Part 60, Appendix A-4, adopted and incorporated by reference at Rule 62-204.800, F.A.C.

(b) The test method for particulate matter emissions shall be EPA Method 5, as described at 40 C.F.R. Part 60, Appendix A-3, adopted and incorporated by reference at Rule 62-204.800, F.A.C. The minimum sample volume shall be 30 dry standard cubic feet.

(c) Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.

Rulemaking Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061, 403.087 FS. History--Formerly 17-2.650(2)(c)9., 17-296.709, Amended 11-23-94, 1-1-96, 7-10-14.

62-296.710 Smelt Dissolving Tanks.

(1) Applicability. The emission limitations set forth in Rule 62-296.710, F.A.C., shall apply to all smelt dissolving tanks associated with a kraft pulp mill.

(2) Emission Limitations. No owner or operator of a smelt dissolving tank shall cause, permit or allow emissions of particulate matter in excess of that calculated by applying the formula $E = 3.59P^{0.62}$ for each, where E is the emission rate in pounds per hour and P is the process weight in tons per hour; or visible emissions greater than 10 percent opacity.

(3) Test Methods and Procedures. All emissions tests performed pursuant to the requirements of this rule shall comply with the following requirements.

(a) The test method for visible emissions shall be EPA Method 9, as described at 40 C.F.R. Part 60, Appendix A-4, adopted and incorporated by reference at Rule 62-204.800, F.A.C.

(b) The test method for particulate matter emissions shall be EPA Method 5, as described at 40 C.F.R. Part 60, Appendix A-3, adopted and incorporated by reference at Rule 62-204.800, F.A.C. The minimum sample volume shall be 30 dry standard cubic feet.

(c) Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.

Rulemaking Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061, 403.087 FS. History—Formerly 17-2.650(2)(c)10., 17-296.710, Amended 11-23-94, 1-1-96, 7-10-14.

62-296.711 Materials Handling, Sizing, Screening, Crushing and Grinding Operations.

(1) Applicability. The emission limitations set forth in Rule 62-296.711, F.A.C., shall apply to the handling, sizing, screening, crushing, or grinding of the materials such as, but not limited to, cement, clinker, fly ash, coke, gypsum, shale, lime, sulfur, phosphatic materials, slag, and grain or grain products, including but not limited to the following types of operations:

(a) Loading or unloading of materials to or from such containers as railcars, trucks, ships, and storage structures;

(b) Conveyor systems other than portable conveyor systems;

(c) Storage of materials in storage structures, such as silos or enclosed bins, which have a storage capacity of fifty cubic yards or more;

(d) Crushing and/or grinding operations;

(e) Sizing and/or rescreening operations;

(f) Static drop transfer points where the discharge point and receiving point of the materials being handled are not moving in relationship to one another.

The emission limitations set forth in Rule 62-296.711, F.A.C., shall not apply to emissions from materials handling, sizing, screening, crushing and grinding operations governed by Rule 62-296.705, F.A.C., Phosphate Process Operations or Rule 62-296.704, F.A.C., Asphalt Concrete Plants.

(2) Emission Limitations.

(a) No owner or operator of an emissions unit governed by Rule 62-296.711, F.A.C., shall cause, permit, or allow any visible emissions (five percent opacity) from such emissions unit except that at the point where material is being discharged to the hold of a ship from a conveyor system. When the conveyor and/or hatch covering is moved, an opacity of 10 percent will be allowed.

(b) If, in order to comply with the requirements of paragraph (a) above, it is necessary to totally or partially enclose an operation and exhaust particulate laden gases through a vent or stack, emissions of particulate from such vent or stack shall not exceed 0.03 gr/dscf.

(c) An owner or operator may request the Department to determine that the emission standards of paragraphs 62-296.711(2)(a) and (b), F.A.C., do not constitute RACT for a facility. If the Department finds that the emission standards do not represent RACT, the Department shall make a determination of RACT for that facility.

(3) Test Methods and Procedures. All emissions tests performed pursuant to the requirements of this rule shall comply with the following requirements.

(a) The test method for visible emissions shall be EPA Method 9, as described at 40 C.F.R. Part 60, Appendix A-4, adopted and incorporated by reference at Rule 62-204.800, F.A.C.

(b) The test method for particulate matter emissions shall be EPA Method 5, as described at 40 C.F.R. Part 60, Appendix A-3, adopted and incorporated by reference at Rule 62-204.800, F.A.C. The minimum sample volume shall be 30 dry standard cubic feet.

(c) A visible emissions test indicating no visible emissions (5 percent opacity) may be submitted in lieu of a particulate stack test for materials handling emissions units subject to this rule, where the emissions unit is equipped with a baghouse.

(d) Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.

Rulemaking Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061, 403.087 FS. History—Formerly 17-2.650(2)(c)11., 17-296.711, Amended 11-23-94, 1-1-96, 7-10-14.

62-296.712 Miscellaneous Manufacturing Process Operations.

(1) Applicability. The emission limitations and other requirements of Rule 62-296.712, F.A.C., shall apply to miscellaneous manufacturing process operations for which a specific RACT emission limitation has not been established in Rules 62-296.401 through 62-296.415, F.A.C., or Rules 62-296.701 through Rule 62-296.711, F.A.C., including but not limited to such operations as heat treating furnaces, waste heat evaporators, corebaking ovens, mixing kettles, blast furnaces, puddling furnaces, dryers, stills, roasters, and all other methods or forms of manufacturing or processing which emit particulate matter.

(2) Emission Limitations. No owner or operator of a miscellaneous manufacturing process operation shall cause, permit, or allow emissions of particulate matter in excess of 0.03 gr/dscf, or any visible emissions greater than 5 percent opacity. However the owner or operator may exceed these emission limits if he utilizes a pollution control device or system for control of particulate matter which has an actual particulate matter collection efficiency of at least 98 percent.

If Rule 62-296.712, F.A.C., is the least restrictive standard, the opacity standard for the emissions unit shall be the average opacity level achieved during the initial compliance test which establishes compliance with the standard, plus 5 percent opacity.

(3) Test Methods and Procedures. All emissions tests performed pursuant to the requirements of this rule shall comply with the following requirements.

(a) The test method for visible emissions shall be EPA Method 9, as described at 40 C.F.R. Part 60, Appendix A-4, adopted and incorporated by reference at Rule 62-204.800, F.A.C.

(b) The test method for particulate matter emissions shall be EPA Method 5, as described at 40 C.F.R. Part 60, Appendix A-3, adopted and incorporated by reference at Rule 62-204.800, F.A.C. The minimum sample volume shall be 30 dry standard cubic feet.

(c) A visible emissions test indicating no visible emissions (5 percent opacity) may be submitted in lieu of a particular stack test for materials handling emissions subject to this rule, where the emissions unit is equipped with a baghouse.

(d) Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.

Rulemaking Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061, 403.087 FS. History—Formerly 17-2.650(2)(c)12., 17-296.712, Amended 11-23-94, 1-1-96, 7-10-14.

Chapter 62-297, F.A.C.

Stationary Sources - Emission Monitoring

CHAPTER 62-297
STATIONARY SOURCES – EMISSIONS MONITORING

62-297.100	Purpose and Scope (Repealed)
62-297.310	General Emissions Test Requirements
62-297.320	Standards for Persons Engaged in Visible Emissions Observations
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62-297.440	Supplementary Test Procedures
62-297.450	EPA VOC Capture Efficiency Test Procedures
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62-297.620	Exceptions and Approval of Alternate Procedures and Requirements

62-297.100 Purpose and Scope.

Rulemaking Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061, 403.087 FS. History—Formerly 17-2.700(1)(a), 17-297.100, Amended 11-23-94, 3-13-96, Repealed 2-16-12.

62-297.310 General Emissions Test Requirements.

(1) Applicability. Unless otherwise stated in a specific rule, permit, or other order, the general requirements set forth in subsections 62-297.310(2) through (10), F.A.C., shall be used for regulated stationary sources' emissions tests for comparison with air pollution emission-limiting standards that are enforceable under state law. An emissions test is an emissions rate test, a concentration test, or an opacity test.

(2) Required Number of Test Runs. For emission rate or concentration limitations, an emissions test shall consist of three valid test runs to determine the total air pollutant emission rate or concentration through the test section of the stack or duct. A valid test run is a test run that meets all requirements of the applicable test method. An emissions test shall also consist of three distinct determinations of any applicable process parameters corresponding to the three distinct test run time periods during which the emission rate or concentration was measured when such data are needed in conjunction with emissions data to compare the emissions test results with the applicable emission limiting standards. Such data shall be obtained pursuant to subsection 62-297.310(6), F.A.C. The three required test runs shall be completed within one consecutive five-day period. In the event that a sample is lost or one of the three runs must be discontinued because of circumstances beyond the control of the owner or operator, and a valid third run cannot be obtained within the five day period allowed for the test, results of the two valid runs shall be accepted, provided that the arithmetic mean of the results of the two valid runs is at least 20% below the allowable emission limiting standard.

(3) Operating Conditions during Emissions Testing. Testing of emissions shall be conducted with the emissions unit operating at the testing capacity as defined below. If it is impracticable to test at the testing capacity, an emissions unit may be tested at less than the testing capacity. If an emissions unit is tested at less than the testing capacity, another emissions test shall be conducted and completed no later than 60 days after the emissions unit operation exceeds 110% of the capacity at which its most recent emissions test was conducted.

(a) Combustion Turbines. (Reserved)

(b) All Other Sources. Testing capacity is defined as at least 90 percent of the maximum operation rate specified by the permit.

(4) Calculation of Emission Rate or Concentration. The emission rate or concentration used for comparison with the relevant standard shall be the arithmetic average of the emission rate or concentration determined by each of the three valid test runs unless otherwise specified in an applicable rule or test method. Data collected during periods of soot blowing shall not be excluded from any calculation of emission rate or concentration.

(5) Required Sampling Times and Observation Periods. Unless otherwise specified in an applicable test method, rule, permit, or other order, the owner or operator shall conduct emissions tests in accordance with the following procedures:

(a) Emission Rate or Concentration Tests. The required sampling time for each test run shall be no less than one hour and no greater than four hours, and the sampling time at each sampling point shall be of equal intervals of at least two minutes, except that for operations that are typically completed within less than the minimum required sampling time, the duration of each test run shall include each occurrence of the operation during the minimum required sampling time. The test period shall include the period of typical operation during which the highest representative emissions are expected to occur.

(b) Opacity Tests. When EPA Method 9 is specified as the applicable opacity test method, the required minimum period of observation for a visible emissions test shall be 60 minutes for emissions units that are subject to a multiple-valued opacity standard and 30 minutes for all other emissions units, except that for batch, cyclical processes, or other operations that are typically completed within less than the minimum observation period, the period of observation shall include each occurrence of the operation during the minimum observation period. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur.

(6) Determination of Process Parameters.

(a) Required Process Equipment. The owner or operator of an emissions unit for which emissions tests are required shall install, operate, and maintain equipment or instruments necessary to determine process parameters, when such data are needed in conjunction with emissions data to compare emissions test results with applicable emission limiting standards.

(b) Accuracy of Process Measurement Equipment. Equipment or instruments used to directly or indirectly determine process parameters shall be calibrated and adjusted so as to determine the value of the process parameter to within 10 percent of its true value.

(7) Required Emissions Testing Facilities.

(a) The owner or operator of an emissions unit, for which an emissions test other than a visible emissions test is required, shall provide emissions testing facilities that meet the requirements of 40 CFR 60.8(e), adopted and incorporated in Rule 62-204.800, F.A.C.

(b) Permanent Emissions Testing Facilities. The owner or operator of an emissions unit, for which an emissions test other than a visible emissions test is required on at least an annual basis, shall install and maintain permanent emissions testing facilities.

(c) Temporary Emissions Testing Facilities. The owner or operator of an emissions unit that is not required to conduct an emissions test on at least an annual basis may use permanent or temporary emissions testing facilities. If the owner or operator chooses to use temporary emissions testing facilities on an emissions unit, and the Department elects to test the unit, such temporary facilities shall be installed on the emissions unit within 5 days of a request by the Department and remain on the emissions unit until the test is completed.

(8) Frequency of Emissions Tests. The following provisions apply only to those emissions units that are subject to an emissions-limiting standard for which emissions testing is required.

(a) Annual Emissions Tests Required.

1. Where used in Rules 62-210.310, 62-297.310, or Chapter 62-296, F.A.C., to refer to frequency of required emissions tests, the terms "annual," "annually," and "annually thereafter" shall mean no less frequently than once every calendar year (January 1 – December 31).

2. Unless exempted by subparagraph 62-297.310(8)(a)5., F.A.C., the owner or operator shall have an emissions unit tested annually for each of the following pollutants that has an emissions-limiting standard for which emissions testing is required:

a. Each hazardous air pollutant regulated by 40 CFR Part 61, adopted and incorporated by reference at Rule 62-204.800, F.A.C.; and

b. Any other regulated air pollutant, as defined at Rule 62-210.200, F.A.C., or a pollutant designated as a surrogate to a regulated air pollutant by an applicable rule or order, if allowable emissions equal or exceed 100 tons per year.

3. Unless exempted by subparagraph 62-297.310(8)(a)5., F.A.C., the owner or operator shall have an emissions unit tested annually for visible emissions, if there is an applicable standard other than the general opacity standard of subparagraph 62-296.320(4)(b)1., F.A.C.

4. Unless exempted by subparagraph 62-297.310(8)(a)5., F.A.C., the owner or operator shall have an emissions unit tested annually if a rule, permit or other order issued after March 9, 2015, requires an initial emissions test but is silent as to the frequency of additional testing. A rule, permit, or other order that states that no further testing is required after an initial test, or which expressly lists or describes the tests that shall be conducted annually, is not considered silent as to the frequency of additional testing. Annual testing is not required where a permit or other order issued prior to March 9, 2015, is silent as to the frequency of additional testing.

5. Exemptions from subparagraphs 62-297.310(8)(a)2., 3., and 4., F.A.C.

a. An annual emissions test shall not be required for any pollutant for which a rule, permit, or other order requires emissions testing at some other specific frequency. If multiple applicable rules, permits, or other orders, other than subparagraphs 62-297.310(8)(a)2., 3., and 4., F.A.C., require different testing frequencies, testing must comply with the frequency requirements of

each such rule, permit, or order.

b. An annual emissions test shall not be required for any pollutant for which a rule, permit, or other order requires that the pollutant emissions be measured by a continuous emission monitoring system and, either that system meets the performance specifications and quality assurance and quality control measures of 40 CFR part 60, adopted and incorporated in Rule 62-204.800, F.A.C., or that system meets the performance specifications and quality assurance and quality control measures of 40 CFR part 75, adopted and incorporated in Rule 62-204.800, F.A.C.

c. An annual emissions test shall not be required for visible emissions for which a rule, permit, or other order requires that emissions be measured by a continuous opacity monitoring system, and that system meets the performance specifications and quality assurance and quality control measures of 40 CFR part 60, adopted and incorporated in Rule 62-204.800, F.A.C., and the manufacturer's recommended quality assurance and quality control measures.

d. An annual emissions test shall not be required for any emissions unit that operated for 400 hours or less (including during startup and shutdown) during the calendar year. If an emission unit operates for more than 400 hours during the calendar year, an emissions test shall be completed no later than 60 days after the emissions unit's annual operation exceeds 400 hours, or by the end of the calendar year, whichever is later.

e. An annual emissions test shall not be required for any emissions unit with emissions generated solely from the combustion of fuel, provided that the emissions unit does not burn any liquid fuel or solid fuel or fuel blend for more than 400 hours combined, other than during startup, during the calendar year. If an emissions unit's liquid fuel or solid fuel or fuel blend burning exceeds 400 hours combined during the calendar year, other than during startup, an emissions test shall be completed no later than 60 days after the emissions unit's liquid fuel or solid fuel or fuel blend burning exceeds 400 hours combined, or by the end of the calendar year, whichever is later.

f. An annual emissions test shall not be required for each fuel-specific emissions limit, provided the fuel or fuel blend subject to a fuel-specific limit was not burned for more than 400 hours, other than during startup, during the calendar year. If an emissions unit burns a fuel or fuel blend subject to a fuel-specific emission limit for more than 400 hours, other than during startup, during the calendar year, an emissions test for that fuel or fuel blend shall be completed no later than 60 days after the unit's burning of that fuel or fuel blend exceeds 400 hours, or by the end of the calendar year, whichever is later.

g. An emissions unit shall not be required to start up for the sole purpose of conducting an emissions test to meet the frequency requirements of subsection 62-297.310(8), F.A.C. In such a case, an emissions test shall be completed no later than 60 days after the emissions unit next starts up.

h. An emissions unit permitted to burn multiple fuels or fuel blends shall not be required to switch fuels for the sole purpose of conducting an annual emissions test to meet the frequency requirements of subsection 62-297.310(8), F.A.C. In such a case, an emissions test shall be completed no later than 60 days after a switch is made to burn the fuel or fuel blend for which testing is required.

i. An annual emissions test for visible emissions shall not be required for emissions units exempted from air permitting pursuant to paragraphs 62-210.300(3)(a) or (b), F.A.C.; emissions units determined to be insignificant pursuant to paragraph 62-213.430(6)(b), F.A.C.; or emissions units authorized pursuant to the general permit provisions in subsection 62-210.300(4), F.A.C., unless the general permit specifically requires such testing.

(b) Emissions Tests Prior to Obtaining an Air Operation Permit.

1. Unless exempted by subparagraph 62-297.310(8)(b)3., F.A.C., prior to obtaining an initial or renewal air operation permit for any emissions unit that is subject to any emission-limiting standard, the owner or operator shall have an emissions test conducted for each such standard to assist in providing reasonable assurance, per Rule 62-4.070, F.A.C., that the emission-limiting standard can be met and shall submit the test report as specified in subsection 62-297.310(10), F.A.C. For an emissions unit at a Title V source, such prior emissions testing is not required provided that an emissions testing compliance plan is included in the Title V permit.

2. For the purpose of renewal of an air operation permit, the owner or operator may satisfy the requirements of subparagraph 62-297.310(8)(b)1., F.A.C., for any emissions unit by submitting the most recent emissions test, as specified in subsection 62-297.310(10), F.A.C., provided such test occurred within the term of the current operating permit.

3. Exemptions from subparagraph 62-297.310(8)(b)1., F.A.C.

a. An emissions test shall not be required for any pollutant for which a rule, permit, or other order requires that the emissions be measured by a continuous emission monitoring system and, either that system meets the performance specifications and quality assurance and quality control measures of 40 CFR part 60, adopted and incorporated in Rule 62-204.800, F.A.C., or that system

meets the performance specifications and quality assurance and quality control measures of 40 CFR part 75, adopted and incorporated in Rule 62-204.800, F.A.C.

b. An emissions test shall not be required for visible emissions for which a rule, permit, or other order requires that emissions be measured by a continuous opacity monitoring system, and that system meets the performance specifications and quality assurance and quality control measures of 40 CFR part 60, adopted and incorporated in Rule 62-204.800, F.A.C., and the manufacturer's recommended quality assurance and quality control measures.

c. For the purpose of renewal of an air operation permit, an emissions test shall not be required for any emissions unit that, in the previous five-year period of permitted operation, operated for 400 hours or less (including during startup and shutdown) during each calendar year included in the five-year period of permitted operation. The first time an emissions unit subsequently exceeds 400 hours of operation during a calendar year, emissions must be tested no later than 60 days after 400 hours of operation is exceeded in that calendar year, or by the end of that calendar year, whichever is later.

d. For the purpose of renewal of an air operation permit, an emissions test shall not be required for any emissions unit with emissions generated solely from the combustion of fuel provided that, in the previous five-year period of permitted operation, the emissions unit did not burn any liquid fuel or solid fuel or fuel blend for more than 400 hours combined, other than during startup, during each calendar year included in the five-year period of permitted operation. The first time an emissions unit subsequently burns any liquid fuel or solid fuel or fuel blend for more than 400 hours combined during a calendar year, emissions must be tested no later than 60 days after the emissions unit's combined burning of any liquid fuel or solid fuel or fuel blend exceeds 400 hours in that calendar year, or by the end of that calendar year, whichever is later.

e. An emissions test shall not be required for each fuel-specific emissions limit prior to the renewal of an air operation permit for an emissions unit provided that, in the previous five-year period of permitted operation, the fuel or fuel blend subject to a fuel-specific limit was not burned for more than 400 hours, other than during startup, during each calendar year included in the five-year period of permitted operation. The first time an emissions unit subsequently burns a fuel or fuel blend subject to a fuel-specific emission limit for more than 400 hours, other than during startup, during any calendar year, an emissions test for that fuel or fuel blend must be completed no later than 60 days after the emissions unit's burning of that fuel or fuel blend exceeds 400 hours in that calendar year, or by the end of that calendar year, whichever is later.

f. An emissions unit shall not be required to start up for the sole purpose of conducting an emissions test to meet the frequency requirements of subsection 62-297.310(8), F.A.C. In such a case, an emissions test shall be completed no later than 60 days after the emissions unit starts up.

g. An emissions unit permitted to burn multiple fuels or fuel blends shall not be required to switch fuels for the sole purpose of conducting the emissions test to meet the frequency requirements of subsection 62-297.310(8), F.A.C. In such a case, an emissions test shall be completed no later than 60 days after a switch is made to burn the fuel or fuel blend for which testing is required.

h. An emissions test for visible emissions shall not be required for emissions units exempted from air permitting pursuant to paragraphs 62-210.300(3)(a) or (b), F.A.C.; emissions units determined to be insignificant pursuant to paragraph 62-213.430(6)(b), F.A.C.; or emissions units authorized pursuant to the general permit provisions in subsection 62-210.300(4), F.A.C., unless the general permit specifically requires such testing.

(c) Special Compliance Tests. When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it shall require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit, unless the Department obtains other information sufficient to demonstrate compliance. The owner or operator of the emissions unit shall provide a report on the results of said tests to the Department in accordance with the provisions of subsection 62-297.310(10), F.A.C.

(9) Scheduling and Notification. At least 15 days prior to the date on which each required emissions test is to begin, the owner or operator shall notify the air compliance program identified by permit, unless shorter notice is agreed to by the appropriate air compliance program. The notification shall include the date, time, place of each such test, Facility ID Number, Emission Unit ID Number(s) and description(s), Emission Point Number(s) and description(s), test method(s), pollutant(s) to be tested, along with the name and telephone number of the person who will be responsible for conducting such test(s) for the owner or operator. If a scheduled emissions test needs to be re-scheduled, the owner or operator shall submit to the appropriate air compliance program a revised notification at least seven days prior to the re-scheduled emissions test date or arrange a re-scheduled test date with the

appropriate air compliance program by mutual agreement.

(10) Test Reports.

(a) The owner or owner's authorized agent of an emissions unit for which an emissions test is required shall submit a written test report to the compliance authority specified by permit, on the results of each such test as soon as practicable but no later than 45 days after the last run of each test is completed. Test reports may be submitted electronically.

(b) If the owner or owner's authorized agent of an emissions unit for which an emissions test is required submits the results of each such test electronically using the EPA Electronic Reporting Tool (ERT), the written report specified in paragraph 62-297.310(10)(a), F.A.C., need not be submitted, provided the conditions of subparagraphs 62-297.310(10)(b)1. through 3., F.A.C., are met:

1. The owner or owner's authorized agent shall submit the test information using the ERT as soon as practicable but no later than 45 days after the last run of each test is completed;

2. The test information shall provide, as a minimum, the information specified in subparagraphs 62-297.310(10)(c)1. through 24., F.A.C.; and

3. The compliance authority specified by permit must receive written notification, no later than 45 days after the last run of each test is completed, of the date that the test data was submitted using the ERT.

(c) The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Department to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report, other than for an EPA Method 9 test, shall provide the following information:

1. The type, location, and identification number of the emissions unit tested.

2. The facility at which the emissions unit is located.

3. The owner and, if other than the owner, operator of the emissions unit.

4. The type and amount of fuels and materials typically used and processed, and the actual types and amounts of fuels used and material processed during each test run.

5. If necessary in order to compare the emissions test results with an applicable emission limiting standard, the means, raw data, and computations used to determine the amount of fuels used and materials processed.

6. The type of air pollution control devices installed on the emissions unit, their general condition, their typical operating parameters, and their actual operating parameters during each test run.

7. A diagram of the sampling location, including the distance to any upstream and downstream bends or other flow disturbances.

8. The date, starting time, and duration of each sampling run.

9. The test procedures, including any authorized alternative procedures, used.

10. The number of points sampled, and the configuration and location of the sampling plane.

11. For each sampling point for each run, the dry gas meter reading, velocity head, pressure drop across the stack or duct, temperatures, average meter temperatures, and sample time per point.

12. The type, manufacturer, and configuration of the sampling equipment used.

13. Data related to the required calibration of the test equipment.

14. Data on the identification, processing, and weights of all filters used.

15. Data on the types and amounts of any chemical solutions used.

16. For each sampling run, data on the amount of pollutant collected from each sampling probe.

17. For each sampling run, data on the amount of pollutant collected from the filters.

18. For each sampling run, data on the amount of pollutant collected from the impingers.

19. The names of individuals who furnished the process variable data, conducted the test, analyzed the samples and prepared the report.

20. All measured and calculated data required to be determined by each applicable test procedure for each run.

21. The detailed calculations for one run that relate the collected data to the calculated emission rate or concentration, as applicable.

22. The applicable emission standard, and the resulting maximum allowable emission rate or concentration for the emissions unit, as applicable, plus the test result in the same form and unit of measure.

23. When an emissions test is conducted for the Department or its agent, the person who conducts the test shall provide the

certification with respect to the test procedures used. The owner or owner's authorized agent shall certify that all data required and provided to the person conducting the test are true and correct to his or her knowledge.

24. For non-Title V sources, a certification by the owner or owner's authorized agent that, to his or her knowledge, all data submitted are true and correct.

25. Any report submitted for a Title V source shall contain certification by a responsible official. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Rulemaking Authority 403.061 FS. Law Implemented 403.031, 403.061, 403.087, 403.0872 FS. History—Formerly 17-2.700(1)(b), 17-297.310, Amended 11-23-94, 3-13-96, 10-28-97, 3-2-99, 3-9-15.

62-297.320 Standards for Persons Engaged in Visible Emissions Observations.

(1) Training and Certification Required. All persons engaged in determining the opacity of visible emissions in Florida shall attend training and be certified by a training provider in accordance with the procedures and requirements set forth below.

(a) Certification shall consist of satisfactory attendance and completion of a classroom lecture and a field qualification. For certification purposes, the classroom lecture and field qualification are separate and independent requirements.

(b) Attendance at the classroom lecture is required no less frequently than every three years. Successful completion of the field qualification is required no less frequently than every six months.

(c) Proof of certification shall be made by including copies of the signed and dated certificates or cards issued by the training providers with documentation of visible emissions observations submitted to the department, or otherwise upon request of the department.

(2) Requirements for Training Providers. All persons providing training leading to the certification of persons engaged in determining the opacity of visible emissions in Florida shall meet the requirements of subsections 62-297.320(2)-(8), F.A.C.

(a) For certification purposes, the classroom lecture and field certification are separate and independent requirements. For each course scheduled, each training provider shall offer a classroom lecture and one or more days of field qualification.

(b) Copies of quality assurance documentation, attendance records and field data sheets shall be maintained for a period of no less than three years after the conclusion of each course and shall be made available to the department upon request.

(c) Each training provider shall arrange for suitable locations for the classroom lecture and field qualification sessions that facilitate learning and reduce the impact of the smoke on passersby.

(d) To assure that cigar, pipe or cigarette smoke does not interfere with the observations of the trainees, each training provider shall enforce a policy of no smoking within the field qualification area.

(3) Classroom Lecture.

(a) The classroom lecture shall include the following topics and exercises:

1. Sources and causes of visible emissions.

2. Common types of emission control equipment and their effects on visible emissions observations.

3. History of opacity measurement.

4. Principles and theory of opacity.

5. Plume types and characteristics.

6. Legal aspects of visible emissions observations and legal defensibility of Method 9.

7. Basic meteorological conditions that influence plume behavior.

8. Proper procedures for conducting field observations under a variety of conditions.

9. A demonstration of commonly used measurement devices including a compass, a wind speed measurement device, and an inclinometer.

10. A written exercise demonstrating the proper procedure for documentation of observations.

(b) Training providers shall issue a signed and dated certificate or card to all persons attending the classroom lecture.

(4) Field Qualification.

(a) The field qualification shall be conducted in accordance with the requirements set forth in 40 CFR Part 60, Subpart A, EPA Method 9, adopted and incorporated by reference at Rule 62-204.800, F.A.C.; EPA Quality Assurance Handbook for Air Pollution Measurement Systems: Volume III, Section 3.12, hereby adopted and incorporated by reference; and EPA Guidelines for Evaluation of Visible Emissions (EPA 340/1-75-007, April 1975), hereby adopted and incorporated by reference.

(b) Each training provider shall meet requirements for quality assurance at least as stringent as those outlined in EPA Method 9.
(c) Each training provider shall monitor the attendees so that conferring or copying results during field qualification does not occur.

(d) Each training provider shall not provide hints of any kind or demonstrate the smoke standards during the field qualification sessions, except during familiarization runs prior to each test.

(e) Training providers shall issue a signed and dated certificate or card to all persons who successfully complete the field qualification.

(5) Notification to Department of Training Course Offerings. Each training provider shall notify the department of all visible emissions training courses such provider offers in Florida at least 30 days prior to the start of each course.

(6) Notification to Department of Persons Receiving Certification. Each training provider shall provide a list of the names of attendees receiving certification at its courses to the department no later than 30 days after the conclusion of each course.

(7) Audit by the Department. For auditing purposes, each training provider shall allow one or more persons from the department or a local air pollution control agency to observe each visible emissions training course offered in Florida without advance notice to the training provider. The training provider shall not issue a certificate or card to the observers, and shall not charge a fee for their attendance.

(8) Invalidation of Certificates. After investigation by the department, should any training provider's course be found by the department to not meet the requirements of this section, the certificates or cards offered by such provider for such course shall not be considered valid for visible emissions observations in Florida.

Rulemaking Authority 403.061 FS. Law Implemented 403.031, 403.061 FS. History--New 2-12-04.

62-297.401 Compliance Test Methods.

Rulemaking Authority 403.061 FS. Law Implemented 403.031, 403.061, 403.087 FS. History--Formerly 17-2.700(6)(b), Amended 6-11-93, Formerly 17-297.401, Amended 11-23-94, 1-1-96, 3-13-96, 10-7-96, 3-2-99, Repealed 7-10-14.

62-297.440 Supplementary Test Procedures.

The following test procedures are adopted by reference. Copies of these documents are available from the sources set forth below. Copies may also be inspected at the Department's Tallahassee Office.

(1) [Reserved].

(2) EPA Reports – EPA occasionally publishes test methods and emission control guidelines in a report format. These documents are available (unless otherwise stated) from the National Technical Information Services, 5286 Port Royal Road, Springfield, Virginia 22216, and may be inspected at the Department's Tallahassee Office.

(a) Petroleum Liquid Storage.

1. Control of Volatile Organic Emissions from Petroleum Liquid Storage in External Floating Roof Tanks, EPA 450/2-78-047, p. 5-3.

2. Control of Volatile Organic Emissions from Storage of Petroleum Liquids in Fixed-Roof Tanks, EPA 450/2-77-036, p. 6-2.

(b) Gasoline Bulk Terminals.

1. Vapor Control System Test.

a. VOC emissions from the vapor control system shall be determined by the method given in Appendix A of EPA 450/ 2-77-026, except that an adequate sampling time shall be at least six (6) hours of operation. For continuous vapor processing systems at least 80,000 gallons (302,800 liters) of gasoline shall be loaded during the test. For intermittent vapor processing systems, at least 80,000 gallons (302,800 liters) of gasoline shall be loaded during the test and at least two full cycles of operation of the vapor processing system shall occur. This test shall be performed prior to the date of compliance and annually thereafter. Test results records shall be maintained at the terminal until the subsequent annual test shall be made available to the department upon request.

b. Control of Hydrocarbons from Tank Truck Gasoline Loading Terminals, EPA 450/2-77-026, Appendix A. Emission Test Procedure for Tank Truck Gasoline Loading Terminals.

2. Vapor Leak Detection.

a. During loading or unloading operations at bulk terminals, there shall be no reading greater than or equal to 100 percent of the lower explosive level (LEL), measured as propane at 1 in. (2.5 centimeters) around the perimeter of a potential leak source as detected by a combustible gas detector using the procedure described in Appendix B of EPA 450/2-78-051.

b. Control of Volatile Organic Compound Leaks from Gasoline Tank Trucks and Vapor Collection Systems, EPA 450/ 2-78-051, Appendix B, Gasoline Vapor Leak Detection Procedures by Combustible Gas Detector.

(c) Gasoline Service Stations.

1. Design Criteria for Stage I Vapor Control: Gasoline Service Stations, USEPA, OAQPS, ESED, November, 1975.

2. [Reserved].

(d) Non-destructive Control Devices.

1. Measurement of Volatile Organic Compounds, EPA 450/2-78-041, Attachment 3, Alternate Test for Direct Measurement of Total Gaseous Organic Compounds Using a Flame Ionization Analyzer.

2. [Reserved].

(e) Perchloroethylene Dry Cleaning Systems.

1. Control of Volatile Organic Emissions from Perchloroethylene Dry Cleaning Systems, EPA 450/2-78-050, p. 6-3, Compliance Procedures, Liquid Leakage.

2. RACT Compliance Guidance for Carbon Absorbers on Perchloroethylene Dry Cleaners. Task No. 119, Contract No. 68-01-4147. EPA, DSSE, May, 1980, pp. 8 – 21, Appendices A and B.

(f) Cross Recovery Determination. When determining if a kraft recovery furnace is a straight kraft or cross recovery furnace the procedure in 40 CFR 60.285(d)(3) of Subpart BB shall be used.

(3) [Reserved].

(4) American Petroleum Institute (API) Recommended Practices – These are available from the API, 2101 L Street, Northwest, Washington, D.C. 20037

(a) API Standard 650, Welded Steel Tanks for Oil Storage, Sixth Edition, Revision 1, May 15, 1978.

(b) API Publication 2517, Evaporation Loss from External Floating Roof Tanks, Second Edition, February, 1980.

(c) API 1004, Bottom Loading and Vapor Recovery for MC-306 Tank Motor Vehicles, Fourth Edition, September 1, 1977.

Rulemaking Authority 403.061 FS. Law Implemented 403.031, 403.061, 403.087 FS. History--Formerly 17-2.700(6)(c), Amended 6-11-93, Formerly 17-297.440, Amended 11-23-94, 1-1-96, 3-2-99, 10-22-02, 7-10-14.

62-297.450 EPA VOC Capture Efficiency Test Procedures.

(1) Applicability. The requirements set forth in subsections 62-297.450(2) and (3), F.A.C., shall apply to all regulated VOC-emitting emissions units employing a control system pursuant to Rules 62-296.501 through 62-296.516, F.A.C., and Rule 62-296.800, F.A.C.

(2) Capture Efficiency Determination. The owner or operator shall determine the capture efficiency of a VOC capture system by using the EPA Emission Measurement Technical Information Center Guideline Document GD-035, "Guidelines for Determining Capture Efficiency," January 9, 1995 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-04299>), hereby adopted and incorporated by reference; and one or more of the following EPA test methods, adopted and incorporated by reference at Rule 62-204.800, F.A.C., as applicable to the capture system:

(a) Method 204, Criteria for and Verification of a Permanent or Temporary Total Enclosure;

(b) Method 204A, Volatile Organic Compounds Content in Liquid Input Stream;

(c) Method 204B, Volatile Organic Compounds Emissions in Captured Stream;

(d) Method 204C, Volatile Organic Compounds Emissions in Captured Stream, (Dilution Technique);

(e) Method 204D, Volatile Organic Compounds Emissions in Uncaptured Stream from Temporary Total Enclosure;

(f) Method 204E, Volatile Organic Compounds Emissions in Uncaptured Stream from Building Enclosure; or

(g) Method 204F, Volatile Organic Compounds Content in Liquid Input Stream (Distillation Approach).

(3) In lieu of determining the capture efficiency of a capture system, the owner or operator of an affected activity, process, or emissions unit may determine the overall emission reduction efficiency of the system by dividing the recovered liquid VOC by the input liquid VOC using the procedure given in 40 C.F.R. § 60.433, adopted and incorporated by reference at Rule 62-204.800, F.A.C., if all of the following criteria are met:

(a) The owner or operator uses a nondestructive control device designed to collect and recover VOC; and

(b) The owner or operator is able to equate solvent usage with solvent recovery on a 24-hour (daily) basis, rather than a 20-day weighted average; and

(c) The owner or operator can equate solvent usage with solvent recovery within 72 hours following each 24-hour period; and

(d) The solvent recovery system (i.e., capture and control system) is dedicated to a single activity, process line, or emissions unit; or the solvent recovery system controls multiple activities, process lines, or emissions units, and the owner or operator is able to demonstrate that the overall control (i.e., the total recovered solvent VOC divided by the sum of liquid VOC input to all activities, process lines, or emissions units venting of the control system) meets or exceeds the most stringent emission standard applicable for any activity, process line, or emissions unit venting to the control system.

(3) Recordkeeping and Reporting.

(a) The owner or operator of an affected activity, process, or emissions unit shall submit to the department a list of the procedures that will be used for the capture efficiency tests at the owner or operator's facility. A copy of the list shall be kept on file at the affected facility.

(b) Required test reports shall be submitted to the department within forty-five (45) days of the test date. A copy of the results shall be kept on file at the facility.

(c) If any physical or operational change is made to a control system, the owner or operator of the affected facility shall notify the department of the change within ten (10) working days after making such change. The department shall require the owner or operator of the affected activity, process, or emissions unit to conduct a new capture efficiency test if the department has reason to believe (based on engineering calculations or empirical evidence) that a physical or operational change made to the capture system has decreased the overall emissions reduction efficiency of the system.

(d) The owner or operator of an affected activity, process, or emissions unit shall notify the department thirty (30) days prior to performing any capture efficiency and/or control efficiency tests.

(e) The owner or operator of an affected activity, process, or emissions unit using a Permanent Total Enclosure shall demonstrate that this enclosure meets the requirement given in Method 204 for a Permanent Total Enclosure during any required control device efficiency test.

(f) The owner or operator of an affected activity, process, or emissions unit using a Temporary Total Enclosure shall demonstrate that this enclosure meets the requirements given in Method 204 for a Temporary Total Enclosure during any required control device efficiency test.

Rulemaking Authority 403.061 FS. Law Implemented 403.031, 403.061, 403.087 FS. History—Formerly 17-2.700(7), Amended 6-11-93, Formerly 17-297.450, Amended 11-23-94, 1-1-96, 3-2-99, 7-10-14.

62-297.520 EPA Continuous Monitor Performance Specifications.

Rulemaking Authority 403.061 FS. Law Implemented 403.031, 403.061, 403.087 FS. History—New 6-29-93, Formerly 17-297.520, Amended 11-23-94, 3-13-96, 3-2-99, Repealed 2-16-12.

62-297.620 Exceptions and Approval of Alternate Procedures and Requirements.

(1) The owner or operator of any emissions unit subject to the provisions of this chapter may request in writing a determination by the Secretary or his/her designee that any requirement of this chapter (except for any continuous monitoring requirements) relating to emissions test procedures, methodology, equipment, or test facilities shall not apply to such emissions unit, and shall request approval of an alternate procedure or requirement.

(2) The request shall set forth the following information, at a minimum:

(a) Specific emissions unit and permit number, if any, for which exception is requested.

(b) The specific provision(s) of this chapter from which an exception is sought.

(c) The basis for the exception, including but not limited to any hardship which would result from compliance with the provisions of this chapter.

(d) The alternate procedure(s) or requirement(s) for which approval is sought and a demonstration that such alternate procedure(s) or requirement(s) shall be adequate to demonstrate compliance with applicable emission limiting standards contained in the rules of the department or any permit issued pursuant to those rules.

(3) The Secretary or his/her designee shall specify by order each alternate procedure or requirement approved for an individual emissions unit in accordance with this section or shall issue an order denying the request for such approval. The department's order shall be final agency action, reviewable in accordance with Section 120.57, Florida Statutes.

(4) In the case of an emissions unit which has the potential to emit less than 100 tons per year of particulate matter and is equipped with a baghouse, the Secretary or the appropriate Director of District Management may waive any particulate matter

compliance test requirements for such emissions unit specified in any otherwise applicable rule, and specify an alternative standard of 5% opacity. The waiver of compliance test requirements for a particulate emissions unit equipped with a baghouse, and the substitution of the visible emissions standard, shall be specified in the permit issued to the emissions unit. If the department has reason to believe that the particulate weight emission standard applicable to such an emissions unit is not being met, it shall require that compliance be demonstrated by the test method specified in the applicable rule.

Rulemaking Authority 403.061 FS. Law Implemented 403.021, 403.031, 403.061, 403.087 FS. History—Formerly 17-2.700(3), Amended 6-11-93, Formerly 17-297.620, Amended 11-23-94.

8. PSD Permitting Applicability Flowchart

Chapter 2

Chapter 2

Role of Compliance Professional



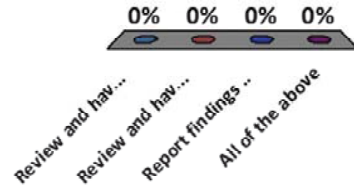
Florida Air Inspector Reference (FAIR)
Training Program

Overview

- > Introduction
- > Review Facility Information
- > Perform Outreach and Compliance Assistance
- > Respond to Complaints
- > Conduct Onsite Compliance Inspections
- > Inform Enforcement Measures
- > Collect Data & Maintain Databases
 - ❖ Electronic Tools & Databases

As an information gatherer, the Compliance Professional must:

- A. Review and have knowledge of the industry and facility type
- B. Review and have knowledge of permit requirements
- C. Report findings to the facility and DEP database
- ✓ D. All of the above



Role of Compliance Professional

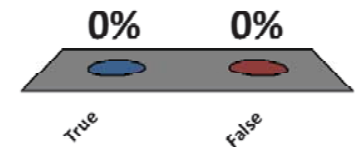
- > Information gatherer and provider
 - ❖ Review, inspect, and report
 - ❖ Review and have knowledge of industry and facility type
 - ❖ Review and have knowledge of permit requirements
 - ❖ Inspect facility operations to ensure compliance with requirements
 - ❖ Report findings to facility and database
- Information gatherer - expected to be familiar with facility processes and environmental requirements, conduct inspections, and review reports to determine whether those requirements are met, and to report their findings to DARM.
- Knowledge of facility processes - starting point of any air inspection. Places environmental requirements into context and is necessary to determine potential areas of noncompliance.
- During inspection, inspectors are often accompanied by an environmental engineer from the facility and a thorough knowledge of the facility's operations is necessary to have meaningful discussion.
- An inspector must have a high level of knowledge of environmental requirements to compare actual operation to those requirements, and to explain those requirements to the facility.
- Perform compliance assurance activity - apply knowledge of proper operation and requirements to actual operation of facility.
- Transition of role from information gatherer to information provider - when providing outreach/compliance assistance and when entering data into ARMS.

Information Gathering

- > Review of a regulated facility operations and practices
 - ❖ Systematic
 - ❖ Documentary
 - ❖ Objective
 - ❖ Periodic
 - ❖ Obtain/evaluate information
 - ❖ Determine conformance with criteria
 - ❖ Communicate results

Environmental Compliance compares a facility's current operations to existing environmental requirements.

- ✓ A. True
- B. False



Note present tense

Environmental Compliance

- > Compares *facility operation* to *environmental requirements*
- > Intended to identify whether a facility is operating in conformance with environmental requirements

Sources of Environmental Requirements

- > Laws, regulations and rules
 - ❖ Federal
 - ❖ State
 - ❖ Local
- > Permits
 - ❖ Construction
 - ❖ Operation

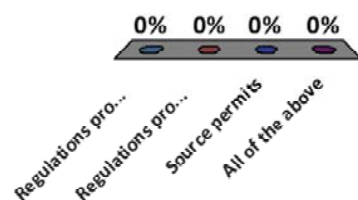
Key Areas of Focus

- > Title V
- > New Source Review (NSR)
- > New Source Performance Standards (NSPS)
- > National Emissions Standards for Hazardous Air Pollutants (NESHAPs)
 - ❖ MACT - Maximum Achievable Control Technology
- > Acid Rain

Facility Information Review

A facility's regulatory requirements can be found in:

- A. Regulations promulgated by EPA
- B. Regulations promulgated by the state of FL
- C. Source permits
- ✓ D. All of the above



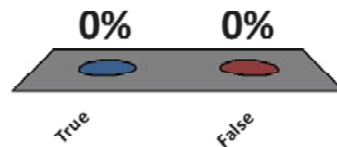
Regulatory Requirements

- > Regulations promulgated by EPA in the CFR, nationally applicable
- > Regulations adopted or promulgated by the state of Florida
- > Stationary sources must keep records and/or report data associated with NSPS and NESHAP
- > Source permits may include additional recordkeeping or reporting requirements
- > Inspectors must check the permit for up-to-date information

- These regulations include continuous emission monitoring, compliance testing, control device monitoring, process monitoring, ambient monitoring, and a variety of notification and information reports.
- Information, including excess emission reports and performance test reports, which is reported to the agency (federal or state) under these regulations is often available to the inspector for review preceding or following the on-site inspection.
- Records required to be kept by the source (and not reported) are available to inspect during the on-site inspection itself and can be checked and/or reviewed at that time.
- Inspectors are cautioned to consult the permit, the Federal Register, etc. for the most up-to-date information.

CEMS are used to continuously monitor and record emissions from a unit.

- ✓ A. True
B. False



Continuous Emission Monitoring ^{1/2}

- > Continuous emission monitoring systems (CEMS) are used to continuously monitor and record emissions from a unit.
- > Certain NSPS and NESHAP require facilities to install, maintain, and operate CEMS.
- > EPA has required that State Implementation Plans (SIPs) or New Source Review (NSR) requirements be revised to require certain existing facilities to install, maintain, and operate CEMS.

- State regulations require "performance testing" and "periodic reports and recordkeeping of the nature and magnitude of such emissions."
- Furthermore, interpretation of Sections 113 and 114 of the Clean Air Act (CAA), as amended in 1990, requires the use of recordkeeping and reporting requirements as means of enforcing emission standards.
- Historically, the reporting requirements for NSPS sources (40 CFR Part 60) have involved a written report for any calendar quarter in which source emissions exceed the value of the standard. The emission value, as recorded by the CEM system (i.e., % opacity, ppm, lb/ton, etc.) must be recorded, as well as the duration (i.e., six minutes, 3 hours, etc.) of the excess emission. An excess emission is defined as an exceedance of the emission limit values over the time period specified by the subject standard.

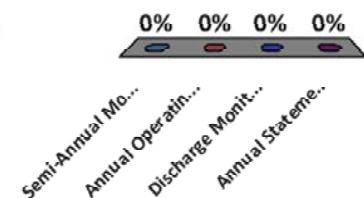
Continuous Emission Monitoring ^{2/2}

- > NSPS and 40 CFR Part 51 requirements often require quarterly reporting for CEMS exceedances.
- > Excess Emission Reports (EER) require information regarding magnitude, duration, and date of excess emissions and corrective action taken.
- > Reporting provides operator information to “fine tune” pollution control device

- Similarly, 40 CFR Part 51 requires some existing stationary sources to implement a continuous monitoring program and to provide quarterly excess emission reports (EERs).
- The minimum information required in the EER is:
 - The magnitude, duration and date of excess emissions;
 - The identification of each excess attributable to startups, shutdowns, and malfunctions;
 - The cause of any malfunction and the corrective action or preventive measures adopted;
 - The date, time, and duration of any monitor outage for reasons other than zero and span checks;
 - The reason for monitor outage and corrective action taken;
 - If there are no excess emissions and no monitor outages, this information must also be reported.
- CEMS often installed on combustion turbines in Florida.

Which of the following is NOT a Title V reporting requirement?

- A. Semi-Annual Monitoring Reports
- B. Annual Operating Report (AOR)
- ✓ C. Discharge Monitoring Report (DMR)
- D. Annual Statement of Compliance (SOC)



Title V Reporting Requirements ^{1/3}

- > Additionally, Title V operation permits require following to be submitted to Compliance Authority
 - ❖ Semi-Annual Monitoring Reports
 - ❖ Annual Operating Report (AOR)
 - ❖ Annual Statement of Compliance (SOC)
 - ❖ Title V Fees
- > Problems noted provide excellent opportunities for compliance assistance

- Most major sources are also required to submit annual operating reports for the subsequent uploading to the National Emissions Inventory after review and verification.
- The permittee must submit these reports in a timely and complete manner for review by the agency.
- Some of these reports, like the annual statement of compliance, are also required to be submitted simultaneously to EPA.
- All of these reports must be timely reviewed for compliance.

Title V Reporting Requirements ^{2/3}

- > Semi-Annual Monitoring Report
 - ❖ Per Rule 62-213(1)(b)3.a., F.A.C
 - ❖ Target Submittal March 1st and August 29th
 - ❖ Certifies compliance/non-compliance and associated corrective action with all monitoring conditions in permit
- > Annual Operating Report
 - ❖ Per Rule 62-210-370(3) and 62-210.900(5), F.A.C.
 - ❖ Due April 1st each year
 - ❖ Provides annual emissions of criteria pollutants and HAPs (every 3 years)
 - ❖ Electronic AOR (EAOR) required (exception available)

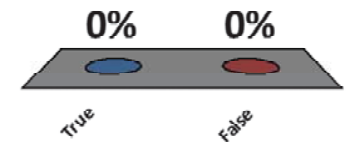
- AORs also help with the allocation of resources by those facilities and categories that have larger emissions

Title V Reporting Requirements ^{3/3}

- > Annual Statement of Compliance
 - ❖ Per Rule 62-213.440(3)(a)(2) and 62-213.900(2), F.A.C.
 - ❖ Due March 1st each year
 - ❖ Certifies compliance/non-compliance with permit requirements and associated corrective action
- > Title V Fees
 - ❖ Per Rule 62-213.205 and 62-213.900(1), F.A.C.
 - ❖ Due April 1st each year
 - ❖ Fees based on actual emissions (previously based on potential)
 - ♦ Fee invoice generated in EAOR

A FCE is a comprehensive evaluation of the compliance status of all regulated emissions units at a facility.

- ✓ **A.** True
- B.** False



Compliance Monitoring Categories

- > Two main categories of compliance monitoring
 - ❖ **Full Compliance Evaluation** - comprehensive evaluation of the compliance status of facility
 - ❖ **Partial Compliance Evaluation** - documented compliance assessment focusing on a subset of regulatory pollutants, regulatory requirements, or emissions units

Compliance Monitoring Categories - Full Compliance Evaluation

- > Addresses all regulated pollutants at all regulated emission units (EU).
- > Addresses the current compliance status of each EU, as well as the facility's continuing ability to maintain compliance at each EU.
- > Reviews all the reports, records, test results, operating conditions, control equipment, performance and any non-compliance issues.

- Review of all required reports, and to the extent necessary, the underlying records. This includes all monitored data reported to the regulatory agency and a review of Title V self-certifications, semi-annual monitoring and periodic monitoring reports, and any other reports required by permit.
- Assess of control device and process operating conditions as appropriate. An on-site visit to make this assessment may not be necessary based upon factors such as the availability of continuous emission and periodic monitoring data, compliance certifications, and deviation reports. Examples of source categories that may not require an on-site visit to assess compliance include, but are not limited to, gas-fired compressor stations, boilers in large office and apartment buildings, peaking stations, and gas turbines.
- Perform VE observation as needed and review of facility records and logs.
- Assess parameters (e.g., feed rates, raw material compositions, and process rates) and control equipment parameters (e.g., water flow rates, pressure drop, temperature).
- Conduct a stack test where there is no other means for determining compliance with the emission limits. In determining whether a stack test is necessary, States/locals should consider factors such as: size of emission unit; time elapsed since last stack test; results of that test and margin of compliance; condition of control equipment; and availability and results of associated monitoring data.

Compliance Monitoring Categories - Partial Compliance Evaluation

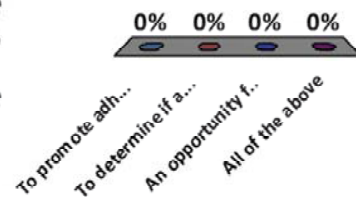
- > More comprehensive than a cursory review of individual reports
- > May be conducted solely for the purpose of evaluating a specific aspect of a facility
- > May be combined over the course of a year (or up to 3 years) to satisfy Full Compliance Evaluation

- This type of evaluation could be used for example to effectively assess compliance with the HON MACT requirements if that is the primary area of concern at a chemical manufacturing facility.
- If at some point later in the year, the regulatory agency decided a Full Compliance Evaluation was necessary, the agency could combine the results of the MACT evaluation with subsequent evaluations focusing on the balance of other CAA requirements.

On Site Compliance Inspections

The Objective of an On Site Compliance Inspection is?

- A. To promote adherence to environmental requirements
- B. To determine if a facility is operating in compliance with its requirements
- C. An opportunity for the Department to discuss compliance requirements with the facility
- ✓ D. All of the above

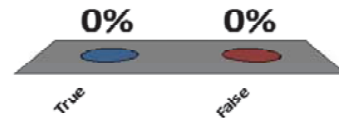


Objectives

- > Promote adherence to environmental requirements
- > Determine if a facility is operating in compliance with its requirements
- > An opportunity for the Department to discuss compliance requirements with the facility

Baseline Inspection Techniques enable inspectors to identify changes in performance of pollution controls.

- ✓ A. True
- B. False



Baseline Inspection Technique

- > Developed by EPA for use by field personnel for effective and complete inspections of air pollution control systems
- > Inspection procedures developed to ensure complete and accurate data gathering
- > Procedures are organized into "Levels of Inspection" - based on degrees of intensity dependent on the situation
- > Field personnel must have a knowledge of the process(es) and the associated control equipment and facility

- The Baseline Inspection Technique has been developed by the EPA to aid both EPA and state agencies in conducting effective and complete inspections of air pollution control systems.
- A methodical approach is presented so that inspectors can obtain all the relevant data in an organized fashion.
- These procedures should be used by field personnel unless there are compelling technical or safety factors at a specific site which demand modified approaches. In such a case, the reasons for the deviation from the standard procedures should be briefly described in the inspection report.
- The inspector's knowledge of the process(es) and the associated control equipment at a facility plays an important part in the success of an inspection, particularly in the diagnosis of control problems.
- It is therefore highly recommended that the inspector work at building his/her own and/or an agency technical library of books, reports, guideline documents, and other publications related to the inspection process. This should include materials addressing specific processes, operation and maintenance of all types of control equipment, and specific inspection procedures for various types of control equipment and industrial processes.

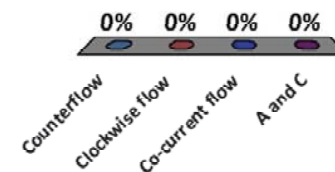
Baseline Inspection Technique

- > Fundamental principle of inspection technique is that control device performance should be evaluated by comparing present conditions to specific baseline data
- > Often depends mainly on the machine-specific data and shifts in performance levels over time

- Each separate control device is initially approached with the assumption that its operating characteristics and performance levels will be unique, since there are a myriad of process variables and control device design factors, any one of which can singly or collectively influence performance. It is often difficult, if not impossible, to determine why apparently similar units operate differently.
- Each variable which has shifted significantly is considered a "symptom" of possible operation problems.
- Cases in which deviations from certain typical industry operating conditions can be an indication of operation and maintenance problems. However, this data is considered secondary to the site specific data as industry data is often difficult to compile, and sometimes difficult to establish its relevance during enforcement.
- One of the major problems in conducting an inspection of an air pollution control system is that the instruments necessary to monitor basic operating conditions are often either non-existent or are malfunctioning. Data quality problems are especially severe on those units which are subject to frequent excess emission incidents and of most interest to the agency.
- Design deficiencies or improper maintenance, which reduced the effectiveness of the control device, usually have a disabling effect on whatever instrumentation is on the control device making it rarely wise to accept the data from on-site gauges at face value. Baseline Technique includes some routine checks of these on-site gauges.

Which of the following approaches is used by the Baseline Inspection Technique?

- A. Counterflow
- B. Clockwise flow
- C. Co-current flow
- ✓ D. A and C



Baseline Inspection Technique

- > Performance evaluations should be performed by examining of a number of different sources of information and variables
- > Incorporates both measurements and observations
- > Utilizes 2 approaches: Counterflow and Co-current flow

- The type of emerging performance problem can often be determined better by evaluating the impact on the set of variables rather than relying on a shift in one operating variable.
- General observations concerning the extent of corrosion, solids discharge rate, and fan physical conditions can be used to support preliminary conclusions.
- Failure characteristics on materials removed from the collectors (e.g. bags, discharge electrodes, nozzles) can be used to determine the type of corrective actions which have a reasonable chance of being successful.
- It is recognized that the control agency inspection can be an inconvenience to source personnel who must accompany the inspector while on plant property.
 - Inspectors should make every reasonable effort to reduce on-site time.
 - Inspector should organize the data and observations in a coherent fashion during the inspection and use this data to focus the field work toward the specific problems, if any, which appear to exist.
 - If the initial information clearly suggests that there are no present or emerging problems, the inspection should be terminated.
- If the process appears to be important, then the inspection should continue with an evaluation of any relevant portions of the plant. If problem is control device related, abbreviate or eliminate a time consuming inspection of process source.
- The Baseline Inspection Technique utilizes both "Counterflow" and "Co-Current Flow" approaches in order to organize and focus inspection efforts. The Counterflow approach is appropriate when the inspector is making a routine inspection of a facility for which baseline data is available.

Fugitive Emissions (FE)

- > Observe for FE which cross or are near plant boundaries
- > Observe FE sources and any controls (including VE readings and photographs to document)
- > Examination of the source's fugitive dust control equipment
- > Observations of any control operations undertaken by source during the inspector's visit
- > Examination of the source's relating to records relating to fugitive dust

- During the evaluation, the inspector should, in particular, look for and note any fugitive emissions, which generally consists of four phases:
 - which cross or are near plant boundaries and their source(s)
 - conditions around feed, product, and/or waste storage piles
 - any other obvious sources of fugitive emissions
- Visible emissions readings and photographs should be taken at this time, as appropriate.
- The portion of the fugitive dust inspection is conducted within the plant boundaries.

Counterflow approach

- > Appropriate on a facility for which baseline data is available, and
- > Basic process operation is well documented in the files
- > Emphasis on the control device operating conditions, both measured and observed
- > The control device information coupled with the stack conditions can be used to:
 - ❖ determine if there is a probable problem
 - ❖ determine if the problem is due primarily to control device related conditions
 - ❖ determine if the problem is due primarily to process related factors

Co-current Flow Approach

- > Performed on sources which do not have air pollution control devices
- > Performed on sources for which there are a number of emission problems related entirely to changes in process operating conditions, raw materials and additives, fuels, and overall equipment design

- A partial list of such sources include but is not limited to, oil- and gas-fired boilers, indirect fired dryers, and refinery heaters.
- The Co-current inspection starts with the preparation of a flowchart of the process, including the locations of all vents and control devices.
- The inspector starts with raw material piles or storage piles and follows this material in a Co-current fashion through the mill.
- The emphasis in this type of inspection is on the raw material and fuel characteristics, operating rates, operating temperatures and pressures, and other information relevant to the generation of air pollutants.
- Major variables affecting the quantity, particle size distribution, and characteristics of the effluent gas stream should be noted.
- Due to the diversity of air pollution sources and control systems, it is important that the inspection procedures incorporate some flexibility.
- This flexibility allows the agency to focus on actual emission problems instead of simply completing a prescribed number of "inspections."
- The flexibility built into the Baseline Technique must also be exercised whenever, in the judgment of the inspector, the standard procedures would be unsafe or incorrect for a specific source. It should also be noted that specific inspection activities can be deleted. However, inspectors should not add new or different procedures without the express approval of supervisory personnel.

Levels of Inspection - *Level 1*

- > Field surveillance tool
- > No entry to the plant grounds is usually necessary
- > Obvious VE problems are noted from outside
- > General plant operations are observed to confirm these conform to permit requirements
- > Unusual conditions provide the stimulus for an in-plant inspection in the near future
- > If potential non-compliance observed, contact manager and information should be transmitted to source's management personnel

- Levels of inspection have been incorporated into the inspection program to give control agencies the opportunity to properly allocate available resources. The most complete and time consuming evaluations are done only when preliminary information indicates that there is or will soon be a significant emission problem.
- The levels of inspection are designated at 1 through 4 with the intensity of the evaluation increasing numerically. The types of activities normally associated with each level and the experience levels necessary to conduct the different levels vary substantially.
- The Level 1 inspection is a field surveillance tool intended to provide relatively frequent but very incomplete indications of source performance. No entry to the plant grounds is usually necessary and the inspection is never announced in advance. The inspector makes visible emission observations on all stacks and vents which are visible from the plant boundary and which can be properly observed given prevailing meteorological conditions. General plant operations are observed to confirm that these conform to permit requirements. Unusual conditions provide the stimulus for an in-plant inspection in the near future.

Levels of Inspection - *Level 2*

- > "Walk through" evaluation of the air pollutant source and/or the air pollution control equipment
- > Entry to the facility is necessary
- > Most common inspection type performed
- > Can be performed either in a co-current or countercurrent fashion
- > Data can be gathered on-site using permanently mounted instrumentation
- > Instrumentation data accuracy is important

- The Level 2 inspection is a "walk through" evaluation of the air pollutant source and/or the air pollution control equipment. Entry to the facility is necessary. Level 2 is the most common inspection type performed. The inspection can be performed either in a co-current or countercurrent fashion depending on the anticipated types of problems. In either case, the inspection data gathered is limited to that which can be provided by on-site permanently mounted instrumentation. An important aspect of this type of inspection is the evaluation of the accuracy of the data from this instrumentation. When control devices are not in service during the plant inspection, the Level 2 inspections can include checks on the internal conditions. This is particularly useful for the evaluation of fabric filter performance. The inspection involves observations from access hatches and under no circumstances includes entry into the collector by the inspector.

Levels of Inspection - *Level 3*

- > Inspections done during a compliance test, whole or partial, are considered Level 3

Levels of Inspection - *Level 4*

- > Identical in scope to the Level 3 procedures
- > Level 4 inspection is an engineering inspection
- > Done to gather baseline information
- > Should be done minimally jointly by a senior inspector and the personnel who will be assigned responsibility for the plant
- > Preparation of general process and control device flowcharts
- > This level is rarely performed; only in unique circumstances

- This is done explicitly to gather baseline information for use later in evaluating the performance of the specific sources at a given facility.
- This type of inspection should be done minimally jointly by a senior inspector and the personnel who will be assigned responsibility for the plant.
- Such inspections are conducted in conjunction with the stack tests on major sources such as large electrostatic precipitators, wet scrubbers, or fabric filters.
- With smaller sources which are rarely tested, the Level 4 inspection is done during a period when source personnel believe that the source is in compliance and the control device is working properly.
- An important part of the Level 4 inspection is the preparation of general process and control device flowcharts.
- The inspector should take advantage of the NACT and EPA/APTI courses to obtain further education on inspection levels and types.

Information Provider

Outreach and Compliance Assistance

- > Prevents noncompliance before it occurs and decreases chances of future noncompliance
- > Helps the regulated community understand and meet its environmental requirements
- > Helps achieve the Department's goal of keeping facilities in compliance with environmental regulations

Outreach and Compliance Assistance - *Improving the Business Relationship*

- > Best opportunity to gain good will, trust and responsiveness
- > Build good relationships every day
- > Every means of communication is a forum for positive interaction
- > Every transaction must be professional, respectful and helpful

- Every phone call, every drop-in visitor, every inspection, every meeting of any sort is a forum for positive interaction.
- That does not mean the answer is always "yes" - it does mean that every transaction must be professional, respectful and helpful.
- That is how the business relationships are established and improved.

Outreach and Compliance Assistance - Purpose and Components

- > Clarifying Rule Requirements, Permit Conditions, and Agency Expectations
- > Suggestions and Recommendations
- > Conclusion of visit or resolution of noncompliance
- > Follow-Up

Assisting Facilities with Compliance

Clarifying Rule Requirements, Permit Conditions and Agency Expectations

- > Address a known compliance area that is solely focused on that announced issue
- > Focus on fixing the problem, achieving positive environmental results and moving forward
- > Goal is to inform facility of requirements, not to witness facility operation
- > Encourage self-reporting

Suggestions and Recommendations

- > Assist the facility with staying in compliance.
- > Non-threatening
- > Can be based on:
 - ❖ permit requirements
 - ❖ prepared guidance and technical documents
 - ❖ information available from the EPA or the department's web sites and/or trade organizations
 - ❖ inspector experience with similar facilities
 - ❖ information about the facility's compliance status.

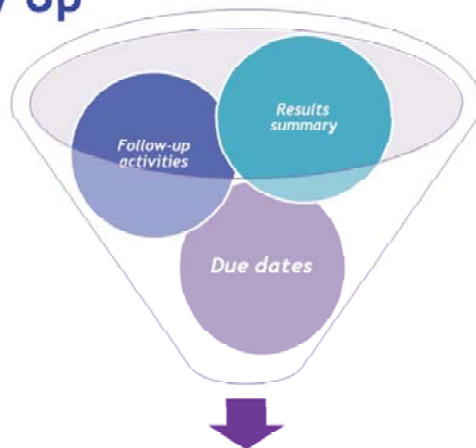
- Although the compliance inspector is not the facility's environmental consultant, it is encouraged that during the interaction, industry practices that promote good environmental stewardship be relayed to the plant personnel in a manner that is courteous and non threatening. Some of this information is available at: <https://www.fldepnet.org/content/darm/compliance-assistance>. It is updated as new materials are developed.
- Any materials independently developed for a particular situation should be forwarded to the Compliance Assistance Coordinator for posting.

Conclusion

- > Provide relevant information
- > Request additional information not available at the time of the inspection
- > It is the inspector's obligation to advise the owner/operator of problems observed at the facility regarding potential violations
- > Provide constructive feedback

- Upon concluding the visit, the inspector should conduct an exit interview to ascertain if the objectives of the visit were met and to establish the need for any follow up visits, phone calls or emails that are deemed necessary to encourage compliance.
- For a significant number of inspections, the exit interview with the owner/operator is the most difficult portion of the inspection. The inspector must be prepared to answer questions, to the extent possible, to prepare necessary receipts for samples, to provide relevant information on the State and federal programs, and to request additional information not available at the time of the inspection.
- If the inspector believes that erroneous or incomplete information may be passed on to the owner/operator during the exit interview, he should contact his supervisor privately and resolve the issue prior to the exit interview. If differences of opinion between the inspector and facility cannot be resolved, it is the inspector's obligation to advise the owner/operator of problems observed at the facility regarding potential violations of either State requirements or other federal requirements not enforceable by the State. Every attempt should be made to provide constructive feedback.

Follow Up



COMPLIANCE

- Upon return to the office, the inspector should prepare a brief summary of the results of an outreach or compliance assistance visit and establish due dates for any additional follow up activities identified during the exit interview.
- Follow-up on the solutions agreed on during the outreach or compliance assistance visit is crucial to the success of the effort. Follow-up activities may be limited to a phone call, email, or may require an additional site visit.
- If subsequent follow-up reviews continue to show non-compliance, the department may need to take further action to encourage compliance.
- See chapter 2 appendices for copy of the Deputy Secretary Memo (11/16/2011).

Small Business Environmental Assistance Program

- > Established under Section 507 of the CAA as a resource to help small businesses understand and comply with environmental regulations
- > Provides free and confidential assistance to small businesses
 - ❖ Phone consultations and referrals
 - ❖ Compliance assistance materials
 - ❖ Outreach and advocacy
- > Assistance primarily geared towards air general permit facilities

- The Small Business Environmental Assistance Program (SBEAP) is housed within the Division of Air Resource Management and implemented under Sections 403.8051-.8052, F.S., and Rule 62-210.220, F.A.C.
- To learn more about the SBEAP and access industry-specific guidance documents, factsheets, forms, and other resource materials visit: <http://www.dep.state.fl.us/air/emission/sbeap/program.htm>.
- SBEAP Toll Free Hotline: 1-800-722-7457.

Information Provider - Enforcement Measures

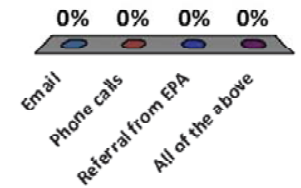
Inspector's Role

- > Provide technical knowledge of the facility
- > Noncompliance will be identified as such
- > Focus should be on returning the facility to compliance and preventing future noncompliance
- > Help determine how to return a facility to compliance
- > Help management to determine the cause of noncompliance
- > An inspector's determination is pivotal when determining proper methods of resolving noncompliance actions

Responding to Complaints

Complaints can be received via:

- A. Email
- B. Phone calls
- C. Referral from EPA
- ✓ D. All of the above



Complaint Definition

- > A referral to the Department regarding a condition that may or may not be associated with the operation, nuisance or compliance of a particular aspect or aspects of a facility's operation(s)
- > Complaints can be made via email, letter, phone calls, or referral from EPA.
- > **Responding promptly to complaints is a priority**
- > Investigate the complaint sooner if potential health threat or environmental damage exists

- All complaints need to be followed up on.
- Some complaints will be referred to other State agencies such as the Florida Forest Service or the Department of Health.

Model Complaint Response

- > Read the complaint carefully
- > Investigate the complaint in its entirety
- > Follow-up note to person who lodged the complaint
- > When responding, respond to each allegation
- > If investigation of complaint will take longer than 24 hours, acknowledge receipt of the complaint and inform complainant that you are looking into the issue

Best Practices Specific to Responding to Complaints

- > Complaint activity - partial review of a facility conducted to resolve specific matters related to the complaint only.
- > May be resolved simply by phone or email.
- > May or may not necessarily require the physical presence of an inspector at the facility.
 - ❖ Visit is unannounced or announced depending on the situation.

- A complaint activity, as stated, relates only to the complaint and/or matters discovered as a result of investigating the complaint.
- The visit should be unannounced to the facility, if a complaint activity requires the on-site presence of the inspector due to:
 - the inability to resolve conditions contained in the complaint
 - the severity of the complaint
 - the specific conditions anticipated to be found at the facility
 - the past history of the facility
 - the desire to receive credit toward an annual inspection of the facility
- Complaint activities (CI activity code) must be manually entered into ARMS per the Compliance Assurance Guidance Document.
- However, if a compliance activity is conducted at the time of a compliance inspection, field inspection tool should be used for the compliance inspection portion only.

Data Collection and Database Maintenance

Importance of Data Collection

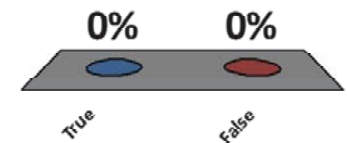
- > Significant part of Florida's responsibilities under the CAA
- > How DEP monitors regulated facilities, tracks their performance under CAA, and provides information to the public
- > Part of EPA's delegation of the CAA to Florida
- > Data used by DEP to ensure regulatory goals and requirements are being met.

- Without accurate data, DEP, EPA, and the public will not have the proper information it needs to preserve Florida's air quality.
- The Division's standard for data quality is 100%, as is EPA's.

Florida's Air Resource Management System (ARMS) is the only electronic tool currently used by DEP.

A. True

✓ B. False



Florida's Air Resource Management System (ARMS) and AirCom

- > Repository for information related to air program facilities across the state.
- > Connects air facility data with each facility's permitting and compliance assurance activities.
- > 3 functional components:
 - ❖ ARMS Inventory (location, contacts, reg. details)
 - ❖ ARMS PA (Permitting Application)
 - ❖ AirCom (Compliance Assurance)

- ARMS Inventory holds information on the location, contacts, and regulatory details specific to the facility.
- ARMS Permitting tracks permit processing details for applications at facilities in the ARMS Inventory module.
- AirCom allows inspectors to retrieve/enter compliance and enforcement activities at facilities in the ARMS Inventory Module.

Electronic Tools & Databases

- | | |
|---|--|
| > EPA's Integrated Compliance Information System (ICIS) | > Electronic Annual Operating Reports (EAOR) |
| > EPA's National Emissions Inventory (NEI) Database | > Florida AOR Data Search (FADS) |
| > Electronic Permit Submittal and Processing System (EPSAP) | > Asbestos Database |
| > AirCom | > Air Documents Handling System (ADHS) |
| > Air Compliance and Enforcement Search (ACES) | > Air OCULUS Document Management System |

- These tools and databases interact.
- Data entry - how the Department provides information to EPA (via uploads to ICIS/NEI) and the public.
- Data is required to be entered into the Division's database after an inspection or report review and during enforcement actions.

EPA's Integrated Compliance Information System (ICIS)

- > Contains compliance and permit data for stationary sources regulated by EPA, state and local air pollution agencies.
- > States use ICIS information to:
 - ❖ Prepare State Implementation Plans (SIPs)
 - ❖ Track the compliance status of point sources with various regulatory programs under the CAA
- > Data in ICIS is compared to data in ARMS/AirCom and physical documents during the State Review Framework (SRF) process.
- > EPA issues a public report identifying discrepancies between those three sources during the review.

- For further information regarding the air permitting program, visit EPA's Air Permits page.
- ICIS was once termed AIRS Facility Systems (AFS) and Aerometric Information Retrieval System (AIRS), hence the historical utilization of those terms may be incorporated within referenced documentation.

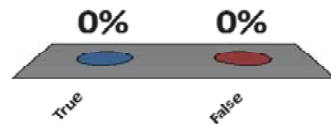
EPA's Integrated Compliance Information System (ICIS)

- > Tracking of emissions inventories has been moved to the National Emissions Inventory (NEI) database.
- > ICIS data is also visible in EPA's Enforcement and Compliance History Online (ECHO) Web site.

- ECHO - This tool provides the public with compliance, permit and demographic data from approximately 800,000 facilities regulated under the CAA stationary source program and other statutes.
- ECHO's integrated reports present inspections, violations, enforcement actions, penalties and locate facilities on demographic maps.

The National Emissions Inventory (NEI) is a comprehensive and detailed estimate of air emissions of both criteria and hazardous air pollutants from all air emissions sources.

- ✓ A. True
- B. False



EPA's National Emissions Inventory (NEI)

- > Is a comprehensive and detailed estimate of air emissions of both criteria and hazardous air pollutants from all air emissions sources.
- > Prepared every 3 years by the US EPA
- > Based primarily upon emission estimates and emission model inputs provided by State, Local and Tribal air agencies for sources in their jurisdictions and supplemented by data developed by the US EPA.

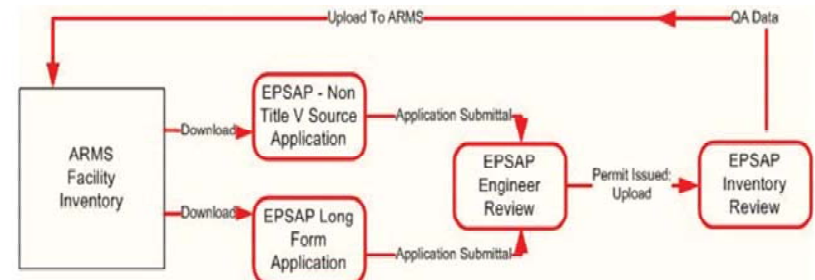
- The 2011 NEI will be built from emissions data in the Emissions Inventory System (EIS). 2011 data submissions to EIS by State, Local and Tribal air agencies were due 12/31/2012.

Electronic Permit Submittal and Processing (EPSAP) System

- > Electronic version of the Air Permit Application Forms
- > Allows facilities submitting air permit applications w/ pre-fill information from the ARMS Facility Inventory Module

- The signatories must have user accounts and PINs from the Air Security System in order to submit the application electronically.
- Once submitted, a permit application reviewer can modify a “copy” of the applicant’s data to reflect the permit issued and then upload that data to the EPSAP Inventory Module.
- Data goes through a rigorous QA and then can be uploaded into the ARMS Inventory module.

Electronic Permit Submittal and Processing (EPSAP)



AirCom (Implemented Summer 2014)

- > Consolidates and modernizes multiple compliance tools
- > Replaces EASIIR and GPCI inspection tools
- > Addresses issues identified in State Review Framework
- > Allows for workload and task tracking
- > Packages information for ease of transmittal to EPA
- > Stable platform will require minimal user updates
- > Improved database and management reports
- > Allows uploading notes/files entered in AirCom to OCULUS, or linking activities in AirCom to the document in OCULUS

Field Inspection Tools (EASIIR/GPCI)

- > Retired Summer 2014
 - > Were programs that allowed inspectors to pull permit requirements from ARMS, collect information in the field electronically, and upload it to ARMS upon return to the office.
 - > Was updated to a more stable platform (AirCom)
 - > Improvements of new system:
 - ❖ Ease of use
 - ❖ Real-time information upload
 - ❖ State Review Framework data quality checks
 - ❖ Easier workload management
-
- Field inspection tool developed to assist the inspector by reducing the manual assemblage of the information necessary to properly prepare for an inspection, provide up-to-date "in-hand" field compliance information and provide a method for uniform automated inspection reporting.
 - Field inspection tool takes information contained in the ARMS Oracle database, air permits, inspection history records and other pertinent information necessary to properly conduct an inspection and transfers this information to the electronic inspection templates contained on a rugged field computer.
 - Inspection observations and results are captured electronically and uniformly within the electronic templates compiling the inspection data record.
 - Once the inspection information is captured, it can be electronically transferred to a desktop PC where the inspector can revise the report, retain the completed electronic copy of the inspection compliance results, and then electronically upload inspection results updating the ARMS Oracle database.
 - The inspection record is then permanently accessible. This data then serves as the base for next air compliance inspection.

Air Compliance and Enforcement Search (ACES)

- > Publicly available report
- > Allows users to search facilities to view their 5-year compliance & enforcement history in the air program
- > Will be revamped and renamed following implementation of AirCom

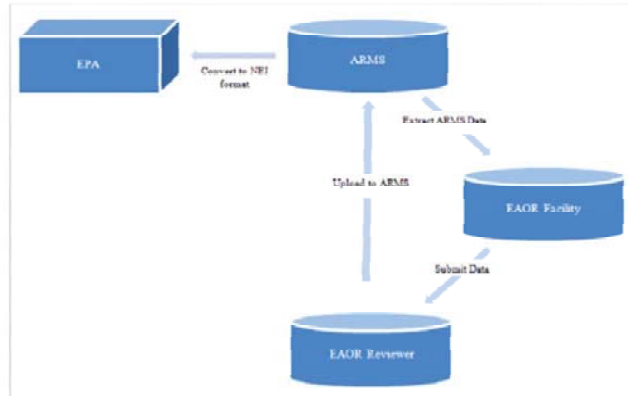
- This data is pulled from the ARMS/AirCom, as well as displaying active permit data. There is a link to ADHS (Permit Documents) and Florida AOR Data Search - FADS (Emissions Data).

Electronic Annual Operating Reports (EAOR)

- > Rule 62-210.370 (3), F.A.C., the Annual Operating Report for Air Pollutant Emitting Facility ([DEP form number 62-210.900\(5\)](#))
- > Provides data required by the EPA and state for:
 - ❖ Air quality assessment and planning purposes
 - ❖ Air quality modeling during permit application reviews
 - ❖ Provides information to the public if requested
- > Title V fee collaboration with AOR report due to Title V rule change for fee calculation

- AOR reporting required for:
 - All Title V sources
 - All synthetic non-Title V sources
 - All facilities with the potential to emit ten (10) tons per year or more of volatile organic compounds or twenty-five (25) tons per year or more of nitrogen oxides and located in an ozone nonattainment area or ozone air quality maintenance area
 - All facilities for which an annual operating report is required by rule or permit

Electronic Annual Operating Reports (EAOR)



Florida AOR Data Search (FADS)

- > Publicly available report
- > Allows users to search data submitted from facilities through their AOR
- > Primary goal - create a mechanism for extracting available information and ultimately providing the public with easy access to the Florida DEP air pollutant annual emissions data
- > Will be revamped and renamed in Summer 2014

- Comparing annual information for different operating years, comparing current emissions with baseline emissions, and ultimately providing the public with easy access to the Florida DEP air pollutant annual emissions data.

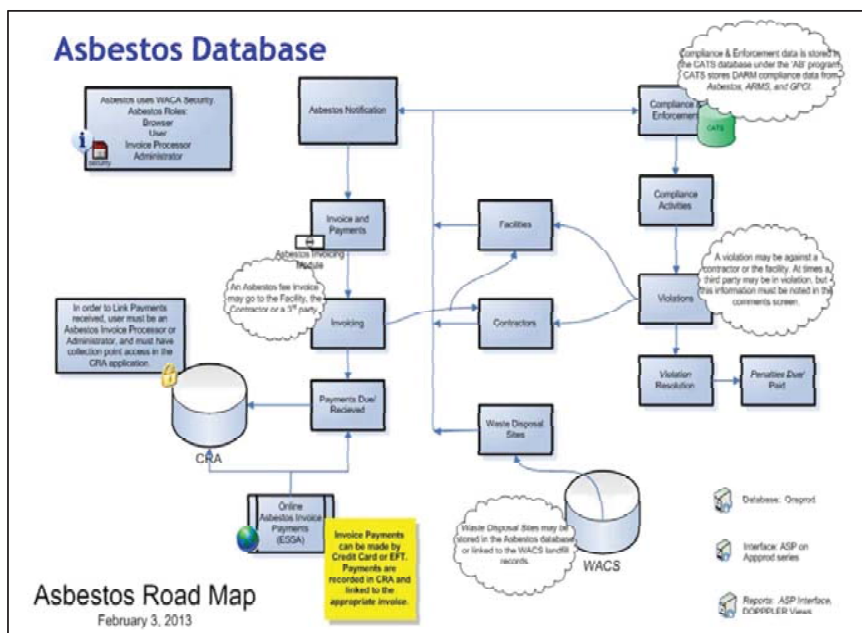
The Asbestos Database tracks notifications of:

- A. Asbestos removal from owners & operators
- B. Asbestos fees paid
- C. Asbestos compliance activities performed by the Districts and local program offices
- ✓ D. All of the above



Asbestos Database

- > Tracks notifications of:
 - ❖ Asbestos removal from owners & operators
 - ❖ Asbestos fees paid
 - ❖ Compliance activities performed by the Districts and local program offices
- > Notifications can now be accepted online



Air Document Handling System (ADHS) ^{1/2}

ADHS is presently being migrated to OCULUS, a Department enterprise electronic data storage system.

ADHS is made up of 5 permit related functions (4 available only to users with their FLORIDADEP or EXOSPHERE credentials and 1 publicly-available)

- > **Permit Posting** - allows the user to post permits so that others can view them.
- > **Permit Search** - allows users to search for the original unconverted zipped documents that are posted via Permit Posting.

- **Permit Posting** - This process involves creating and posting a zipped file. Word and Excel documents that are located in the zipped file are then converted to Adobe PDF for public viewing when searching using "Air Permit Document Search" located on Air's internet website.

Air Document Handling System (ADHS) ^{2/2}

- > **Document Search** - allows users to search for the scanned permit file documents that were processed
- > **Document Upload** - allows users to upload scanned documents viewable online to the general public
- > **Air Permit Document Search** - is a publicly available website that displays the permitting documents made available through ADH Tabs for the general public in an easy-to-understand format. *(May be changing.)*

OCULUS ^{1/4}

- > Migration occurred July 2013 to match interface used by other Divisions in Department
- > Documents inserted into OCULUS 3 ways:
 - ❖ Web-Based System Interface
 - ❖ Insert Macro
 - ❖ Direct Scanning Through Document Management Staff

- OCULUS web-based system interface - This is the interface found while logging in to the OCULUS system through the web-based system. Requires the link to OCULUS (<http://depdms.dep.state.fl.us/Oculus/servlet/login>) and appropriate permissions to OCULUS. Because DEP has a maximum number of concurrent licenses it is recommended you use a different interface if available.
- OCULUS Insert Macro - This is software that must be installed on your PC. To request the software be installed contact the DEP Service Desk or your District IT support. (Note: This requires your password be set up in the Macro's set up. Your IT staff can help you.)
- Direct Scanning Through Document Management Staff - Generally this will be used for getting paper files in an electronic format, QA/QC processed by trained staff, and scanned directly to OCULUS using a batch class in KOFAX software.

OCULUS ^{2/4}

- > Type of documents inserted:
 - ❖ Permit Authorizations
 - ♦ Air General Permits
 - ♦ Title V Permits
 - ♦ Other Permits (Construction, FESOP, Other Operating Permits)

OCULUS ^{3/4}

- > Type of documents inserted:
 - ❖ Discovery Compliance
 - ♦ AOR
 - ♦ Facility Closures
 - ♦ Complaint Related
 - ♦ Incident or Malfunction Reporting
 - ♦ Inspection Reports
 - ♦ Correspondence
 - ♦ Site Reports
 - ♦ Photos

OCULUS 4/4

> Type of documents inserted:

- ❖ Enforcement Legal
 - ♦ Case Closure Related
 - ♦ Consent Order
 - ♦ Final Judgment
 - ♦ Final Orders
 - ♦ Correspondence and Meetings
 - ♦ NOVs
 - ♦ Penalty Related
 - ♦ Variances
 - ♦ Warning Letters

**Deputy Secretary's
Memo (11/16/2011)**



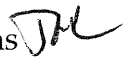
Florida Department of
Environmental Protection
Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

Rick Scott
Governor

Jennifer Carroll
Lt. Governor

Herschel T.
Vinyard Jr.
Secretary

TO: Regulatory Directors

FROM: Jeff Littlejohn, Deputy Secretary, Regulatory Programs 

DATE: November 16, 2011

SUBJECT: Regulatory Compliance

Thank you all for the good discussions about compliance assistance and enforcement at the Secretary's strategic planning meeting and our subsequent directors meeting in July. I appreciate your collective experience and the careful thought you continue to give these issues. Based on your continuing input and further reflection, I intend the regulatory programs to move forward under the following guidance.

Compliance Assistance

Keep uppermost in your mind that the department's primary *regulatory* objective is compliance with Florida's environmental laws. As such, compliance assistance must be integral and fundamental to our work.

Please expand your outreach, education and technical assistance efforts to help your constituents avoid violations. Reach out to local small business organizations, trade groups, homeowners associations, contractors, local governments, and similar groups to arrange regular and continuing educational meetings, Q&A sessions, permitting and compliance guidance workshops, etc. You provided Carla with examples of the kind of outreach assistance you undertake (attached). We need to actively transfer effective strategies across District and Division boundaries – and we will discuss how best to do so at our upcoming directors meeting. Compliance assistance must be integral and fundamental to your work. I expect the districts and divisions to work together to develop and implement well thought out programs with specific compliance objectives.

I also want to make sure we routinely offer the opportunity for pre-application meetings. These are particularly important for applicants with limited access to

consulting resources. They are also valuable for projects you believe are likely to prove controversial, in order to make sure the ground rules are clear up front and to understand the applicant's objectives.

Pre-application and compliance assistance is hard work and takes time. It is essential, then, to track it in terms of time and effort—and results. What's the pay off? Do our actions improve compliance over time and, if so, to what measurable degree? Can we determine which actions are most effective? Can we use the information to adapt and better target strategies? Cause and effect relationships may be difficult to establish, but we will work on that problem collectively over time. We also must have data systems to account for the time, effort and results; and we have to transfer knowledge—successful models should be expanded, unsuccessful ones dropped.

Formal assistance is essential, but your day-to-day encounters with regulated interests and the general public are the best opportunity we have to gain good will, trust and responsiveness—all of which will improve compliance and environmental stewardship. Build good relationships every day. Every phone call, every drop-in visitor, every inspection, every meeting of any sort is a forum for positive interaction. That does not mean your answer is always “yes”—it does mean that every transaction must be professional, respectful and helpful.

Inspections and Enforcement

One tool for delivering compliance assistance is, of course, field inspections. Inspections are not only a means of detecting violations and making responsible decisions about enforcement, they also are a gauge by which to identify patterns and trends in environmental behavior in order to target compliance assistance. Patterns may involve a single actor over time, a type of activity, an area, or an industry sector, for example. While they may identify those who warrant meaningful enforcement, patterns may also reflect confusing regulatory requirements or inconsistencies in our application of requirements, both of which we need to fix. Understanding patterns requires attention and analysis. The results should be factored into future actions—so we can adapt and improve.

Where noncompliance occurs, despite your best efforts at education and outreach, your first consideration should be whether you can bring about a return to compliance without enforcement. The department's longstanding practice, explicitly set forth in the Enforcement Manual, recognizes that if compliance can be achieved without enforcement, the outcome is usually timelier and less costly than formal measures, especially legal proceedings, and allows the focus to be on fixing the problem, achieving positive environmental results, and moving forward.

Compliance without enforcement is certainly not appropriate in all situations, but it is the right approach when a violation is limited in scope, the violator is unaware or genuinely confused about the requirements and is cooperative and willing to rectify the situation and restore any damage. (Consideration must always be given to federal delegation agreements, which may prescribe an enforcement response.) Such situations typically can be resolved by informal agreement or letter, with agency follow-up to make sure the issue is resolved. If corrective actions are complicated and time consuming, a consent order making everyone's responsibilities clear may be a better choice.

In some instances, parties report on themselves when they discover an inadvertent violation. The department should encourage this behavior, which shows good faith on the part of the reporter and helps us quickly reach a positive environmental result. These situations may be handled without enforcement as well if the violation is limited in scope and the violator is not a chronic offender (unlikely for a self-reporter) and is willing to fix the problem and restore any damage. Again, if corrective actions are simple, the situation can be resolved by informal agreement or letter, with agency follow-up. If corrective actions are complicated, a consent order may prove necessary. (And, again, federal delegation agreement requirements must be considered.)

Determining whether achieving compliance without enforcement is the right approach is not always straightforward. Determining the right penalties when formal enforcement becomes necessary. The direction provided by the Enforcement Manual, including the specific guidelines for characterizing different types of violations, is essential to promoting consistent practices. The division offices and the Office of General Counsel are positioned to help make these judgments and review outcomes to assure that we are consistent. With that in mind, I will be asking the divisions and OGC to make recommendations to me on reviewing penalties and other compliance and enforcement practices.

Water	Drinking Water & Wastewater	6 times/year	Focus on Change Seminars. The FRWA, in partnership with DEP, holds six one-day training seminars annually. This seminar program started in 1991 and over the past several years 1,400 operators and utility managers have attended annually. This program focuses on rule changes, new Department initiatives and ways to improve plant compliance. It allows operators needing continuing education credits to maintain their operator licenses in the water and wastewater fields.	Improve understanding of the regulations. Improve compliance.
Water	Stormwater	On-Going	Stormwater Education Task Force. For about the past 10 years, DEP has used federal grants to fund this program (at the Stormwater Management Academy at the University of Central Florida) which is aimed at developing, collecting and making available a variety of educational materials to assist the local governments holding MS4 permits with meeting their educational requirements.	Improve understanding of the regulations. Improve compliance.
Water	Stormwater	Quarterly	NPDES MS4 Webinars. Staff will be conducting quarterly webinars to assist the MS4 permit holders with meeting their permit requirements.	Improve DEP visibility and access in the business community. Improve Compliance. Improve understanding of the regulations.
Waste	Cleanup	On-Going	Information Packet for State Funded Petroleum Cleanup. The Division is developing an information packet for Responsible Parties for facilities eligible for state funded petroleum cleanups to inform them about the contractor designation process, performance based cleanups, closure options, etc. The focus is on closing more sites quicker and educating site owners about the various options to achieve this goal.	Improve DEP visibility and access in the business community. Improve Compliance.

Air	Siting Office	As Requested	Training in Florida's Siting Acts. Presentations related to the Siting acts are provided as a webinar or in person, as requested.	Improve understanding of the regulations.
Air	Small Business Program	As Requested	Small Business Assistance. The Division maintains a website to assist small businesses. The site included information regarding registration worksheets, rules & regulations, general information, etc. The Division also has a hotline and email address to assist small businesses with their questions.	Improve communication between the DEP and businesses. Improve understanding of the regulations. Improve compliance. Improve DEP visibility and access in the small business community.
Water	Drinking Water & Wastewater	On-Going	Area Wide Optimization Program (AWOP). AWOP is a program aimed at evaluating Water Treatment Plants and educating operators and management on strategies for optimizing their processes.	Improve DEP visibility and access in the business community. Improve Compliance.
Water	Drinking Water & Wastewater	On-Going	Florida Rural Water Association Technical Assistance. DEP partners with the FRWA to: (1) provide training on Florida's water and wastewater regulations and rule requirements, (2) assist operators of small systems to ensure they stay in compliance with drinking water standards, (3) to prepare Department permitting applications and loan applications for federal funding, and (4) ensure there are sufficient competent operators for manning of treatment plants.	Improve understanding of the regulations. Improve compliance.

SD	Executive Direction	October 2011 – April 2012	Community Events. During the next six months, the SD will be present at community fairs for a free display area to increase public awareness of DEP's great work in "getting the water right" and increasing the awareness of our beautiful state parks and the economic value of day or weekend trips to one.	Improve communication between the DEP and citizens. Improve DEP visibility and access to citizens. Improve understanding of the regulations.
SD	Executive Direction	On-Going	Community Stakeholder Meetings. The SD will be reaching out to community stakeholders to meet with them and become active with the various environmental conservation groups or clubs in the SD. The District's goal is to demonstrate that DEP is working at protecting Florida's environment with regulatory processes that our consistence. This will allow us to be more proactive in learning what their current issues are and create a plan of action by asking the groups or clubs with a particular issue if would they like a speaker to talk about it (issue) from either a scientific or regulatory bases.	Improve communication between the DEP and stakeholders. Improve DEP visibility and access to stakeholders. Improve understanding of the regulations.
SED	Tanks	As Requested	Storage Tanks/Petroleum Contamination Presentations. At the request of industry, presentations are given to educate them on our compliance and enforcement policies and procedures. For the last few years, we have given presentations for the National Institute for Storage Tank Management (NISTM) at their Annual West Palm Beach Conference at the Crowne Plaza Hotel on Belvedere Road. A presentation at the conference is planned this year in October.	Improve communication between the DEP and businesses. Improve DEP visibility and access in the business community. Improve Compliance. Improve understanding of the regulations.
SED	Hazardous Waste	2011 – 2012 FY	Hazardous Waste Outreach. This fiscal year, the SED will be focusing on the following outreach initiatives related to hazardous waste regulations: -- Expanding the variety of compliance assistance tools available to Florida small businesses to familiarize them	Improve communication between the DEP and businesses. Improve DEP visibility and access in the business community. Improve Compliance.

			with the RCRA regulations and improve their compliance. – SED committed to a minimum of 100 Compliance Assistance Site Visit (CASV) inspections. This includes DEP's agreement to conduct follow up Compliance Evaluation Inspections (CEIs) within 120 days after the CASV is conducted. – DEP intends to increase the number of counties participating in this enhanced compliance assistance effort; and improve the capability of current partnerships through improved data management sharing; by conducting joint training inspections and workshops.	Improve understanding of the regulations.
SED	Hazardous Waste	On-Going	Schools Chemical Clean-Out Campaign. Schools Chemical Clean-Out Campaign (SC3), in operation since 2005, has created chemically safer school environments in which chemicals are purchased wisely, stored safely, handled by trained personnel, used responsibly, and disposed of properly. DEP educates teachers and staff on proper handling, storage, and disposal of hazardous chemicals and identification of potentially dangerous chemicals that should not be present or used.	Improve DEP visibility and access in the business community. Improve Compliance. Improve understanding of the regulations.
SED	ERP	Annual	Marine Contractors Workshops. The SED holds annual marine contractor workshops where they provide presentations on permitting and state lands issues, mitigation, etc. This past year they also held local government workshops within all of our counties to review DEP's rules and jurisdiction and also roll out the new self certification website.	Improve communication between the DEP and businesses. Improve DEP visibility and access in the business community. Improve Compliance. Improve understanding of the regulations.
Air	Permitting & Compliance	New Initiative	Outreach to Key Industry. The Office of Permitting & Compliance is now organized into three industrial groups: Chemicals & Combustion, Minerals & Metals, and Power Plants. Staff is directly contacting personnel at regulated industries to describe the reorganization and establish a key contact within the Office.	Improve communication between the DEP and businesses. Improve understanding of the regulations. Improve compliance. Provide a single point of contact for customers.

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SWD	Executive Direction	On-Going	Establish a New Business Initiative. Setting up seminars for new businesses that may have permitting questions. Allowing access to the SWD permitting staff in the various programs. This would also serve as an opportunity to drive the importance of compliance and educate those who may not be familiar with our rules.	Improve communication between the DEP and new businesses. Improve understanding of the regulations. Improve compliance throughout the SWD. Improve DEP visibility and access in the business community.
SWD	Executive Direction	6 times per year	Host Open House for Stakeholders. Director hosts a bi-monthly "open house" and each event hosts a different set of stakeholders. Examples of stakeholder groups: consultants, local grassroots environmental groups, etc.	Improve communication between the DEP and environmental stakeholders. Improve understanding of the regulations.
SWD		On-Going	Host Compliance Workshops. The SWD would look to identify trends in enforcement and target groups/areas that have non-compliance issues. Compliance workshops would be hosted by the SWD for these targeted industries.	Improve communication between the DEP and businesses. Improve understanding of the regulations. Improve compliance throughout the SWD. Improve DEP visibility and access in the business community.
SD	Executive Direction	On-Going	Business Support Strategic Plan. The SD working with Economic Development Offices, Small Business Development Centers and local Chamber of Commerce to help streamline environmental permitting for business growth. Other goals include: — Increase awareness of Brownfield locations — Increase awareness of DEP's proactive business stance — Attend regional business to business expos	Improve communication between the DEP and businesses. Improve DEP visibility and access in the business community. Improve Compliance. Improve understanding of the regulations.

CD	ERP	On-Going	Florida Marine Contractors Association Workshops. The CD is partnering with the Florida Marine Contractors Association and has conducted two workshops for marine contractors. The workshops featured agencies with overlapping jurisdiction, including the Army Corps of Engineers, Florida Fish & Wildlife Conservation Commission, US Fish & Wildlife and Orange County EPD.	Improve communication between the DEP and businesses. Improve DEP visibility and access in the business community. Improve Compliance. Improve understanding of the regulations.
CD	ERP	On-Going	Marine/Boating Industry Outreach. The CD provides continuous outreach to the boating and marine industry in Central Florida, routinely conducting site visits, compliance assistance, workshops, and presentations to marinas, boatyards, and others in the industry.	Improve communication between the DEP and businesses. Improve DEP visibility and access in the business community. Improve Compliance. Improve understanding of the regulations.
SWD	Executive Direction	Quarterly	Establish Legislative Relationships. In an effort to re-establish relationships with legacy lawmakers, as well as newly elected officials, the SWD director will visit with each legislator that frequently interacts with the SWD. Following those meetings: — Quarterly newsletter emailed to legislators. — Host Legislative Workshops for overviews of the SWD's responsibilities. — Coordinate Director/Legislator Workdays.	Increase communication. Generate positive media coverage. Establish relationships. Improve understanding of the regulations.

CD	Hazardous Waste	On-Going	Florida Green Yards Program. CD staff conducts countless compliance assistance site visits to auto recyclers in the district, educating salvage yard owners and operators while improving compliance rates. This program has been adopted by the Hillsborough County EPD.	Improve communication between the DEP and businesses. Improve DEP visibility and access in the business community. Improve Compliance. Improve understanding of the regulations.
CD	Hazardous Waste	Quarterly	SQG Roundtable. The Hazardous Waste program meets quarterly in an "SQG Roundtable" involving numerous local agencies, including county governments, to discuss potential/current compliance/enforcement issues, new rules, and problem solving. Seminole County has instituted a Task Force which achieves the same goal on a smaller scale; just one county and multiple local agency representatives within the County attend.	Improve communication between the DEP local governments. Improve Compliance. Improve understanding of the regulations.
CD	ERP	On-Going	Onsite Mitigation Project. ERP staff began a new project in January of 2011 centering on compliance, with an important outreach component. The goals of the project are to influence permittees to do their onsite mitigation plantings (to offset their other impacts and to ensure no net loss of wetland function) and to improve chances of compliance when we make our compliance visits. Initially 30 permittees who chose to do onsite mitigation planting as part of their permit from DEP were selected. Staff made phone calls or sent letters to each of them to advise that the planting was important, DEP would be coming to check their work, and would gladly provide them personal, onsite assistance if they needed help understanding or planning their mitigation. We offered the services of our top wetland expert if they needed assistance in planning their mitigation planting. Our staff has already made a difference by leveraging a low-intensity phone call to assist the regulated community and improve compliance rates.	Improve Compliance. Improve understanding of the regulations.

CD	Executive Direction	On-Going	Metropolitan Environmental Training Alliance. For years, the CD has leveraged enforcement into education. The Metropolitan Training Alliance was started by the CD as a constructive alternative to standard enforcement. It is now a non-profit organization run "on its own steam" for over 10 years providing environmental training to businesses and citizens around Orlando. METRA's goal is to provide low or no-cost training to small businesses and other entities that usually do not have environmental staff on site. Because of its diverse membership, METRA is able to develop training specific to a wide variety of industries. More than 3,000 individuals have been trained by METRA.	Improve Compliance. Improve understanding of the regulations.
CD	Water	On-Going	Drinking Water, Wastewater, Biosolids Workshops. For the past five years, the CD has conducted workshops aimed at increasing compliance in various industries regulated by our Water Facilities program. These include Drinking Water, Wastewater, and Biosolids (residuals). All workshops were assembled and presented by Central District staff in an effort to increase compliance in the specific areas. Continuing Education Units (CEUs) were offered for most workshops. The District has hosted more than twenty-five workshops during the past five years.	Improve communication between the DEP and businesses. Improve DEP visibility and access in the business community. Improve Compliance. Improve understanding of the regulations.
CD	Hazardous Waste	On-Going	Hazardous Waste Initiatives. Hazardous Waste participates in diverse outreach and compliance assistance activities, ranging from targeted, industry-specific compliance assistance endeavors to presentations at large and small conferences and workshops, such as the Florida Veterinary Association, the Tupperware Environmental Conference, and the METRA Medical Workshop. Hazardous Waste staff organizes HAZWOPER refresher courses for district employees as well as other governmental agency staff.	Improve communication between the DEP and businesses. Improve DEP visibility and access in the business community. Improve Compliance. Improve understanding of the regulations.

NED	Hazardous Waste Section	3 – 5 per year	Major Industry Training - To provide industry-specific training on hazardous waste, used oil, universal waste regulations, and the DEP inspection and enforcement processes to large businesses such as the First Coast Manufacturers' Association (FCMA), Camp Blanding, and the Jacksonville Aviation Authority (JAA).	Improve communication between the DEP and large businesses. Improve understanding of the regulations. Improve compliance throughout the NED. Improve DEP visibility and access in the business community.
NED	Hazardous Waste Section	2 – 4 per year	Environmental Professionals Training - To provide training on hazardous waste, used oil, universal waste regulations, and the DEP inspection and enforcement processes to environmental professionals such as UF Law School students and Certified Hazardous Material Managers (CHMMs).	Improve communication between the DEP and environmental professionals. Improve understanding of the regulations.
NED	Potable Water	110	Potable Water Facilities - Train and/or verify correct bacteriological sample collection methods by PWS samplers.	Reduce number of false positives. Increase SQR Compliance rate.
NED	Wastewater Permitting	28	Wastewater Facilities – Provide pre-permit application review and post-permit issuance training for domestic and industrial wastewater facilities.	Reduction in RAIs. Reduction in time in-house for permits. Increase compliance rates. Increase communication.
NED	Wastewater Compliance & Enforcement	23	Wastewater Operator Training – As part of the compliance assistance efforts, general and violation based training is provided to increase knowledge of the regulatory conditions in wastewater permits.	Reduction in SNC. Increase compliance rates. Improve understanding of regulations. Increase communication.

				Reducing costs and incidence of corrective actions when unknowing structures and fill that violate Statutes must be removed, as well as avoiding enforcement costs.
NED	Waste Program	4 per year	Navy Partnering - Quarterly meetings (four Naval commands and three Government agencies) to discuss environmental issues of concern to the Naval facilities in the NED.	Improve communication between the DEP and military facilities. Improve environmental compliance at military facilities.
NED	Hazardous Waste Section	4 per year	NED SQG Roundtable Meetings – To educate County inspectors by discussing new regulations, present case studies of specific types of industries, and answer questions and concerns of the county inspectors.	Train County inspectors to leverage DEP's limited resources. Improve communication with DEP and County SQG inspectors. Improve compliance with hazardous waste and used oil regulations throughout the NED.
NED	Hazardous Waste Section	4 - 6 per year	County Sponsored Hazardous Waste Workshops – To provide training to businesses on hazardous waste, used oil and universal waste regulations.	Improve communication between the DEP and small businesses. Improve understanding of the regulations. Improve compliance throughout the NED. Improve DEP visibility and access in the business community.
NED	Hazardous Waste Section	6 – 10 per year	Hazardous Waste Training at the Northeast Florida Safety Council – To provide training to consultants and facility representatives on the hazardous waste, used oil, and universal waste regulations on a continuing basis.	Improve communication between the DEP and businesses and consultants. Improve understanding of the regulations. Improve environmental compliance throughout the NED. Improve DEP visibility and access in the business community.

District/Division	Section	Number of Events	Type	Desired Outcomes
NWD	Drinking Water	12 per year	Consumer Confidence Reporting Help Sessions. The NWD hosts 3 half day sessions per month in January, February, March and April. Community water systems are invited to attend. Before the help session, we download the individual system's data and have it available for them to use in the help session. At the help session they input the data in the CCR template with our assistance. When the system representative leaves, the CCR is complete.	Improve communication between the DEP and businesses. Improve DEP visibility and access in the business community. Improve Compliance. Improve understanding of the regulations.
NWD	Air	As Requested	Asbestos Renovation and Demolition Activity Presentations. The NWD conducts asbestos presentations, as requested. The District also has an informational summary concerning asbestos abatement, renovations and demolitions that they send out to the public when they receive questions.	Improve Compliance. Improve understanding of the regulations.
NED	ERP	4 per year	Real Estate Professionals and the Northeast Florida Association of Realtors (NEFAR) – Provide sufficient information to homeowners, through their realtors, to avoid dock or wetland violations.	Reducing costs and incidence of corrective actions when unknowing structures and fill that violate Statutes must be removed, as well as avoiding enforcement costs.
NED	ERP	2 per year	Marine Contractors and the Florida Marine Contractors Association – Provide permitting education for marine construction professionals.	Create the conditions necessary for fast permit processing and knowledgeable industry representatives best able to provide service for their clients.
NED	ERP	4 per year	County Building Inspectors – Assist building inspectors complete wetlands fill and dock construction concurrency reviews for compliance with the Florida Building Code and Federal Law under the National Flood Insurance Program (NFIP).	Reducing costs and incidence of corrective actions when unknowing structures and fill that violate Statutes must be removed, as well as avoiding enforcement costs. Avoid duplicative permitting processes for property owners seeking authorization for building construction from multiple agencies.
NED	ERP	2 per year	County Health Departments – Education and coordination with DOH Onsite Sewerage Treatment Device System (OSTDS) inspectors on the identification of wetlands.	Avoid duplicative permitting processes for property owners seeking authorization for building construction from multiple agencies.

Waste	Solid Waste	On-Going	Solid Waste Webinars. The Division has begun hosting webinars with regulated industry, stakeholders and DEP District solid waste staff to discuss emerging issues in the Solid Waste Program and get feedback.	Improve communication between the DEP and businesses. Improve DEP visibility and access in the business community. Improve Compliance. Improve understanding of the regulations.
DEAR		On-Going	Green Industries Best Management Program. The Green Industries Best Management Program (BMP) program is targeted at those persons required by statute to obtain certification in the application of fertilizers and pesticides. Certain applicators are required to be certified by 2013 and are regulated by a DACS commercial application license.	Improve Compliance. Improve understanding of the regulations.
DEAR		On-Going	Sediment and Erosion Control Course. The Sediment and erosion control course is targeted at persons in the construction industry with the goal of assisting them in their efforts to comply with the BMP maintenance and inspection requirements outlined in the NPDES construction generic permit.	Improve Compliance. Improve understanding of the regulations.

Chapter 3

Chapter 3

Conducting On-Site Compliance Inspections



Florida Air Inspector Reference (FAIR)
Training Program

Overview

- > Purpose of Inspection
- > Conduct, Ethics, and Professionalism
- > Inspection Frequency and Targeting
- > Preparing for Inspection
- > Safety Considerations
- > Conducting the Inspection
- > Documentation
- > Handling Non-Compliance Issues
- > Inspection Report
- > Data Entry
- > Resources/Appendix

- Chapter 2 provides the general points of inspecting. This Chapter details the inspection itself.

Acronyms

> ISO	> CMS	> AFS
> SIP	> CEMS	> GPCI
> PCE	> EER	> ADH
> FCE	> PSD	> SOP
> HRF	> NSR	> BMP
> SNC	> NSPS	> MDR
> MNC	> NESHAP	> ICR
> CAA	> BACT	
> SNTV	> ARMS	

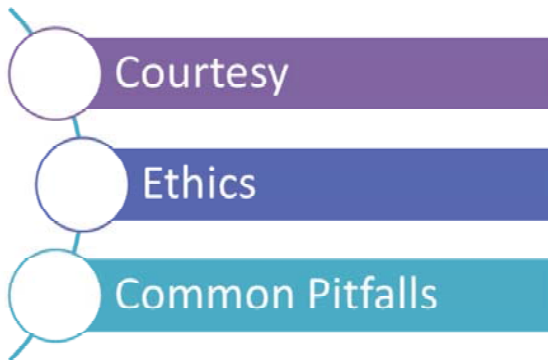
- The acronyms are in the order in which they first appear for this chapter.

ISO	International Organization for Standardization
SIP	State Implementation Plan
PCE	Partial Compliance Evaluation
FCE	Full Compliance Evaluation
HRF	High Risk Facility
SNC	Significant Non-Compliance
MNC	Minor Non-Compliance
CAA	Clean Air Act
SNTV	Synthetic Non-Title V
CMS	Compliance Monitoring Strategy
CEMS	Continuous Emissions Monitor
EER	Excess Emission Reports
PSD	Prevention Of Significant Deterioration
NSR	New Source Review
NSPS	New Source Performance Standards
NESHAP	National Emission Standards For Hazardous Air Pollutants
BACT	Best Available Control Technology
RACT	Reasonably Available Control Technology
ARMS	Air Resource Management System
AFS	Air Facility System
GPCI	General Permit Compliance Inspections
ADH	Air Document Handling
SOP	Standard Operating Procedure
BMP	Best Management Practices
MDR	Minimum Data Requirements
ICR	Information Collection Request

Purpose of Inspection

- Some companies have well structured compliance programs, others integrate into other business functions.
- Know that a compliance inspection can be viewed as happening in "the worst time possible" because of other impacting challenges.
- Timing and availability of staff should be addressed. Also, some companies are very sensitive to any compliance review or findings.
- "Brand image" (e.g., IBM) can elevate both the responsiveness as well the perceived impact of noncompliance items (even when relatively common/minor).
- Yet other facilities don't have the resources to provide focused support - doesn't mean compliance is lacking in and of itself.
- Recognize that industrial facilities operate in a dynamic fashion. Their goals and products change at the same time regulations evolve and are updated.
- Just because they were in compliance one day, and maybe even had a functioning compliance management system, it does not mean that they always will be.

Overview



- Recognize that it has a real cost impact to facilities when performing an inspection:
 - Time intensive
 - One of the main reasons for a push towards multi-media inspections
 - Cost of implementing suggestions
 - Temporary disruption of operations
 - Documenting noncompliance and responding to, correcting, and improving upon found noncompliance
 - Lack of resources delaying time, resulting in overtime, compromises elsewhere

Common Courtesy / Considerations

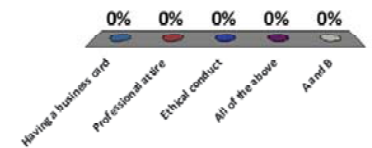
- > Call day before and confirm
- > Arrive on time
- > Time management
 - ❖ Try to start and end inspections on agreed upon schedule
 - ❖ Set aside appropriate amount of time for both touring operations and reviewing records
- > Be respectful and professional
- > Be aware of speaking in acronyms

- Since you won't have enough time to review everything, you need to define a strategy beforehand to identify what is important to see and what will be most helpful in understanding compliance.
- Also gives "heads-up" to the facility of the focus and what to be prepared to show. A large frustration can be chasing down obscure records or equipment type verifications that doesn't appear to be an important item for compliance. If you need something, say why.
- Two common complaints about past inspections were unannounced inspections and lack of knowledge.

Inspector Professionalism

Which of the following constitute(s) the foundation of professionalism?

- A. Having a business card
- B. Professional attire
- C. Ethical conduct
- ✓ D. All of the above
- E. A and B



Ethics / Code of Conduct ISO 19011

- > **Ethical Conduct - The foundation of professionalism**
 - ❖ Trust, transparency, integrity, confidentiality, discretion
- > **Fair Presentation - The obligation to report truthfully and accurately**
- > **Due Professional Care - The application of diligence and judgement**

- To help with transparency, be sure to mention the following:
 - “This is why I’m here...”
 - Inspection frequency requirements
 - Targeted inspection based on compliance history

BEAC* Ethics and Standards of Conduct

- > No conflict of interest
 - ❖ See “DEP Directive 202”
- > Independence
- > Proficiency
- > Material facts and disclosure
- > Due professional care
- > Confidentiality

* BEAC = Board of Environmental, Health & Safety Audit Certifications

- Reference: DEP Directive 202 in supplement

Inspector Competence Based On:

> Inherent Skills

- ❖ Personal Traits

> Learned Skills

- ❖ Experience
- ❖ Education

Inherent Skills - Personal Traits (1 of 2)

- > Stamina
- > Inquiring Mind / Curious / Observant
- > Flexible
- > Perceptive
- > Tenacious
- > Good Sense of Humor
- > Organized
- > Good Communicator / Listener
- > Even Disposition
 - ❖ Poised Under Fire

Inherent Skills - Personal Traits (2 of 2)

- > Good Interpersonal Skills
 - ❖ Puts People At Ease
 - ❖ Diplomacy / Tact
- > Ego Under Control
- > Objective and Independent
- > Capable of Making Good Decisions Based on Objective Evidence

Learned Skills

- > Experience
 - ❖ Working Knowledge of Regulations
 - ❖ Environmental Background
 - ❖ Knowledge of Industry or Facility
 - ❖ Environmental Inspecting Experience
 - ♦ Compliance, Management System and/or Due Diligence
- > Education
 - ❖ Science, Technology or Law degree or Equivalent Work Experience
 - ❖ Inspector Training

- The key to successful inspections is to have a strong capability to quickly digest an air permit.
- Know what each section of a permit entails, how monitoring, recordkeeping, and reporting fits in and what it means, what the differences can be between the state implementation plan (SIP) and federal rules, and how the appendices tie in.
- Often, the best document to get up to speed quickly is the most recent statement of basis.
- Ask questions about the facility process if you don't understand.
- Know how to assimilate requirements of an air permit.
- A statewide workgroup has identified the various disciplines of which a Florida air inspector is required to have knowledge.

Common Pitfalls & Good Practices

- > Not controlling conflict
 - ❖ Between Inspection team members
 - ❖ Between facility and the Inspection team
- > Not controlling the inspection
 - ❖ Allowing the Inspection to be side-tracked
 - ♦ Extended coffee breaks
 - ♦ Long scenic tour
 - ❖ Not taking charge of the opening and closing meeting
- > “You must do it this way”

- Air regulations are very complex and being unaware of an impacting regulation is one of the largest pitfalls of air inspections.
- Air regulations come from a wide variety of sources. They derive from:
 - Federal CAA and subsequent EPA regulations
 - Florida Statutes and in F.A.C.
 - Local regulations and ordinances
- Air inspectors must be aware of the many different sources of air regulations and permitting requirements.

Common Pitfalls & Good Practices

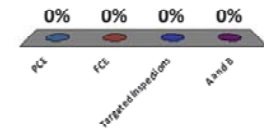
- > Don't jump to conclusions
- > Too much or too little records review
- > Too soft or too hard
- > “Surprise!” findings
 - ❖ Communicate early if there may be an issue
- > Inform facility of any observed imminent issues

- The number of emissions points (both regulated and unregulated) that have unit specific applicable requirements can be a pitfall if inspector is not fully versed in ALL of the applicable requirements. (e.g., NSPS, NESHAP, SIP, PSD/BACT, RACT, etc. all at once site such as phosphate fertilizer).
- Don't forget that insignificant activities don't always remain as such (e.g., engine NESHAP and NSPS affecting insignificant activities and/or unregulated units).
- If a compliance issues is discovered, emphasis should be on how to return facility to compliance.
 - Noncompliance does not automatically mean enforcement.
 - Enforcement considerations should be discussed with DEP manager after the inspection is completed.
- Try to mention things that the facility has done well in addition to any problems you may have found.

Inspection Frequency and Targeting

Which type of inspection requires DEP to identify the compliance status for each pollutant and emission unit at a facility?

- A. PCE
- ✓ B. FCE
- C. Targeted Inspections
- D. A and B



Overview

- > Partial Compliance Evaluations (PCEs)
- > Full Compliance Evaluations (FCEs)
- > Targeted Inspections
- > Required Inspections (by Frequency and by Complaint)

- There are two main types of inspections that can be performed at an air facility: A full compliance evaluation and a partial compliance evaluation.
- A partial compliance evaluation (PCE) is a targeted inspection focusing on a specific aspect of a facility, such as regulated pollutants, regulatory requirements, or emission units. Examples of a PCE include, but are not limited to, performing a VE test, responding to a complaint, CEMS quality assurance reviews, and significant report reviews. A PCE often includes one of the types of reviews included in a full compliance evaluation.
- A full compliance evaluation (FCE) is defined in greater detail on subsequent pages of this section.
- Off-site inspection is used when a facility is not operating and consists mostly of records review.

Required Inspection Frequencies

(1 of 2)

- > Are established by EPA policy and pursuant to agreements with EPA
- > DEP is required to perform FCEs on the following schedule:
 - ❖ Title V facilities every 2 years
 - ❖ Synthetic Non-Title V (SNTV) every 5 years
- > The Department has also established inspection frequency targets for the state's minor and general permit facilities

Required Inspection Frequencies

(2 of 2)

- > Federal inspection requirements:
 - ❖ Provided in EPA's Compliance Monitoring Strategy (CMS) document
 - ❖ Codified in a CMS Plan agreed to by EPA and the Division every 2 years
 - ❖ CMS plan identifies every Title V and SNTV facility in Florida, and when they should anticipate inspection
 - ❖ CMS plan is a living document that changes throughout 2-year compliance monitoring cycle
 - ♦ Facilities can come on and off the list as they change status (SNTV to TV, minor to SNTV, etc.) or operating status (active, inactive)

- EPA's CMS document can be found at:
<http://www2.epa.gov/sites/production/files/2013-09/documents/cmspolicy.pdf>

DEP Inspection Goal

(General Permit/True Minor Facilities)

- > Inspecting general permit and true minor facilities at least once every five years (permit cycle)
- > These facilities often have low emissions profiles or have minimal regulatory requirements
- > A regulatory presence is required to ensure limits and requirements are being met

- Despite the decreased sophistication of these facilities, a regulatory presence is required to ensure limits and requirements are being met.

Sources of Emissions in Florida

Type of Facility	# of Facilities	Contribution to Total Emissions	Required Minimum Inspection Frequency
Title V	400	97%	Once every 2 years
Synthetic Non-Title V/True Minor	1,000	2.5%	Once every 5 years
General Permit	2,500	< 0.5%	No federal inspection requirement

What is an FCE?

- > Review of facility activities over the previous 12 months, concluded by an on-site (or off-site, if applicable) inspection
- > Consists of numerous inspection activities (visible emissions tests, on-site inspections, records review, etc.)
- > FCEs are a considerable undertaking

- A full compliance evaluation (FCE) is a comprehensive evaluation of the compliance status of a facility. An FCE addresses all regulated pollutants and regulated emissions units at a facility, and requires DEP to identify a compliance status for each pollutant and emissions unit. An FCE includes the following:
 - A review of all required reports and underlying records, as necessary
 - An assessment of control device and process operating conditions
 - A visible emission observation, as needed
 - A review of facility operating records and logs
 - An assessment of process parameters, such as feed rates, raw material compositions, and process rates
 - An assessment of control equipment performance parameters, e.g. water flow rates, pressure drop, temperature, and electrostatic precipitator power levels
 - A stack test where there are no continuous emissions monitoring devices or other methods for determining compliance with emissions limits

FCE Timing

- > While EPA allows for an FCE to be performed piecemeal over time, DEP encourages an FCE to be completed within a reasonable time after commencement.
- > A delay can lead to an incomplete FCE, late data reporting to EPA, and failure to meet federal inspection frequency requirements.
- > Facility records should be reviewed at least a month before physical inspection is performed

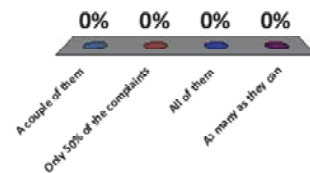
Targeted Inspections

- > Division initiative not specifically required by EPA
- > Purpose is to address a known compliance issue at a specific facility or within a specific industry
 - ❖ Inspectors are encouraged, but not required, to perform a compliance outreach visit prior to a targeted inspection so that the facility understands permit requirements and what the inspector expects to see during the formal inspection
- > Most commonly performed at a facility classified as “high-risk” by the Department
- > High Risk Facility (HRF) – one that in the last 3 years, has had:
 - ❖ 1 SNC case
 - ❖ 2 MNC cases
- > Furthers Department goal of compliance with environmental regulations

- May be reasons to conduct inspections beyond the required minimums.
- Due to limited resources, it is important to identify specific facilities that may require special attention.

How many complaints received from the public must DEP respond to?

- A. A couple of them
- B. Only 50% of the complaints
- ✓ C. All of them
- D. As many as they can



Response to Complaints

- > DEP must respond to all complaints received from the public.
- > Air inspectors are expected to provide prompt and professional service to the citizens of Florida.
 - ❖ If response will take more than 24 hours, acknowledge receipt and let citizen know you are following up and will get back to them.

- DEP has agreed with EPA to also provide asbestos inspections on a complaint basis.

Excess Emission Report (EER)

- > As EPA and many State air pollution control agencies expand their source emission monitoring programs, the EER is being used for enforcement of emission standards.
- > Since the EER can be used by regulatory agencies for enforcement actions, the report must be thorough and complete.

Investigations

- > An investigation may be distinguished from PCE and FCE categories in that generally it is:
 - ❖ Limited to a portion of a facility
 - ❖ More resource intensive
 - ❖ Focused on a particular issue

- Usually based on information discovered during a FCE or as the result of a targeted industry, regulatory or statutory initiative.
- Often requires the use and analysis of information not available in State or EPA data systems.
- It is best used when addressing issues that are difficult to evaluate during a routine FCE because of time constraints, the type of preliminary field work required, and/or the level of analytical expertise needed to determine compliance.
- Are not common

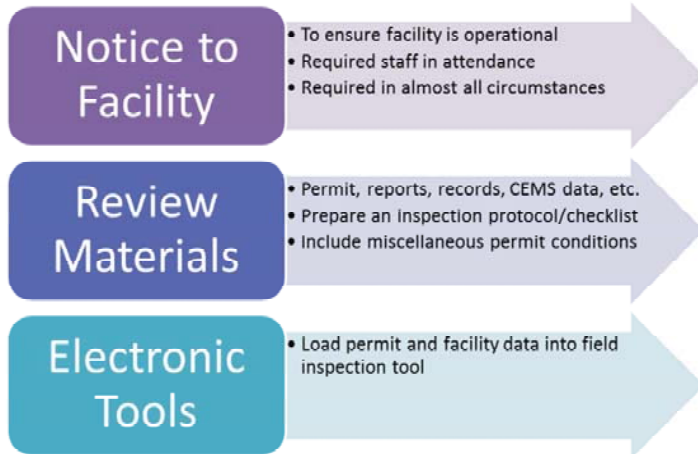
Example Investigations

- > In-depth PSD/NSR and NSPS reviews conducted by EPA for:
 - ❖ Pulp & paper
 - ❖ Utility
 - ❖ Petroleum refining industries

- Investigations were initiated following analyses of publicly available information on growth within the industries.
- EPA analyzed data maintained by regulatory agencies on the number of PSD/NSR permits issued during the same timeframe.
- Discovered many facilities failed to obtain the necessary permits.
- As a result, the facilities had not controlled pollutant emissions as required, and thus realized significant economic benefits.

Preparing for the Inspection

Overview



- Shouldn't approach an inspection at all facilities in the same way.
- Need to know at least some of the history of the facility (e.g., site specific self-imposed synthetic limit – note, if facility exceeds own synthetic limit, not only out of compliance but brings back up the baggage of incorrect permitting over history – if leaned on minor source status to avoid review) and industry.
- Review and UNDERSTAND the application for the operation permit and recent construction permits.
- Even if permit follows application, what is constructed and operated may be different, or operated in a different manner that may require different permitting or applicable regulations (e.g., assumed control efficiency – difficult to verify in a short inspection visit).
- Noncompliance as much about what is currently being done incorrectly in the present as it is in the PAST.

Notice to Facility

- > Facilities should be provided with advanced notice
- > Ensures:
 - ❖ Facility will be operating
 - ❖ Proper facility staff will be present
- > Useful when coordinating site visits with facility testing dates

- DARM regularly conducts inspection feedback surveys.
- Surveys indicated unannounced inspections can be very disruptive to a facility's activities.
- Scheduled operations can be derailed because a facility's environmental manager has to escort an inspector around the site, rather than oversee facility operation.
- Notice is encouraged but is not always appropriate.
- Certain facilities that have had a long history of noncompliance may be better suited for unannounced inspections.
- Unannounced inspections can provide a snapshot of facility operations. However, these situations are rare.

Notice to Facility - Tips

- > Before setting a date, think about how much time you need to prepare for a successful inspection (a few days or a few weeks)
- > Notify site contact of scope and schedule

- Example: "We will be focusing on the newly installed equipment for which you recently received an air construction permit. The entire inspection will include a review of both the equipment and the records. We will need to have your full attention, and we expect the visit to last 2-4 hours."
- Example: "We will be conducting an on-site inspection as part of a Full Compliance Evaluation, which is required by EPA every ___ years."

Review Materials (1 of 2)

- > Familiarization with the facility is an important asset for the inspector and portrays the Department in a positive light.
- > The task of assembling, organizing, conducting and reporting an inspection can be a complicated, detailed and time consuming process

- This is important because it defines what requirements are "implicit" by other requirements.
- Also, if there is a required work practice that is put into a SOP or policy, did the facility TRAIN employees on the policy?
- Could look for those training records or at least interview to see if they were aware of and followed the policy that was driven by a permit requirement.

Review Materials (2 of 2)

- > There are several different reports required to be submitted on a periodic basis for review.
- > These reports should be reviewed prior to the onsite inspection.
- > Many sources at the facility that require inspection are in ARMS.
- > Inspection checklists are included in AirCom's field inspection tool.

- Some of the reports are as follows:
 - Past Inspection reports
 - Quarterly/Semi-annual/Annual reports contain a useful summary of the site's compliance records
 - CEMS and other continuous monitoring reports show the type and frequency of monitoring requirements
 - Databases with facility details, permit requirements

Dissecting an Air Permit

- > Lists to Make While Reading an Air Permit:
 - ❖ Index of emission units, control devices, emission points
 - ❖ Major air programs covered
 - ❖ Key emission and operating limits
 - ❖ Data flows and data forms required
 - ❖ Standard operating procedures implied
 - ❖ Miscellaneous permit conditions

- See appendix for diagram outlining an approach to dissecting an air permit into categories of requirements to help identify actionable compliance items which can be verified during an inspection.

Class Exercise- Dissecting an Air Permit

- See attachment for “Dissecting an Air Permit.” This document can be used with the class exercise for the ABC Power air permit.

Tips to Prepare for an Inspection

Compliance Assurance Questions_(1 of 3)

- > Focus on matters with greatest enforcement liability?
 - ❖ Conditions associated with PSD/NSR BACT or avoidance limits (i.e. NSR Reform Reporting 5/10 years after change)
 - ❖ Conditions associated with Federal rules (NSPS, NESHAP)
- > Focus on matters most likely to have problems?
 - ❖ Conditions associated with administrative reporting requirements
 - ❖ Conditions associated with monitoring data of no value to operations and collected only for environmental compliance

Compliance Assurance Questions_(2 of 3)

- > Focus on matters that may be overlooked?
 - ❖ Conditions associated with general SIP rules buried in the permit
 - ❖ Conditions associated with topics not addressed on day-to-day basis (e.g., ODS requirements)
 - ❖ Upset reporting requirements

Compliance Assurance Questions_(3 of 3)

> Effect of resource and time constraints

❖ Limited Review

- ♦ Check only as much as can be done in the time allotted
- ♦ Check a representative sample of all requirements
- ♦ Check at least one of each type of equipment
- ♦ Check at least one of each unique requirement
- ♦ Check explicit requirements readily discernable

❖ Complete Review

- ♦ Completely review status of every single requirement, both explicit and implicit

Possible Tiers in Air Inspection

> Tier 1- “Compliance with Air Permit(s)?”

- ❖ Assess compliance with requirements derived from existing air permit(s), for example:
 - ♦ Collection and review of explicit monitoring data and reporting requirements
 - ♦ Verification of accuracy and appropriateness of emission test and direct emission measurements
 - ♦ Defining, considering, and assessing implicit requirements of an air permit

- Verification of accuracy and appropriateness of emission test.
- For example, you note a NO_x emission test report showed measured emissions of 9.6 lb/hr vs. a permit limit of 10 lb/hr; however, the testing was conducted at 80% heat input capacity.

Possible Tiers in Air Inspection

> Tier 2- “Correctness of Air Permit(s)?”

- ❖ Additionally, assess completeness and accuracy of existing air permit(s), for example:
 - ♦ All numerical values and calculations (operating limits, emission limits, parameter limits)
 - ♦ Correct regulatory interpretations
 - ♦ Confirmation that compliance assurance methods sufficient (and appropriate) to verify compliance with emission limits
- ❖ Requires an independent regulatory applicability analysis

- Confirmation that compliance assurance methods sufficient.
- For example, suppose the facility has a process dryer with direct heat supplied by a set of natural gas fired burners.
- There is a CO emission limit and a requirement to test at 90-100% of heat input capacity.
- But what if the dryer sometimes operates at 60% capacity, but the CO emissions from the burners at this turn down are 2 times greater than at capacity?
- Or sometimes translation from original PSD permit – I believe NSG has a PSD permit limit for VOC maybe that was correct for turbine basis in original PSD, but by time it got in renewed Title V, it had lost its % O₂ basis.
- This is the next most difficult tier and will be more time consuming, basically assumes nothing was already done correctly.

Possible Tiers in Air Inspection

> Tier 3- “Have Necessary Air Permit(s)?”

- ❖ Additionally, assess whether all necessary permits have been obtained for capital projects and process changes
 - ♦ Detailed review of facility operating history
 - ♦ Review of capital appropriation requests
 - ♦ Review of maintenance expenditures
 - ♦ Review of raw material, production and utility trends
 - ♦ Interviews with plant personnel
 - ♦ Tour of facility property

- Not just was it permitted correctly or not, but what about those projects that weren't ever brought to DEP's attention?
- These require much more time and analysis of sometimes non-traditional records/questions to identify “physical change or change in the method of operation” or modification as defined in Rule 62-210, F.A.C.
- Will need a list of capital projects, management of changes, etc., that may not be from the EHS manager, but the plant manager.
- This could be a LOT depending on the site, may want a cutoff, like, provide me a description of the capital projects >\$10,000 over the past year (or since the last inspection) or could base on an increase in emissions for a specific unit realized from an annual operating report submittal, and just ask for capital and maintenance projects at that one emission unit.

Reviewing key applicable air regulations and an overview of their requirements is not required while preparing for an inspection.

- A. True
- ✓ B. False



Air Inspection Preparation Elements-Template

- > Air permits in place and air permitting history
- > Key applicable air regulations and overview of their requirements
- > Method of gathering and reviewing information during Inspection
 - ❖ Pre-Inspection questionnaires
 - ❖ Data to obtain and review prior to and during Inspection
 - ❖ Items to physically verify/inspect during the Inspection
 - ❖ Interviews to conduct during Inspection
 - Individuals or groups that will be interviewed during Inspection
 - ❖ Inspection Tools and Checklists to be used
 - ❖ Method of capturing notes from Inspection

- In the Inspection Preparation, you are essentially trying to tell the story of how the Inspection occurred before it has. This then becomes your roadmap during the Inspection.
- Assimilating the Requirements of an Air Permit:
 - Understand process and emission unit nomenclature.
 - Consider format and parts of permit.
 - General provisions, facility-wide requirements, emission unit-specific requirements.
 - Categories of requirements.
 - Note facility source classification(s).
 - Identify key state and federal regulations.
 - Discern conditions derived from regulation versus self-imposed.
 - Start getting familiar with compliance assurance conditions.

Tools in Hand When Starting the Air Inspection

- > Reference material
 - ❖ Permits, regulations, process flow diagrams, emission unit lists
- > Field inspection tool/Inspection checklists
 - ❖ Requirements summary
 - ❖ Compliance assessment questions
 - ❖ Compliance task lists
- > Inspection findings template
 - ❖ Where you will capture information on findings

- Need to distinguish between tools/documents to have BEFORE starting, vs. those that you want during.

Inspection Preparation

- > Establish format for conducting the Inspection
- > Establish format for recording data
- > Generalized checklists are adapted to the facility, process, and expected conditions
- > Address Federal, State, and Local requirements
- > Well-developed protocols are valuable tools
- > Protocols do not replace Inspector knowledge and experience

- Inspectors often presume a source in a source category SHOULD be subject unless proven not (prove still grandfathered).
- Not sure this is a good presumption, but does highlight the need to re-evaluate periodically.
- On the other hand, it is best to approach inspection that the facility has a much deeper understanding of their own equipment, process, and changes than you could.
- They may not know the impact of the regulations as deeply as you do, and do not have the benefit of seeing how OTHER facilities implement and apply regulations they trigger.
- This is the knowledge that provide the most value to share with the site.
- Another key understanding PRIOR to inspections is the existing source classification.
- Existing major source PSD should have more attention to missed “physical changes or changes in the method of operation”.
- At existing PSD minor sources, would only become major if made a change that was major in and of itself – much harder to do without realizing.
- Can identify previous changes in method of operations by trending AOR submittals.
- If see a jump (increase in emissions) between years or over time, may have made a “changes in the method of operation”.

MINI QUIZ

- A. What are the typical objectives in performing an air compliance inspection?
- B. The air regulations and requirements a facility is subject to is dependent on what?

- This quiz is to help expand an inspector's understanding of the benefit and impacts of a compliance review.

- Answers:

- A.
 - 1. Facility may realize potential cost savings by identifying opportunities for operational efficiencies
 - 2. Title V air permits require air compliance inspections
 - 3. To help discover potential non-compliance matters and correct them before they occur
- B.
 - 1. History of construction and modifications to equipment at site
 - 2. Promulgated and revised standards on the federal, state, and local level
 - 3. Which county the facility is located in (e.g., maintenance areas)

Preparing an Air Inspection Checklist (Part of the Inspection Preparation)

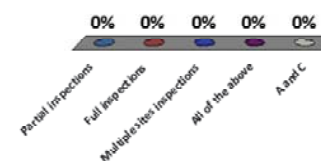
- For those familiar with waste inspections – a lot of it is observation.
- How to review the site and regulations to know to understand what is triggered and required and where.
- While observation is important for air, the most important is to PLAN for what you need to look at.
- One of the first questions in planning: What equipment at the site is “grandfathered”? Recently permitted equipment is usually captured with current applicable regulations in the permit.
- For “grandfathered” equipment, 2 initial questions need to be answered:
 - 1. What new/changed regulations could impact this unit, which the facility is unaware of (e.g., BACT, RACT, NESHAP); and
 - 2. What has the facility done (likely without realizing it) that would subject the grandfathered unit to new regulations/permitting (e.g., modification under NSPS, PSD).
- So much of air compliance is in records, interviews, procedures, flowchart, SOP, BMP, etc., it pays big dividends to review before hand and sort out what you want to review.

Air Inspection Checklist

- > List of questions to ask or information to verify during the Inspection based on compliance tasks defined
 - ❖ Often useful to segregate by when to address in Inspection
 1. Verify through data review
 2. Verify through interviews
 3. Verify through physical inspection
 - ❖ Include sufficient detail/background with question for review

An Air Inspection Checklist must be developed for:

- A. Partial inspections
- B. Full inspections
- C. Multiple sites inspections
- ✓ D. All of the above
- E. A and C



Air Inspection Checklist Summary

- > How you organize and prepare your Inspection checklist is dependent on:
 - ❖ Partial or Full Inspection
 - ❖ Whether it will be used for multiple sites
- > Moral of the story
 - ❖ **There is no getting around the need to develop a custom air inspection checklist for each facility!**

- Template air inspection checklist included in the appendix to this chapter

Inspection Safety and Equipment

Inspectors are entitled to bypass safety and security procedures when visiting a facility.

A. True

✓ B. False



Safety & Security

- > Ask about any safety or health requirements, security clearances, or local approvals needed to enter specific areas, before the visit
- > Some organizations require health releases and/or a safety awareness orientation

Safety & Security

- > Safety equipment such as: ear plugs, safety shoes, hard hats, and safety glasses may be required. Most plants supply these equipment, but better to bring your own.
- > Local rules such as: no short sleeve shirts, no tank tops, no shorts, no skirts, and no high heeled or open toe shoes must be followed. Find out ahead of time.
- > May be required to wear hair/beard nets

Resources

- > Refer to Appendix for full EPA document (APTI-SI-446).

AIR POLLUTION SOURCE INSPECTION SAFETY SELF INSTRUCTIONAL COURSE

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- > Become familiar with safety hazards

Conducting the Inspection

Overview

- > Logistics and Tips
- > Review onsite records
- > Observe stack tests
- > Observe control equipment
- > Observe visible emissions
- > CEMS
- > Class Exercise - Opening Inspection Meeting

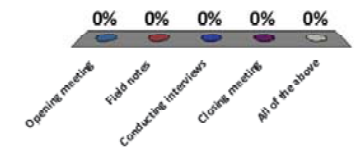
Site Visit Logistics

- > Personnel Schedules
- > Language
- > Equipment
- > Training
- > Security Clearances
- > Camera Permits
- > Meeting Space
- > Group Space
- > Site Layout/Distances
- > Telephone/Internet Access
- > Meals/Hotels
- > Pre-Inspection Team Meeting

- Inspectors need to arrive at the right place, with the right equipment and information, at the right time, and for a suitable duration of time to get the job done right.
- Complexities affecting time and schedule may include number of employees (affect the number of interviews), distances between inspection areas (travel time between interviews), number of production lines or services provided (added interview time to sample lines and services), and new processes/ products/ services that may need additional verification and interviewing.

Which of the following is part of the Inspection Implementation?

- A. Opening meeting
- B. Field notes
- C. Conducting interviews
- D. Closing meeting
- ✓ E. All of the above



Inspection Implementation

- > Opening Meeting
- > Orientation Tour
- > Field Notes
- > Records Review
- > Conducting Interviews
- > Observations
- > Inspection Findings
- > Closing Meeting

Opening Meeting (1 of 2)

- > Inspection Team leader conducts meeting
- > Verify the scope and purpose of the Inspection
- > Introduce the team members
- > Request introduction of facility staff
 - ❖ Expect Plant Manager and Environmental Manager involvement
- > Describe the methodology
- > Confirm resources

Opening Meeting (2 of 2)

- > Agree on logistics
 - ♦ Work space for team
 - ♦ Escorts
 - ♦ Safety briefing / PPE requirements
 - ♦ Interview etiquette
- > Verify summary meeting and closing meeting times

Opening Meeting Tips

- > Arrive on time
- > Start the meeting in a positive/professional manner
- > Inspector will prepare and provide agenda and handouts if necessary
- > Acknowledge that the Inspection may disrupt daily routines and that the team will minimize disruption as much as possible
- > Encourage questions, listen carefully, answer directly and thoroughly

Opening Meeting Objectives

- > Seek a general understanding of the facility
- > Clarify details already collected / reviewed off-site
- > Collect additional information about the facility's general operations
 - ❖ Processes
 - ❖ Capacities/Volumes
 - ❖ Hours/Employees

Example Question

Opening: I am interested in learning about the facility's _____ program. Could you please provide a general overview of the _____ program?

Example Follow-up Questions:

Who is responsible for conducting _____?

What type of training has that individual received?

What type of information is documented?

Orientation for Inspection

- > Familiarize Inspection Team with Inspection site
- > Maintain pace, note areas that will require more in depth inspection
- > Set time limit
- > Note path taken through Inspection site
- > Look for indicators of recent changes
- > Observe general housekeeping practices
- > Understand area specific restrictions

Site Inspection Tips

- > Obtain briefing on process operations first
- > Discuss flow of tour before going out in plant where noise inhibits discussion
- > Take good to-scale plot plan
- > Take good process flow diagram

- If you are unsure that the plot plan and PFD submitted with applications are accurate, then call the facility and ask them to provide more recent versions, or verify the one you have from the application is the right one.
- Alternately, you can ask this question during opening meeting.

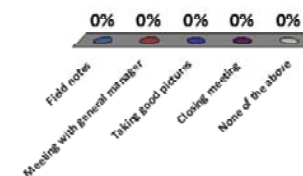
Site Inspection Tips

- > Tour outside structures and roofs prior to inside
- > Have tour follow flow of process where possible
- > Physically see/identify each defined emissions unit, control device, stack
- > Preliminary visual inspections

- If you are unsure that the plot plan and PFD submitted with applications are accurate, then call the facility and ask them to provide more recent versions, or verify the one you have from the application is the right one.
- Alternately, you can ask this question during opening meeting.

Which of the following is the core of the inspection process?

- ✓ A. Field notes
- B. Meeting with general manager
- C. Taking good pictures
- D. Closing meeting
- E. None of the above



Field Notes (Working Papers)

- > Core of the Inspection process
- > Documentation of work performed, the techniques used and the conclusions reached
- > Provide assurance that Inspection is carried out in a manner consistent with data gathered, and substantiates any findings of compliance or non-compliance

Field Notes - Contents

- > General background information
- > Description of facility programs
- > Descriptions of actions taken to complete each step
- > Conclusions drawn

Collecting Objective Evidence

- > Objective Evidence includes
 - ❖ Review of documents and records
 - ❖ Observations of activities and conditions
 - ❖ Interviews

Keep a balance between Records Review, Observations and Interviews

- > Evidence should always be verified

On-Site Documentation Tips

- > Have templates and system for capturing Inspection notes pre-established
- > Take notes electronically where possible (can save time later)
 - ❖ Drawings and figures are often easier to hand-write

- Keep notes as objective as possible.
- Be perceptive to feelings of potential areas for noncompliance, but notes should be based on what was actually observed or interview responses, or that logs could not be observed because not available, but do not speculate.
- One example is, records for VE show all 5% every day, as that is limit, and then another record shows that the equipment was down when they had a record for the same date as 5%, don't speculate that not doing any of the records and just copying down, just note observation, note trend, and inconsistencies.

Onsite Records Review

- > Most records review is before an inspection
- > Primary goal is to confirm site compliance
- > Obtain copies of relevant documents as necessary

Interviews (1 of 2)

- > Conduct interviews in work spaces
- > Work to put the interviewee at ease
- > Develop rapport
- > Explain the reason for the interview
- > Use proper note-taking for legibility and to avoid improper conclusions
- > Ask open-ended questions
- > Avoid leading questions

- Avoid leading questions: this can be difficult to provide the interviewee at ease by telling "why" you need something without leading them.
- Can point to a permit condition, and say "how do you verify compliance"?

Interviews (2 of 2)

- > Always be prepared to say “Can you show me?”
- > Summarize key points of interview
- > Review permit items for completion
- > Thank the interviewee for their cooperation and participation

Observations

- > Walk the perimeter
- > Inspect remote areas
- > If possible, observe critical operations (e.g. start-up, shut-down, batch discharges to waste treatment)
- > Observe sampling/monitoring procedures, control equipment, visible emissions and sometimes stack tests

- If possible, time inspections to be able to observe critical operations (e.g. start-up, shut-down, batch discharges to waste treatment).

Data Collection and Review Tips- General

- > Obtain briefing on air permit files organization
- > Request time to gain familiarity with file organization and to scan contents
- > Use an Inspection Checklist to compile and organize data needed
- > Generally best to start with annual compliance certification documents
 - ❖ ...then quarterly/semiannual reports
 - ❖ ...then electronic data systems
 - ❖ ...then actual data logs

Data Collection and Review Tips- General

- > You can't check every number
- > Be strategic and consider most likely areas for errors
- > Relevant depth of spot-checking consistent with volume of data
- > Use software to filter/process/analyze data available electronically
- > Look for step-function changes in data
- > Tag team when reviewing volumes of data logs (e.g., one reader, one note taker)

- Step-function changes example: Baghouse data trends upwards and then declines sharply, presumably with bag replacement/cleaning.
- Compare to maintenance records to ensure bag replacement/cleaning captured, then compare to BH manufacturer specifications to identify if vendor defines what delta pressure to do this at, or schedule, and if that matches what was done.

Data Collection and Review Tips- Stack Test Reports

- > Compile test reports covered by inspection period
- > Verify all tests for each pollutant and equipment conducted
 - ❖ Confirm appropriate test methods completed
 - ❖ Confirm notifications for test protocol, test date and report submittal
- > Reality check on process rates and/or fuel use during tests
- > Confirm calculations reported in test

- Can check dates of reports, notifications, etc. from available records in DEP.
- Can ask facility how they verify dates are met, especially if they have trouble providing enough advance notice for notification.

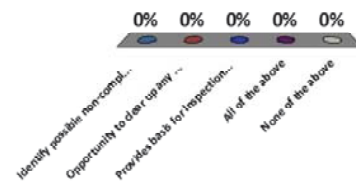
Data Collection and Review Tips- Monitoring Data and Reports

- > Good to start with past semiannual/quarterly monitoring reports
 - ❖ Establish required frequency
 - ❖ Index parameters to be reported on
 - ❖ Verify method of data capture
 - ❖ Verify completeness and quality assurance
 - ❖ Assess data against required parametric ranges
 - ❖ Do parameters and ranges make sense with respect to assuring compliance?
 - ❖ Identify causes of excursions
- > Scrutinize carefully data and information associated with past reported deviations

- If excursion is identified (even if already disclosed by facility in SOC), was an appropriate cause and corrective action identified and carried through?
- For example, if a log is missed, and corrective action was to provide refresher training, or even just correction to the individual accountable, was this training/correction documented?

Which of the following best describes the purpose of the Closing Meeting?

- A. Identify possible non-compliance issues
- B. Opportunity to clear up any misunderstandings held by Inspection team
- C. Provides basis for Inspection report
- ✓ D. All of the above
- E. None of the above



Closing Meeting

- > Identify possible non-compliance issues
- > Opportunity to clear up any misunderstandings held by Inspection team
- > Provides basis for Inspection report

Closing Meeting Tips

- > Express appreciation to participants and contributors
- > Re-summarize methodology and work completed
- > Start with a positive observation
- > Objective review of findings
- > Discussion of items requiring further review/consideration
- > Review of next steps and schedule

Questions

- > In an on-site review of process, fuel use or monitoring data required by a permit, what type of trend change, in general, would warrant further scrutiny?
- > An air permit includes a PM emission limit for a dust collector of 5.6 lb/hr. The test report executive summary indicates that measured emissions were 5.6 lb/hr, right at the limit. But, in reviewing the test details, you determine that the average of 3 test runs was 5.64 lb/hr and had been rounded down. Should this be a finding? Why or why not?

- Things to consider for each question:
 - Step-function change.
 - For PM emission limit, depends on rule that applies. Most have a level of sig figs (EPA's guidance is 2 to 3, although it is dated), but also matters what was submitted in application – was it flat 5.6, or was it rounded?
 - For the dust collector associated with the 3 conveyors, can you even run 3 at once? Are they required to? What did the test protocol say? Since less than 90%, did the facility later limit operation to only 2 at one time from then on as new max capacity?

Questions

- > You subsequently determine that this dust collector is tied to pick-up hoods at three conveyor transfer points and only two of the conveyers were operating during the test. What additional follow-up questioning should you pursue?

- Things to consider for each question:
 - For the dust collector associated with the 3 conveyors, can you even run 3 at once? Are they required to? What did the test protocol say? Since less than 90%, did the facility later limit operation to only 2 at one time from then on as new max capacity?

Questions

- > A facility you are inspecting has too many monitoring records to be able to check and verify all of them. What techniques might you use to strategically choose a subset to check?
- > If in the course of conducting inspection, you identify a potential finding, but are not sure and are pressed for time, how should you proceed?

- Things to consider for each question:
 - Group processes by emission unit, regulatory applicability, timeframes are important for turnover, weekends, etc.
 - Stay for review? Follow up with facility later?

Questions

- > What is the difference between “intermittent compliance” and “non-compliance”?
- > The hard drive to which a process system electronically captures and sends monitoring data reached capacity and the system began overwriting data. As a result, monitoring data required by the Title V permit is missing for a portion of the reporting period. If the plant has other evidence to show that the monitoring data was in range and was originally captured, would this still be a noncompliance event?

- Things to consider for each question:
 - Intermittent is an occasional issue that is now back in compliance (missed daily VE, but resumed the next day), non-compliance is still out (didn't get permit for modification, still don't have it).
 - Depends on wording of requirement/condition, TV facilities required to maintain records for 5 years.

Documentation

Overview

- > Inspection Report
 - ❖ Standardized procedures
 - ❖ List of contents
- > Chain of Custody
- > Procedures for Photographs/Video
- > Class exercise - review “Inspection Report” file

Documentation: Inspection Report

Standardization

- > Standardized Inspection Procedures - defines inspection process
- > Standardized Inspection Recording - establishes field inspection guidelines
- > Standardized Inspection Reporting - defines the process for data based inspection information collection
 - ❖ See Division's "Standard Operating Procedure For Conducting and Reporting Air Source Inspections"
 - http://depnet/darm/reference/CompEnforce/cedar/docs_by_chptr/two/2-9-1.pdf

- Standardized Inspection Procedures – defines inspection process and the method and manner for preparation and conducting inspections.
- Standardized Inspection Recording - establishes field inspection guidelines for determining compliance recommendations.
- Standardized Inspection Reporting – defines the process for data based inspection information collection in order to communicate, store and retrieve inspection results in a consistent and reliable format.
- Air source compliance inspections require an in-depth look at a facility's processes, controls and procedures to ensure that the facility is maintaining and can demonstrate compliance consistent with the conditions of the air operating permit.
- The "Standard Operating Procedure (SOP) for Conducting and Reporting Air Source Inspections establishes the procedures, guidelines and requirements necessary for conducting thorough inspections, preparing quality reports and securing records necessary for inspection, re-inspection, enforcement and the on-going monitoring and evaluation of facility compliance histories.
- Standardization provides a uniform method for the interpretation and implementation of air compliance regulations and a uniform structure for increasing levels of environmental overview, thereby increasing inspection accountability and consistency. Inspections based on a standardized process help minimize negative impacts of inconsistent and ineffective reporting and maximize efforts to positively impact and regulate industry in a fair and consistent manner.

Inspector Responsibilities

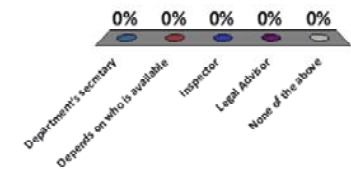
- > Compliance inspectors with the DEP and approved Local Air Programs
- > Inspect air facilities to determine if they are in compliance with the regulations pertaining to the state's air compliance standards

Supporting Information

- > This inspection task is supported by:
 - ❖ Information contained in the Air Permit
 - ❖ Information data contained in the Air Resource Management System (ARMS) Oracle Database
 - ❖ The results of previous inspection histories and other pertinent reference information

Who is responsible for organizing the data collected during an inspection?

- A. Department's secretary
- B. Depends on who is available
- ✓ C. Inspector
- D. Legal Advisor
- E. None of the above



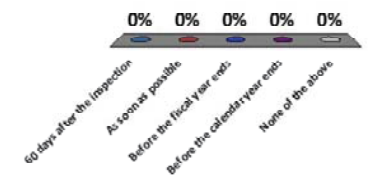
File Updates

- > During the inspection, data is collected and substantiated
- > It is the inspector's responsibility to see that this data is organized and arranged so that other agency personnel may make maximum use of it

- Data may be used later as evidence in an enforcement proceeding.

When must the inspection report be completed?

- A. 60 days after the inspection
- ✓ B. As soon as possible
- C. Before the fiscal year ends
- D. Before the calendar year ends
- E. None of the above



Report Completion

- > Inspection Report should be done as soon as possible after the inspection
- > Ensures that all events of the inspection are still fresh in the inspector's memory
- > Inspector must be able to confirm - during later enforcement proceedings, if any - that the information contained in the inspection report is true

- Thus, the file update and inspection report preparation are an important part of the inspection process.

File Updates

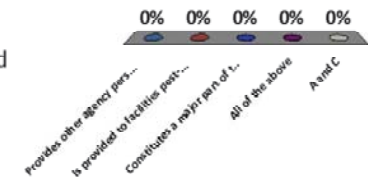
- > Compare data collected to ARMS. If data is missing or has changed, work within the office system to update ARMS
- > Types of Facility Data to Review/Update:
 - ❖ General Facility Information - Name - Address - Industrial Process Type
 - ❖ Compliance Related Activities
 - ❖ Emissions Unit Information
 - ❖ Monitoring Data

- Compliance Related Activities such as:
 - Inspections
 - Opacity Observations
 - Source Tests
 - Issuance of Compliance Assistance Letters
 - Notices of Start-Up, Construction
 - Pending Actions
- Point Source Information such as:
 - Process Equipment
 - Regulated Pollutants
 - Applicable Regulations
 - Control Equipment
 - Production Rates
- Monitoring Data such as:
 - CEM Instrument Data
 - Applicable Regulations
 - CEM Related Activities
 - Excess Emission Report Summaries

Preparing an Inspection Report Document

Which of the following is the purpose of an Inspection Report?

- A. Provides other agency personnel with easy access to the inspection information
- B. Is provided to facilities post-inspection
- C. Constitutes a major part of the evidence package, which is available for subsequent enforcement proceedings and/or other types of compliance-related follow-up activities
- ✓ D. All of the above
- E. A and C



Inspection Report Purposes

- > This report serves three very important purposes:
 - ❖ Provides other agency personnel with easy access to the inspection information because it has been organized into a comprehensive, usable document
 - ❖ Is provided to facilities post-inspection
 - ❖ Constitutes a major part of the evidence package, which is available for subsequent enforcement proceedings and/or other types of compliance-related follow-up activities



- To meet the objectives discussed above, the information contained in the inspection report must be:
 - Accurate - All information must be factual and based on sound inspection practices. Observations should be the verifiable result of firsthand knowledge. Compliance personnel must be able to depend on the accuracy of all information.
 - Relevant - Information in an inspection report should be pertinent to the objectives of inspection. Irrelevant facts and data will clutter a report and may reduce its clarity and usefulness.
 - Comprehensive - Suspected violation(s) should be substantiated by as much factual, relevant information as is feasible to gather. The more comprehensive the evidence is, the better and easier the outcome of any enforcement action will be.
 - Coordinated - All information pertinent to the subject should be organized into a complete package. Documentary support (e.g., photographs, statements, sample documentation, etc.) accompanying the report should be clearly referenced so that anyone reading the report will get a complete, clear overview of the situation.
 - Objective - Information should be objective and factual; the report should not speculate on the ultimate result of any factual findings.
 - Clear - The information presented should be clear and well-organized.
 - Neat and Legible - Allow time to prepare a neat, legible report.

Elements of Inspection Report

- > Specific information will vary depending upon the inspection objectives, but most reports will contain the same basic elements:
 - ❖ Cover page
 - ❖ Narrative report
 - ❖ Documentary support

Cover Page

- > Easy access to basic facility information. It should include:
 - ❖ Facility name and address
 - ❖ Facility identification number
 - ❖ Facility contact and/or representative (including phone number)
 - ❖ Type of inspection
 - ❖ Date of inspection
 - ❖ Inspector's name

- The cover page is followed by a work plan (discussed below and continued on the next page). The work plan will simplify preparation of the inspection report and will help ensure that information is organized and in a usable form. There are four basic steps: reviewing the information, organizing the material, referencing accompanying material, and writing the narrative report. The first two are discussed below:
 - Reviewing the Information - The first step in preparing the narrative is to collect all information gathered during the inspection. The inspector's field notebook should be reviewed in detail. All evidence should be reviewed for relevance and completeness. Gaps may need to be filled by a phone call or, in unusual circumstances, by a follow-up visit to the facility.
 - Organizing the Material -The information may be organized in many forms depending on the individual need, but should present the material in a logical, comprehensive manner. The narrative should be organized so that it will be easily understood by the reader.

Narrative Report - Work Plan

- > Concise, factual summary of observations and activities, organized in a logical, legible manner, and supported by specific references to accompany documentary support
- > Basic steps:
 - ❖ Reviewing the Information
 - ❖ Organizing the Material
 - ❖ Referencing Accompanying Material
 - ❖ Writing the Narrative Report

- A continuation of describing the steps of the work plan, the third and fourth step are discussed below (continued from the previous page):
 - Referencing Accompanying Material - All documentary support accompanying a narrative report should be clearly referenced so that the reader will be able to locate these documents easily. All documentary support should be checked for clarity prior to writing the report.
 - Writing the Narrative Report - Once the material collected by the inspector has been reviewed, organized, and referenced, the narrative can be written. The purpose of the narrative is to record factually the procedures used in, and findings resulting from, the evidence-gathering process. The inspector need only refer to routine procedures and practices used during the inspection, but should describe facts relating to potential violations and discrepancies in detail. If the inspector follows the steps presented, the report should develop logically from the organizational framework of the inspection. In writing the narrative, the inspector should keep the following in mind: Use a simple writing style; avoid stilted language. Use an active, rather than passive approach: (e.g., "He said that..." rather than "It was said that..."). Keep paragraphs brief and to the point. Avoid repetition. Proofread the narrative carefully.

Narrative - Basic Format (1 of 4)

- > General Inspection Information
 - ❖ Inspection objectives
 - ❖ Facility selection scheme
 - ❖ Inspection facts (date, time, location, plant official, etc.)

Narrative - Basic Format (2 of 4)

- > Summary of Findings
 - ❖ Factual compliance findings (include problem areas)
 - ❖ Compliance status with applicable regulations
 - ❖ Administrative problems (as with entry, withdrawal of consent, etc.)
 - ❖ Recommended future action (if appropriate)
- > Facility Information

Narrative - Basic Format (3 of 4)

- > Process information
- > Raw materials, production rates
- > Control equipment
- > Applicable regulations
- > Enforcement history
- > Inspection Procedures and Detail of Findings

- Inspection Procedures and Detail of Findings:
 - Refer to standard procedures used
 - Describe nonroutine procedures use
 - Reference inspection data attached
 - Note and reference any statements taken
 - Reference photographs, if relevant
 - Reference any drawings, charts, etc. made
 - Reference visible emission observation forms
 - List records reviewed and address inadequacies

Narrative - Basic Format (4 of 4)

- > Sampling
 - ❖ Refer to methods used
 - ❖ Reference analytical results attached
- > Attachments
 - ❖ List of all documentary support attached

Documentary Support

- > All evidence referred to in the inspection report
- > Includes:
 - ❖ Inspector's field notes, forms, checklists
 - ❖ Drawings, charts, etc.
 - ❖ Photographs
 - ❖ Analysis results of sample collected
 - ❖ Statements taken
 - ❖ Visible emission observation forms

Confidential Business Information

- > In preparing the report, material claimed confidential business information should preferably be referenced in a non-confidential manner
- > Alternatively, the report may include the confidential information; however, the entire inspection report must then be treated as a confidential document

Keys to Writing Findings

*"It's not so much what you say,
but how you say it."*

Keys to Writing Findings

- > A finding should include:
 - ❖ The source of the requirement
 - ❖ Description of the evidence
 - ❖ The finding
 - ❖ The source of the finding

- Note both the permit condition and the underlying applicable requirement.
- Description should include the time period of noncompliance.
- The source should include the reviewed records, lack of records availability, and/or interview.
- Noncompliance events should be written as: objective, factual, precise, traceable, and concise.

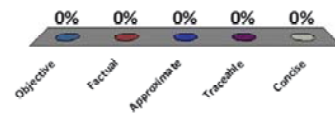
Ranking of Air Inspection Findings

- > Aim is to assess the severity of the discrepancy by its effect on the underlying systems and the environmental risk
 1. Violation of Standards
 2. Compliance Assurance
Noncompliance/Intermittent Compliance
 3. Procedural/Administrative

- One such categorization of noncompliance severity could be based on the following:
 1. Violation of Standards (emission limits, operating limits, work practice standards delineated at front of each emission unit section in permit).
 2. Compliance Assurance Noncompliance, Intermittent compliance (testing, monitoring, recordkeeping, reporting) – these aren't necessarily a violation, just that the facility can't prove that they did NOT have a violation.
 3. Procedural/Administrative noncompliance (applicability statements, permitting requirements, admin requirements) – e.g., updating responsible official after turnover.

Finding statements should not be:

- A. Objective
- B. Factual
- ✓ C. Approximate
- D. Traceable
- E. Concise



Tips for Writing Inspection Findings

(1 of 6)

- > Write findings in complete sentences
- > Findings statements made should be:
 - ❖ Objective
 - ❖ Factual
 - ❖ Precise
 - ❖ Traceable
 - ❖ Concise

Tips for Writing Inspection Findings

(2 of 6)

- > Cite underlying regulation, permit condition, or procedure involved
 - ❖ **Poor:** “Maintenance records for some of the bake oven burners are incomplete.”
 - ❖ **Better:** “Condition XX of Permit YY requires that records be kept of all maintenance performed on bake oven burners. There was no log available for inspection of Bake Oven B2 burner maintenance activities.”

- Add to the “availability” – need to describe time and constraints.
- Was it that the record was not available on that day, but was later emailed to the inspector?
- Was it that it was incomplete for a certain date range, but was otherwise reviewed?

Tips for Writing Inspection Findings

(3 of 6)

- > Make no assumptions
- > Avoid use of non-quantitative adjectives (e.g., very, large, infrequent, somewhat)
- > Write in definitive terms
 - ❖ **Poor:** “It is unclear that...”
 - ❖ **Better:** “There was insufficient evidence available that...”

Tips for Writing Inspection Findings

(4 of 6)

- > Avoid drama and extreme language
 - ❖ “horrible”, “flagrant”, “heinous”
- > Avoid references to particular people’s names
 - ❖ **Poor:** “John Silver’s Method 9 certification did not appear to be up to date”
 - ❖ **Better:** “The most recent Method 9 training certificate for the personnel in Materials Handling Department conducting opacity readings was from January 2010.”

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Tips for Writing Inspection Findings

(5 of 6)

- > Avoid judgment, conjecture, or legal opinions
 - ❖ **Poor:** “In the opinion of the Inspector, more steps should be taken or there will be fugitive dust escaping the plant causing a nuisance.”
 - ❖ **Better:** “Dried mud was observed on portions of the haul road between Entrance #2 and raw materials receiving. Wind screens on the west property line are torn or detached.”
 - ❖ **Poor:** “Since there is no record of the visual inspections, the facility is not in compliance”
 - ❖ **Better:** “A log of visual observations for Baghouse C3 was not available for inspection.”

- If you can't be objective, you probably need more information.
- Don't be tempted to get into the solution and/or ramifications of alleged violation in this step – wait for later steps after already noting potential observed noncompliance.

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Tips for Writing Inspection Findings

(6 of 6)

- > Provide context for numerical quantities
 - ❖ **Poor:** “Three differential pressure readings are missing.”
 - ❖ **Better:** “Condition A5 requires that the differential pressure on Baghouse C3 be logged daily. During calendar year 2012, readings are absent for the following dates: September 4, October 10-11.
 - ❖ **Better:** “Three of the daily differential pressure readings for Baghouse C3 were missed in 2012.”

Example Inspection Finding Documentation 1 - **Poor**

Requirement:

Condition XX requires that personnel conducting opacity readings be appropriately trained and certified in accordance with...

Finding:

From the spotty training records available, it appears that a third of the staff have not been properly trained.

Example Inspection Finding Documentation 1 - **Better**

Requirement:

Condition XX requires that personnel conducting opacity readings be appropriately trained and certified in accordance with...

Finding:

A review of training records for 2013 indicated that 1 of the 3 employees in the Maintenance Department responsible for the visual inspections had no documented opacity training.

Example Inspection Finding Documentation 2 - **Poor**

Requirement:

Condition XX mandates use of a ASTM method XX for daily coal sampling.

Finding:

The coal sampling SOP appears to be outdated and may not be consistent with the ASTM method specified in the permit.

Example Inspection Finding Documentation 2 - Better

Requirement:

Condition XX mandates use of a ASTM method XX for daily coal sampling.

Finding:

The existing coal sampling SOP used by utility personnel was last updated in May 2005 (prior to issuance of the Title V permit) and does not explicitly reference the required ASTM method.

Example Inspection Finding Documentation 3 - Poor

Requirement:

Condition XX requires that monitoring devices be maintained and calibrated in accordance with manufacturer's specifications.

Finding:

It appears from various discussions with personnel that several flow meters and thermocouples at the plant have never been calibrated. No one even knew where the manuals are or that this was a requirement!

Example Inspection Finding Documentation 3 - Better

Requirement:

Condition XX requires that monitoring devices be maintained and calibrated in accordance with manufacturer's specifications.

Finding:

Documentation demonstrating that formal maintenance and calibration procedures have been established and are being followed was not available for monitoring devices associated with the P010 scrubber and C10 oxidizer.

Example Inspection Finding Documentation 4 - Poor

Requirement:

Pursuant to Condition XX air contaminants emitted by the emission units covered by the permit shall not cause a public nuisance.

Finding:

Inspector counted at least a half dozen odor complaints that were received and isolated to the P010 process. Yet the facility claimed to be "continuously" in compliance with the public nuisance requirements of the state rule. This is incorrect.

- Watch tone, don't overreach on correctness. Just repeat facts.

Example Inspection Finding Documentation 4 - Better

Requirement:

Pursuant to Condition XX air contaminants emitted by the emission units covered by the permit shall not cause a public nuisance.

Finding:

During 2012, 7 odor complaints were filed with FL DEP that were isolated to the P010 process. However, on the 2012 annual certification, the compliance status for this condition was marked as “continuous”.

Chain of Custody

A chain of custody is not an important aspect of an air inspection.

- A. True
- ✓ B. False



Chain of Custody

- > Important aspect of the introduction of evidence during enforcement proceedings
- > Documentation of the possession and handling of that evidence from the moment of its collection to its introduction as evidence
- > Assures the court or other quasi-judicial body of the data integrity
- > See APTI “Chain of Custody”

Evidence/Applicability

- > Samples
 - ❖ Most rigorous proof of a chain of custody is usually required for physical samples
- > Photographs
- > Field Notes
- > Laboratory Notes

Elements of Custody

- > A sample or document is in "custody" if:
 - ❖ It is in one's actual physical possession
 - ❖ It is in one's view
 - ❖ It was in one's physical possession and it was secured so it couldn't be tampered with
 - ❖ It is kept in a secured area with access restricted to authorized personnel only
 - ❖ It is placed in a container or other receptacle sealed with an Official Seal that will be broken when the receptacle is opened

- The most rigorous proof of a chain of custody is usually required for physical samples, thus this discussion will focus on chain of custody procedures for samples.

Major Documentation Aspects

- > Preparation of written information: responsibility of the inspector and lab personnel
- > Properly maintained written information: serves as a clear and complete account indicating the sample has remained intact from collection to introduction as evidence
- > Describes the collection, shipment, and storage of the sample

Identifying Samples

- > Sample must be consistently identified throughout this documentation
- > Sample numbers are used for this purpose
 - ❖ one unique sample number is used for each sample
- > It should appear on all documentation relating to a sample including: seals, sample tags, the Chain of Custody Record, inspector's field notes, drawings, photographs, etc.

Procedures for Photographs

Taking Photographs

- > Effective tool when conducting a compliance inspection
- > Photographs of specific areas of concern are especially valuable
- > Photo documentation can be reviewed when an inspector and management discuss the compliance status of a facility
- > Please see Division's "Photography Management SOP"
 - ❖ http://depnet/darm/reference/CompEnforce/cedar/docs_by_chptr/two/2-9-1.pdf

- Inspectors should have access to a digital camera and proper password-protected storage devices.
- Cameras with wide-angle, macro and telephoto capabilities are preferred.

Photography Tips

- > Inclusions of fixed points or landmarks are important to confirm the location of the picture
- > Items such as a pen, pencil, or ruler help convey size and scale
- > Close-up pictures, followed by wide angle pictures. can place an item in context and convey dimension

- It is helpful to use general photography techniques when taking pictures.

While conducting an inspection, the date and time when a picture was taken is enough information to document it.

- A. True
- ✓ B. False

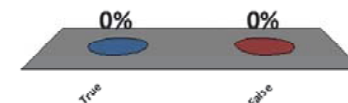


Photo Log Contents

- > Date and time the picture is taken
- > Picture/frame number
- > Name of facility
- > Description of object/subject of photo
- > Type of camera
- > Location of the subject/object
- > Photographer's location relative to subject/object
- > Name, title and company of any other individual present

- If possible, the camera should be set up to have the correct time and date stamped on the face of the photo.
- However, the photograph should be composed in such a way as to avoid having this stamp cover any object of importance in the shot.
- Inspectors should keep a photo log of pictures taken during an inspection.
- The log should be saved in the same location as the digital pictures.
- Picture/frame number: if a site map was obtained, place this number on the map where the subject/object of the photo is located.
- Description of object/subject of photo: emissions unit, source, potential violation, etc.
- Type of camera: digital or film camera and, if film, film type; phone camera; etc.
- Any other individual present when the photos were taken.

Videography

- > Use of videos is also allowed
- > Be sure to have the permission of anyone whose voice may be recorded

Documentation

- > Save pictures or videos to a password-protected computer as soon as possible after completing an inspection
- > Copies of the pictures or videos may be generated and edited, but the original files need to be preserved in original condition

Example Inspection Photos



- Examples of photos that are helpful in capturing an image of emissions, but do not put the emissions or sources in context. They do not:
 - Identify the location or include a landmark
 - Convey scale or size

Handling Non-Compliance Issues

DEP's Philosophy (1 of 2)

- > Primary regulatory objective: Compliance with Florida's environmental laws
- > Despite the best compliance assistance efforts, noncompliance occurs
- > Noncompliance is noncompliance and will be identified as such
- > Oftentimes, a facility can be returned to compliance without enforcement
- > Other times, formal enforcement measures are appropriate

- Although there are some bad actors, noncompliance itself does not only happen to bad actors.
- The enforcement process is described later in this chapter.
- Formal enforcement measures: corrective actions or penalties.
- How the Department handles potential noncompliance is extremely important to meeting the Department's regulatory objectives.

DEP's Philosophy (2 of 2)

- > Premature noncompliance determinations:
 - ❖ Can be timely and costly for the Department and the facility
 - ❖ Can begin a resource-intensive process for facilities (e.g. hiring of consultants and lawyers)
- > The majority of facilities take potential noncompliance very seriously.

- Responding to Warning Notice/NOV/etc. can be extremely expensive.
- If later proven to be IN compliance, will be an unnecessary burden to the facility/business.
- However, if you can't verify compliance, an effort is needed by the facility to help provide this verification.

Site Communications (1 of 2)

- > If the inspector's supervisor agrees that what the inspector observed would in fact be noncompliance, the facility should be contacted to discuss the matter.
- > Facilities can often provide additional information on the issue and any mitigating circumstances.

- A non-compliance initial discussion can be done via a telephone call or as a result of a compliance assistance offer letter.
- Additional information provided by the facility is extremely important when determining if noncompliance actually exists and what enforcement measures, if any, are appropriate.
 - Helpful in determining the quickest path to return the facility to compliance.
- Facilities often become much more cooperative and willing to institute corrective measures when they realize the Department is willing to listen to them and get their input.

Site Communications (2 of 2)

- > A discussion regarding how each party sees the noncompliance often helps both parties to assess how close they are to seeking a resolution.
- > If facilities are far apart regarding resolution at an early stage, additional research and the involvement of enforcement staff in the division and elsewhere can be taken advantage at an early stage.

- Most often, however, the Department and facility have a similar idea of what led to the noncompliance and how to resolve it.

Common Air Compliance Issues

Common Emissions Limit / Operating Limit Issues

- > Equipment capacity information
 - ❖ Actual operating data never reconciled with original application representations
 - ❖ Increases due to production creep invalidating original emissions assumptions
- > Fuel certifications missing or not correct
- > No fugitive dust control practices or SOPs
- > Historical limits based on outdated emission factors

Common Testing Issues

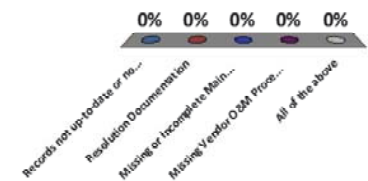
- > Missed or tardy tests
- > Missed or tardy test protocols/notifications
- > Incorrect reference methods used
- > Not operating control equipment to max/min ranges
- > Poor or incomplete test reports
 - ❖ No production data tallied
 - ❖ Incorrect or inappropriate units for results
- > No accounting for by-pass stacks, emergency pressure releases, dilution air dampers, etc.

Common Monitoring/Recordkeeping Compliance Problems

- > Monitoring data outside defined ranges
- > No calibration records for monitoring equipment
- > Poor or incomplete data logs
 - ❖ Dates & Times
 - ❖ Signatures vs. Initials
 - ❖ OK vs. Values
 - ❖ Weekends & Holidays
 - ❖ Incomplete Forms
 - ❖ Lost or overwritten electronic files

Which of the following is a common Monitoring/Recordkeeping Compliance Problem?

- A. Records not up-to-date or not readily accessible
- B. Resolution Documentation
- C. Missing or Incomplete Maintenance Logs
- D. Missing Vendor O&M Procedures
- ✓ E. All of the above



Common Monitoring/Recordkeeping Compliance Problems

- > Records not up-to-date or not readily accessible
- > Issue Resolution Documentation
- > Missing or Incomplete Maintenance Logs
- > Missing Vendor O&M Procedures
- > Missing/Incomplete SSM or O&M Plans

Common Reporting Problems

- > Missed reporting requirements
- > Wrong compliance status
 - ❖ “continuous compliance” vs. “intermittent compliance” vs. “non-compliance”
 - ❖ Partial records review
 - ❖ Incomplete inspection of requirements
- > Late
- > Forms Completed Incorrectly
- > No Compliance Plan
- > Wrong Responsible Official

Data Entry

Data Entry: Importance and DARM philosophy

- > Significant part of Florida's responsibilities under the CAA.
- > Data used for many purposes:
 - > monitors Florida's regulated facilities
 - > tracks its performance under the CAA
 - > provides information to the public, part of EPA's delegation of the CAA to Florida

Data Entry (1 of 2)

- > Data is entered into ARMS/AirCom by Districts and Local programs, and then uploaded to EPA's ICIS database by DARM
- > Data is also used in DEP's "Dashboard"
 - > monitors how DEP is performing regarding meeting specific regulatory goals

Data Entry (2 of 2)

- > Data is used by the Division to ensure its regulatory goals and requirements are being met
- > Without accurate data, DEP, EPA, and the public will not have the proper information it needs to preserve Florida's air quality
- > The Department's standard for data quality and timeliness is 100%, as is EPA's

ARMS data assists DEP in determining if it is meeting its regulatory requirements.

- ✓ A. True
- B. False



Importance of Data Entry (1 of 3)

- > Specific information is provided to EPA as part of EPA's delegation of the CAA to Florida
- > EPA has established, and regularly updates, CAA minimum data requirements (MDR) and corresponding information collection requests (ICR)

- These documents provide what information EPA requires from the states and the manner in which it will be collected.
- EPA reviews the quality of state data every two to three years during the state review framework (SRF) process.
- At the conclusion of the SRF, EPA publishes a public report providing the results of its review, and identifying specific areas where the states need to improve or provide more attention.

Importance of Data Entry (2 of 3)

- > Data is how DEP determines if it is meeting its regulatory requirements.
 - ❖ If ARMS/AirCom data is incorrect, so is the State's assessment of how it is performing
- > DARM, districts, and local programs have access to reports to make sure these requirements are being met

- Florida is delegated specific tasks (review stack test results, perform compliance evaluations, etc.) within specific time frames.

Importance of Data Entry (3 of 3)

- > The data process starts when a facility's basic "inventory" data is entered into ARMS
- > Inventory data used by compliance and enforcement staff in the districts and local programs to conduct compliance monitoring activities
- > An inspector will review the permit and base a compliance determination based on the requirements in the permit

- Inventory data entered into ARMS generally at the time of permit issuance.
- Inventory includes owner name, address, as well as number and type of emission units and related emissions limits.
- For example, if a facility's allowable emissions for a significant pollutant is entered into ARMS as 2 tons/24 hour average, that is the standard an inspector will use when reviewing emissions reports and performing on-site inspections.

Data Entry Timelines

- > EPA provides minimum data requirements regarding the results of compliance monitoring activities conducted by inspectors
- > Example: Stack Test Reviews
 - ❖ Must be uploaded into EPA's ICIS database within 120 days of performance of the test.
 - ❖ An inspector must review a stack test report and enter the report results into AirCom in a timely manner
 - ❖ If not, the data will be late in getting to EPA and that lateness will be reflected during EPA's State Review Framework

Data Quality Importance

- > Florida has agreed to give EPA's regional office quality data
- > EPA's regional office has in turn agreed to provide EPA headquarters accurate data, and
- > EPA headquarters has agreed to provide accurate data to the President and Congress

- A summary of data quality and timeliness requirements is included in the appendix.
- The appendix supplement provides specific timeframes for when DARM requires data to be uploaded to ARMS/AirCom, as well as for when DARM uploads data to ICIS.

Use of Data

- > The data is used, among other things, when formulating environmental and energy policy
- > Data starts at the inspector level and plays a large role on how our country manages its environmental resources

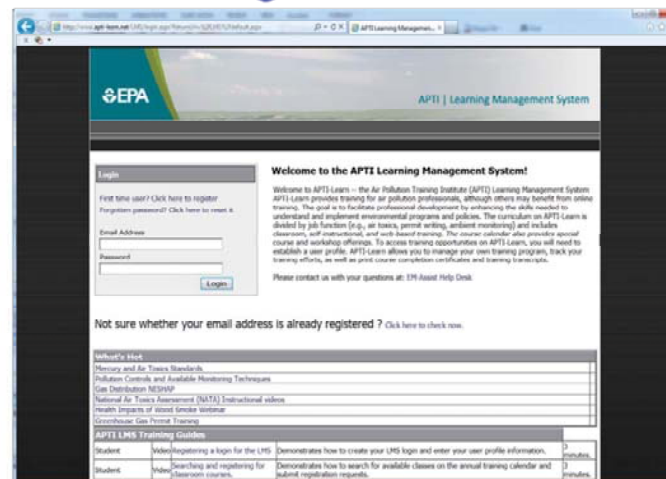
- Link to EPA CMS document
 - <http://www2.epa.gov/sites/production/files/2013-09/documents/cmspolicy.pdf>
- Link to EPA MDR document
 - <http://www2.epa.gov/sites/production/files/2013-10/documents/mdrshort.pdf>

Resources / Appendix

References in Chapter 3

- > EPA APTI Training -see <http://www.apti-learn.net/LMS/default.aspx> (requires login)
- > CARB Course #102: Air Quality Training Program (AQTP) - Online Training - FREE - see <https://ssl.arb.ca.gov/training/courses.php?course=102>
- > APTI "Chain of Custody" - attached
- > DEP Directive 202 - attached
- > How to Dissect an Air Permit - attached
- > FCE Checklist - attached
- > APTI 446 - attached
- > CEDAR 2.9.1 SOP - attached
- > CEDAR Photo SOP - attached
- > Chain of Custody Procedures - attached

EPA Training Website



- EPA APTI Training -see <http://www.apti-learn.net/LMS/default.aspx> (requires login).

CARB Training Website



- CARB Course #102: Air Quality Training Program (AQTP) - Online Training – FREE – see <https://ssl.arb.ca.gov/training/courses.php?course=102>.
- The CARB Online Air Quality Training Program (AQTP) is a series of 10 sections providing an introduction to air pollution control and enforcement. The program is intended for new, entry-level stationary source inspectors, regulatory agency staff, and environmental specialists in business and government. You will learn the basics of air pollution history, the evolution of air pollution laws and regulations, control equipment associated with proper compliance inspections. You are encouraged to ask questions and share your experiences.

1. DEP Directive 202 - Code of Ethics

CODE OF ETHICS

1. Purpose

This directive establishes policy and procedures for implementation and administration of a code of ethics within the Department of Environmental Protection (DEP).

2. Authority

Executive Order 11-03, Article I, Section 24 of the Florida Constitution, chapter 112, Part III, Florida Statutes, chapter 119, Florida Statutes, and chapters 34-12 and 34-13, Florida Administrative Code.

3. Policy

DEP is committed to building public trust and confidence, communicating effectively with the public, and maintaining the people's respect. This code of ethics is intended to clearly set forth the agency's ethical principles and expectations in keeping with the Governor's Code of Ethics and support of the code of ethics specified in chapter 112, part III, Florida Statutes. To the extent that a statutory provision is not enhanced by a more restrictive, express provision of this Directive, the statutory Code of Ethics shall apply. Therefore, employees should familiarize themselves with the statutory Code of Ethics.

Ethics involves more than simply imposing limits on gifts. This comprehensive DEP Code of Ethics covers a wide range of topics and issues, all of which relate to the ultimate goal of improving services to the public. Promoting the public interest and maintaining the respect of the people in their government is a foremost concern.

4. Definitions

- a. **Director:** Any member of senior management.
- b. **Employee:** Any DEP employee, regardless of employment classification.¹

¹ DEP has elected to apply the provisions of the lobbying laws contained in section 112.3125, Florida Statutes, to all DEP employees, rather than limit their application to those individuals who must file financial disclosure forms pursuant to sections 112.3144 and 112.3145, Florida Statutes.

- c. **Gift:** A service or item having value and accepted (either directly, indirectly, or in trust for the recipient's benefit) by the recipient or by another on the recipient's behalf. Gift includes: real property; the use of real property; tangible or intangible personal property or use of such property; preferential terms or rate on a debt, loan, goods or services which are not provided as a government rate; forgiveness of a debt; transportation; food or beverage; membership dues; entrance or admission fees; plants or flowers; personal services for which a fee is normally charged; any other similar service or thing having value.

Gift does not include:

- (1) salary or expenses associated with the employee's employment;
- (2) contributions reported pursuant to chapter 106, Florida Statutes (regarding campaign financing) and gifts (regardless of value) involving volunteer campaign-related travel, lodging, and/or food or beverage expenses, provided the General Counsel has approved such acceptance;
- (3) an honorarium related to an honorarium event, unless given by a lobbyist or given to the employee's spouse (see 7.g of this directive for more on honorarium);
- (4) an award, plaque or similar personalized item given in recognition of the employee's public, civic, charitable or professional service, provided that such item has no separate commercial value; however, such awards from lobbyists or a lobbyist's principal must be approved by DEP OGC;
- (5) an honorary membership in a service organization presented merely as a courtesy;
- (6) use of a public facility or public property made available by a governmental agency for a public purpose;
- (7) transportation provided to an employee by an agency in relation to officially approved governmental business (see DEP OGC intranet website for a memo with further information);

- (8) gifts provided directly or indirectly by a state, regional, or national organization which promotes the exchange of ideas between, or the professional development of, governmental officials or employees, and whose membership is primarily composed of elected or appointed public officials or staff, to members of that organization or officials or staff of a governmental agency that is a member of that organization. See sections 112.312 (12), Florida Statutes (2010).

The acceptance of cash or property received as awards, prizes, or winnings from activities authorized by the laws of this state or other jurisdictions in which such activities are conducted are not gifts, provided that the acceptance of such cash or property does not otherwise pose a conflict of interest as described in this directive, and providing further that the entities or organizations awarding or distributing the awards, prizes, or winnings do not lobby executive branch agencies, do business with DEP (regulated entities or contractors/vendors), or seek to do business with DEP.

- d. **Immediate Family Relative:** An employee's spouse, sibling, parent, or child.
- e. **Lobbyist:** Any person who meets the definitions of that term as used in Chapter 112, Part III, Florida Statutes. Consistent with section 112.3215, Florida Statutes, "lobbyist" does not include an employee of an agency or of a legislative or judicial branch entity acting in the normal course of his or her duties. Consistent with chapter 112, Part III, Florida Statutes, a "principal" is anyone (other than an agency, legislative branch entity or judicial branch entity) who employs or retains a lobbyist, either as an employee or independent contractor. The Florida Legislature maintains a website of executive branch lobbyists and their principals, and should be consulted by the employee (<http://www.leg.state.fl.us>). See sections 112.3215(1)(f)-(h), Florida Statutes (2010).
- f. **Lobbying:** Seeking to influence an executive branch agency decision in the area of policy or procurement, or attempting to obtain the goodwill of an employee.
- g. **Reasonable Accommodation:** Any change or adjustment to a job or work environment that does not pose an undue hardship to DEP and that permits a qualified applicant or employee with a disability to participate in

the job application process to perform the essential functions of a job, or to enjoy benefits and privileges of employment equal to those enjoyed by employees without disabilities. See paragraph 19 of this directive.

- h. **Relative:** An employee's father, mother, son, daughter, brother, sister, uncle, aunt, first cousin, nephew, niece, husband, wife, father-in-law, mother-in-law, son-in-law, daughter-in-law, brother-in-law, sister-in-law, stepfather, stepmother, stepson, stepdaughter, stepbrother, stepsister, half brother, half sister, grandparent, great grandparent, grandchild, great grandchild, step grandparent, step great grandparent, step grandchild, or step great grandchild. Relative also includes a person who is engaged to be married to the subject employee, or who otherwise holds himself or herself out as, or is generally known as, the person whom the employee intends to marry, or with whom the employee intends to form a household, or any other natural person having the same legal residence as the employee. See sections 112.312(21), Florida Statutes (2010).
- i. **Reporting Individual** (also referred to as a "specified state employee"): An employee who is required to file a financial disclosure form pursuant to section 112.3144, Florida Statutes. Contact Employee Relations in the DEP Personnel Office to find out whether you are a reporting individual.
- k. **Specified State Employee:** A reporting individual.
- l. **Undue Hardship:** Circumstances whereby an accommodation proposed to be provided to a qualified applicant or employee with a disability would be unduly costly, extensive, substantial or disruptive, or would fundamentally alter either the nature of the job or DEP's operations. See paragraph 19 of this directive.
5. **Ethics Officer/Public Records & Open Government Contact**
- The Secretary has designated the General Counsel as DEP's ethics officer and public records/open government contact person.
- a. **Responsibility of Ethics Officer.** The General Counsel is responsible for acting as the agency's contact person for providing information and interpretation concerning ethical issues. The General Counsel will also be the primary liaison between DEP and the Governor's Office of Open Government for purposes of training and compliance. Additionally, the

General Counsel has designated an ethics attorney to answer day-to-day questions from DEP employees regarding the DEP ethics code. References in this code to seek assistance from the General Counsel also mean you may contact the ethics attorney.

- b. **Responsibility of Public Records & Open Government Contact.** The General Counsel is responsible for facilitating access to public records and open meetings. This office is also responsible for providing information and interpretation concerning any public records issue. Additionally, the General Counsel has designated a public records attorney (different from the ethics attorney) to respond to legal questions about the public records laws.
- c. **Open Government Mediation Program of the Office of the Attorney General.** The General Counsel is responsible for acting as the agency's contact person and representative for utilizing this program or similar procedures to expedite resolution of public records and open meeting disputes.
- d. **Training.** The General Counsel will also make reasonable efforts to ensure that training is available regarding ethics, public records and open meeting requirements. Currently, DEP employees must annually take ethics and public records training. Please see the DEP Personnel Services website for information on Training Opportunities.
- e. **Violations.** Employees should report any suspected violations of this DEP Code of Ethics to the appropriate bureau chief, director, deputy secretary, DEP Bureau of Personnel Services or DEP Office of Inspector General.

6. Ethics Training

Supervisors are responsible for ensuring that all employees are provided information and appropriate training to ensure full understanding of the agency's Code of Ethics, as specified in this directive and other related directives. Supervisors shall ensure that they and their employees receive annual training on the subjects of ethics, public records law, open meetings, records retention, equal opportunity, and proper personnel procedures.

- a. **Completion of Training.** Training for supervisory personnel on the subjects of ethics, public records law, open meetings, records retention, equal opportunity, and proper personnel procedures is available through the agency's Basic Supervisory Training. All supervisors are required to complete this training.
- b. **Access to Information.** Supervisors are responsible for ensuring that all employees access information on DEP's code of ethics through New Employee Orientation and the DEP Employee Handbook. Editors of DEP's various newsletters are responsible for ensuring that periodic informative articles on DEP's code of ethics provisions appear in these publications. Please contact the General Counsel for assistance.

7. Avoiding the Appearance of Impropriety

Employees will use the powers and resources of the agency to further the public interest and not for any financial or personal benefit other than salaried compensation and employer-provided benefits.

- a. **Safeguarding Impartiality.** Employees are expected to safeguard their ability to make objective, fair and impartial decisions. Accordingly, employees are prohibited from engaging in any activity or accepting benefits that a reasonable person could perceive as potentially influencing or rewarding their decisions. Employees should avoid any conduct (whether in the context of business, financial or social relationships) that might undermine the public trust, whether that conduct is unethical or may give the appearance of ethical impropriety.
- b. **Exceptions.** There may be unique or compelling circumstances warranting exceptions to or waivers from these additional requirements in certain individual cases. In those instances, prior approval of the General Counsel is required. However, prior approval from the Governor's chief ethics officer is required for the Secretary, Deputy Secretaries, and Chief of Staff.
- c. **Conflicts of Interest.**
 - (1) Employees whose immediate family relative is a lobbyist are required to report to the General Counsel the names of all such lobbyist's clients quarterly. Such employees are prohibited from

participating in any matter that would benefit them or their immediate family relatives, and will refrain from participating in discussions, meetings, or activities involving clients of their immediate family relatives. Directors shall reassign responsibilities that pose a conflict of interest to another employee. Where confidentiality requirements prohibit the public disclosure of any names of clients, the employee must specifically identify the confidentiality concerns prior to or contemporaneously with the submission of the list and the employee's supervising Director, in consultation with the General Counsel, will take the measures necessary and appropriate to assure effective recusal by the affected employee(s).

- (2) Serving as Officers/Directors of Governmental & Non-Governmental Entities. See the DEP OGC intranet site Ethics sidebar regarding information OGC needs to make a recommendation regarding whether serving on certain boards is in conflict with this Code of Ethics.
- Employees may serve on the board or commissions of governmental entities subject to the approval of the employee's supervisor and General Counsel.
 - No employee may serve as an officer or director of any non-governmental corporation, company, partnership or other entity regardless of its private or public ownership or its for-profit or non-for-profit status unless such service meets one of the following exceptions:
 - a. Subject to the approval of the employee's supervisor and the general counsel, an employee may serve as an officer or director of a non-governmental, non-profit corporation, company or partnership that does not seek funding by the State:
 - b. Subject to the approval of the employee's supervisor and the general counsel, and employee may serve as an officer or director of a non-governmental, non-profit corporation, company or partnership that seeks funding from the State if:
 - i. Serving in that capacity is directly related to the employee's employment and

- ii. The employee has been requested to do so by the Secretary of FDEP or is required to serve in that capacity by statute, rule, executive order or other applicable law.
- c. Subject to the approval of the employee's supervisor and the general counsel, an employee may serve as an officer or director of a non-governmental, for-profit corporation, company or partnership that does not seek or receive funding from or do business with the State and that is closely-held or family-owned/operated. For example, an employee who, along with other family members, is an officer or director of an entity that owns rental property could seek approval under this exception.
- d. Voluntary, pro bono services not associated with serving on a board (i.e., where the DEP employee does not receive compensation) on behalf of non-profit organizations may be permitted, so long as services to such organizations would not have the potential to create a conflict and would not impair the employee's ability to discharge his/her public duties fully and faithfully. See section 10 of this directive for more on dual employment.
- d. **No Personal Benefit.** No employee shall participate in an official capacity in any matter that would benefit him or her, or which the employee knows will benefit any immediate family relative or business associate of the employee or immediate family relative.
- e. **Screening.** To further avoid any appearance of impropriety, employees will not participate in meetings between and/or decisions directly involving the DEP employee and his or her former private employer, clients or business entities for which she or he had substantial, direct responsibility during the two years prior to assuming their present employment with DEP. To the extent the employee seeks to participate in any such meeting or decision, he or she will first notify the supervising Director who, with consultation with the General Counsel, will prescribe an appropriate screen depending on the particular circumstances. In no event, however, will a procedure limit the employee's ability to fulfill the core functions of his or her job. Moreover, nothing in this Code is meant to prohibit an employee from addressing or making decisions relating to issues that may generally affect an industry or business sector with which

they may have had a prior relationship. For example, a DEP employee may not ever review the permit that he helped prepare as a private engineering consultant, though that DEP employee may review permits that others prepared for the DEP's former employer.

- f. **Honoraria and Honorarium Related Expenses.** Employees are prohibited from soliciting or accepting, directly or indirectly, honoraria or any other thing of monetary value for speaking appearances or published articles relating to DEP or the employee's DEP employment-related responsibilities. Employees may, however, accept payment of honorarium expenses reasonably incurred. Such acceptance must receive prior approval from the General Counsel. The employee's spouse or relative may not accept any honorarium for expenses incurred to attend such functions with the employee. The employee may not accept payment of honorarium expenses if a political action committee, DEP regulated entity, DEP contractor, a lobbyist, or an employer, principal or partner of a lobbyist offers to pay these honorarium-incurred expenses. However, payment of honorarium expenses reasonably incurred on behalf of the employee by DEP may be reimbursed to DEP and prior approval of these expenses is not required from the General Counsel. See sections 112.3149 & 112.3152, Florida Statutes (2010).
- g. **Aircraft and Motor Vehicles.** The motor vehicles owned, leased, or operated by the Office of the Governor/Lieutenant Governor or any State agency are available for official state business only as authorized by the Governor, Lieutenant Governor, or the Secretary. Although not specifically prohibited by Chapter 112, Florida Statutes, employees are prohibited from traveling in a private aircraft unless they have obtained prior authorization from the Governor or the Governor's Chief of Staff.
- h. **Employee Political Activities.** Political activities of State employees are restricted by the Federal Hatch Act and Florida law. See Chapter 110, Florida Statutes. Employees are responsible for being aware of and complying with these restrictions, as specified in DEP Directive 490. Contact the Bureau of Personnel Services for assistance. Directives are located at <http://www.dep.state.fl.us/admin/depdirs/directives.htm>
- i. **Nepotism.** Employees with authority to employ, appoint, promote, advance, or recommend such employment actions are prohibited from using that authority with respect to any relative who is or may become

their subordinate. Supervisory employees with such authority are responsible for being aware of, and complying with, the provisions regarding nepotism specified in DEP Directive 407. This directive does not prevent relatives from working together in public employment. Contact the Bureau of Personnel Services for assistance. Directives are located at <http://www.dep.state.fl.us/admin/depdirs/directives.htm>

j. **Gifts.**

- (1) Nothing of value may be solicited or accepted based upon any understanding that the gift was given to influence official action. See section 112.313, Florida Statutes (2010).
- (2) The statutory Code of Ethics for public officers, procurement employees and reporting individuals provides that a gift from a lobbyist may not be accepted. However, it is the policy of DEP that no employee, regardless of reporting status, may accept a gift or anything of value from a lobbyist or lobbyist's principal, regardless of whether the thing is being offered or given for the purpose of lobbying.
- (3) No DEP employee may solicit any gift, regardless of its value, if the gift is for the personal benefit of themselves, their family, or another employee.
- (4) Unless given by a relative, any gift received by specified state employees (i.e., reporting individuals and procurement employees) which is valued at over \$100 must be reported to the Commission on Ethics in the quarter in which it is received. Forms 9 and 10 are available on the Florida Commission on Ethics' website (www.ethics.state.fl.us) to use for this purpose.
- (5) No DEP employee may accept anything of value from a non-lobbyist unless given by a relative or a personal friend in the ordinary course of friendship for a special occasion (e.g., holidays, birthdays, weddings, showers, anniversaries, graduation, Valentine's Day, etc.), or a meal (whether at a restaurant or at a home), or lodging at the friend's home. However, that personal friend cannot be:

- (a) a lobbyist;
 - (b) the partner, firm, member, employer, employee or principal of a lobbyist;
 - (c) a person having a special pecuniary interest either individually or through a corporation or organization in a matter pending before DEP (those regulated by DEP) and/or the Office of the Governor/Lieutenant Governor;
 - (d) a person who (either individually or through a corporation or organization) provides goods or services to the State under contract or agreement (contractor or vendor); or
 - (e) a person who (either individually or through a corporation or organization) is seeking such business with the State.
- (6) Gifts (regardless of value) may be accepted on behalf of a governmental entity or charitable organization, or for which a public purpose can be shown, provided the General Counsel has approved such acceptance. DEP employees must contact the General Counsel for assistance with the acceptance of such gifts on behalf of DEP.
- (7) Gifts (regardless of value) made to DEP may be accepted by an employee on behalf of DEP provided that the General Counsel has approved such acceptance.
- (8) In determining whether a gift or potential gift poses a conflict of interest and should not be accepted, the following questions are intended as guidelines for employees.
- (a) Is the gift being given or accepted with the intent that your official action or judgment would be influenced by the gift? If the answer to this question is "yes," the gift, regardless of value, CANNOT be accepted. If the answer is "no," proceed to question (b).
 - (b) Do you know, or with the exercise of reasonable care should you know, that the gift is being given to influence your

official action? If the answer to this question is "yes," the gift, regardless of value, CANNOT be accepted. If the answer is "no," proceed to question (c).

- (c) Have you accepted multiple gifts (even if nominal in value) from the same source, such that the gifts taken in the aggregate may appear that they have been given in circumvention of the prohibition against gifts? If the answer is "yes," the gift CANNOT be accepted. If the answer is "no," proceed to question (d).
 - (d) Is the gift being given by either a registered or unregistered lobbyist, principal of a lobbyist, DEP contractor or DEP regulated entity? If the answer is "yes" the gift CANNOT be accepted. If the answer is "no" proceed to question (e). ²
 - (e) Is the gift being given to you by a relative? If the answer is "yes" the gift CAN be accepted. If the answer is "no" proceed to question (f).
 - (f) Is the gift being given to you by a friend who is not a relative or lobbyist, principal of a lobbyist, DEP contractor or DEP regulated entity? If the answer is "yes" the gift CAN be accepted. Specified state employees must report such gift if it is valued at over \$100.00 to the Commission on Ethics.
 - (g) Is the gift being given to your relative by a lobbyist? If the answer is "yes" the gift CANNOT be accepted. Any gift that the DEP employee cannot receive directly may not be received indirectly.
- (9) Additional Guidance regarding events sponsored in whole or in part by lobbyist, principal of a lobbyist, DEP contractor or DEP regulated entity.

² For a list of registered executive branch agency lobbyists, see www.leg.state.fl.us/Lobbyist, then click on "registered executive lobbyist directory."

- (a) Employees have a duty to inquire whether the thing of value is from a lobbyist, principal of a lobbyist, DEP contractor or DEP regulated entity. Ignorance of the facts is no excuse.
 - (b) Employees may attend events sponsored by statutory direct-support organizations ("DSO").
 - (c) Employees may attend a community event open to all persons or accepting an item or benefit generally available for free or below the customary rate (discount) if the terms or rate is a government rate available to all other similarly-situated government employees or a rate which is available to similarly-situated members of the public by virtue of occupation, affiliation, age, religion, sex, or national origin.
 - (d) If the discount has been made possible by sponsorship by a lobbyist, principal of a lobbyist, DEP contractor or DEP regulated entity, the employee must first determine whether the discount is available equally to all government employees or whether it is intended to benefit a particular class of employees. If the discount is available to all government employees, it is not prohibited. Examples: reduced registration fees for government lawyers attending a legal seminar; reduced registration fees for government employees attending a chamber of commerce program. Otherwise, the employee may not accept the discounted pricing.
 - (e) Employees may attend events or accept invitations to events sponsored by a lobbyist, principal of a lobbyist, DEP contractor or DEP regulated entity ONLY IF the DEP or employee pays or provides equivalent consideration. The payment must be contemporaneous with or precede the receipt of the item or attendance at the event. When such an event is a social occasion, employees should at all times refrain from discussing any State business.
- (10) Chapter 112, Florida Statutes, requires that specified public officers and specified state employees must disclose to the Commission on

Ethics any gift that is not prohibited and is valued at over \$100 that has not been received from a relative.

- (11) Remember that awards, plaques, certificates, or similar personalized items given in recognition of the employee's public, civic, charitable or professional service may be accepted if the item has no separate commercial value. If the item is being given by a lobbyist, principal of a lobbyist, DEP contractor or DEP regulated entity the DEP OGC must approve the acceptance.

8. Financial Disclosure

Specified state employees must comply with reporting requirements.

- a. **Disclosure of Financial Interests.** Specified state employees are required by section 112.3145, Florida Statutes, to disclose publicly, by July 1 of each year of state employment, their financial interests to the Commission on Ethics. See chapter 34-8, Florida Administrative Code, and Florida Commission on Ethics Form 1 (Statement of Financial Interests). The DEP Bureau of Personnel Services annually provides a list of specified employees to the Florida Commission on Ethics. The Commission via U.S. mail contacts these employees annually.
- b. **Quarterly Gift Disclosure.** Specified state employees must also file a Quarterly Gift Disclosure (Form 9) for all gifts received that are valued at over \$100.00. Only those gifts received from relatives or gifts reported pursuant to Form 10 (see next) are exempted from this quarterly filing requirement.
- c. **Annual Gift Disclosure.** Specified state employees must also file Form 10, Annual Disclosure of Gifts from Governmental Entities and Direct Support Organizations and Honorarium Event Related Expenses form, to be submitted with Form 1 by July 1 of each year, to report the following: (a) any gift valued at over \$100 which is received from a governmental entity or direct support organization; or (b) actual and reasonable transportation costs, lodging or other expenses related to travel in connection with a presentation made by the employee and paid by a political action committee or lobbyist.

- d. **Final Statement of Financial Interests.** Specified State Employees must file a Final Statement of Financial Interests (Form 1F) with the Florida Commission on Ethics within 60 days after leaving state employment, unless such employee immediately accepts a subsequent position that requires the employee to comply with the financial disclosure requirements of section 112.3145, Florida Statutes.

For more information about financial disclosure requirements or to obtain forms, please visit the Florida Commission on Ethics website at www.ethics.state.fl.us.

9. Frequent-Flyer Miles Earned Through State-Reimbursed Travel

Employees may sometimes be required to travel on State business, requiring them to spend evenings and weekends away from their homes and families. Per diem reimbursements often do not fully reimburse the employee for out-of-pocket travel expenses. As a matter of general policy, any frequent-flyer miles and/or bonus miles awarded to an employee as a result of State-reimbursed travel may be used for personal use by the employee.

10. Dual employment

Secondary employment within state government or outside of state government may not interfere with or pose a conflict of interest with an employee's primary employment with DEP.

- a. **Determination by General Counsel.** In addition to completing the Bureau of Personnel Services Secondary Employment notification form for Personnel, SMS and SES employees are required to seek an opinion from the General Counsel to determine whether any current or potential secondary employment constitutes a conflict of interest. If the General Counsel determines that the secondary employment constitutes a conflict of interest with the employee's SMS or SES appointment, the employee must sever or not accept the secondary employment relationship.
- b. **Dual State Employment.** Career Service and OPS personnel may be employed by another state agency in any capacity, in keeping with the provisions specified in DEP Directive 401 and the applicable provisions of collective bargaining agreements. Career Service employees may also be employed outside state government, but are required to disclose such employment to their immediate supervisor in keeping with the

requirements specified in DEP Directive 401 and the DEP Employee Handbook. Employees are required to be familiar, and comply, with the provisions of DEP Directive 401.

11. Telephone/Internet Usage/E-Mail

State-provided telephones and Internet access are intended for public business.

- a. **Telephone Usage.** DEP recognizes that in the ordinary course of the workday there will be occasions when practicalities make it necessary to make or accept personal telephone calls. Examples of such occurrences are calls necessary to schedule doctor or dental visits, to check on children arriving home from school, and similar circumstances. When making or accepting such personal phone calls, every effort should be made to place these calls during routine breaks or lunch periods.
- b. **Long Distance Calls.** It is not ordinarily permissible to charge personal long distance calls to State telephones. However, the Department recognizes there may be some occasions when employees will find it necessary to receive and make personal telephone calls. Such occurrences should be kept to a minimum. When unavoidable circumstances require an employee to place a personal long distance call, the employee must use their personal long distance credit card for placing the call. Under an emergency situation involving the health or safety of an employee's family member when the employee or caller does not possess a telephone charge card, the employee may place or receive the call and reimburse the state for its cost. It is the employee's responsibility to determine the cost of the call, to immediately inform the supervisor that the call was made and to pay the cost of the call as soon as practical.
- c. **State Issued Cell Phones.** DEP recognizes that in the ordinary course of the workday or while in travel status, there will be occasions when practicalities make it necessary to make or accept personal cellular telephone calls. Due to these practical considerations involved in the use of a state cellular phone, it is permissible for employees issued a state cellular phone to use the phone for personal calls. As with any personal calls on any state telephone, they should be kept to a minimum. If personal calls are on the cellular telephone billing, the employee must reimburse the State for these calls. In addition to paying the cost of the

calls, including roaming charges if applicable, the employee shall pay a \$3.00 processing charge on each billing.

- d. **State-issued Computers.** A state-issued computer is generally for public business use only. Use of your state computer for personal gain, for more than incidental personal business transactions, or storage of personal files or any non-state business purpose that would bring discredit to the agency is strictly prohibited. Use of a state-issued computer for personal reasons while an employee is expected to be working, except for incidental and infrequent use as one may experience with a personal telephone call, is also prohibited. A state-issued computer may be used for incidental personal use during an employee's lunch hour or before or after work hours, providing such use does not incur expense to the state and provided such use is not excessive or inappropriate. Examples of approved incidental computer use during an employee's lunch hour or before or after work with a supervisor's approval are conducting research for educational purposes, making personal travel arrangements, or checking a weather forecast. For more information on computer security and usage policies, consult DEP Directives 390 (Information Resources Security Policies and Standards. See OTIS for assistance.) and 435 (Conduct of Employees) and the DEP Employee Handbook.
- e. **Internet Usage.** State-provided Internet access is generally for public business use only. Employee use of the Internet is recorded and can be monitored. It is inappropriate to make personal Internet purchases using your state physical or state e-mail address for shipping or billing purposes. Visits to Internet sites that contain sexually explicit materials or content, usage of the internet to engage in illegal activities, usage for any purpose that would bring discredit to or embarrass the agency or the state, or visits to non-state sponsored "chat rooms" is strictly prohibited. Employees are required to be familiar, and comply, with the provisions of DEP Directive 390 concerning Internet usage.
- f. **E-mail.** As with telephones, DEP recognizes that in the ordinary course of the workday there will be occasions when practicalities make it necessary to make or receive e-mail messages of a personal nature. Such usage should be kept to a minimum and every effort should be made to send any personal e-mail while on scheduled breaks or during a lunch period. In no case should large attachments, such as photographs, greeting cards and similar materials be sent. Such incidental use does not

include sending material that is or may be offensive to others or which may bring embarrassment or discredit to the agency or to you as a public employee. Keep in mind that e-mail can be requested at any time through a public records request so do not put into e-mail what you would not want a member of the public to read. Employees are required to be familiar, and comply, with DEP Directive 390 relating to e-mail preservation and usage.

- Employees shall not use DEP e-mail services to access, send, store, create or display inappropriate or illegal content, including sexually suggestive or explicit material, gambling, profanity, political activities, obscenity, harassment or discrimination regarding age, race, color, sex, religious belief, national origin, political opinion or disability.
- Employees shall not use DEP computers to visit non-state sponsored "chat rooms" or to visit Internet sites that contain sexually suggestive or explicit material.
- Employees shall not use DEP e-mail services for unlawful activities, commercial purposes outside the agency, personal financial gain, or uses that violate other DEP policies or guidelines.
- Employees shall not use DEP e-mail services to represent, express opinions, or otherwise make statements on behalf of the Department or any unit of the agency unless authorized to do so.
- Employees shall not use computers for personal reasons while working, except for incidental use. Such incidental use should be infrequent and not interfere with DEP operation of computers or e-mail services, burden DEP with noticeable incremental cost or interfere with the e-mail user's employment obligations to DEP.
- Employees shall not use computers to make personal purchases with a State e-mail or physical address for shipping or billing purposes or to store personal files.
- Employees shall not use DEP e-mail services for purposes that could reasonably be expected to cause, directly or indirectly, excessive strain on any computing resources, or unwarranted or unsolicited interference with the use of e-mail or e-mail systems by others (e.g., animated email signatures).
- Employees shall not send mass e-mails unless authorized. This restriction does not preclude an employee from sending multiple e-mails to a finite group for official business. Large attachments with graphics, streaming video, or sound effects are discouraged.

If you receive an **inappropriate** e-mail (political, sexually suggestive or explicit, discriminatory or gambling-related) and do not recognize the sender's name or e-mail address, you should:

- Create a new email with "SpamReport" as the email address to send to and then DRAG the inappropriate email into the body of new email so that it becomes an attachment. Press Send.
- Click the Shift and Delete keys simultaneously on your computer to permanently delete the e-mail.
- If receipt continues, contact the agency IT Help Desk by phone (850-245-7555) or email (helpdesk@dep.state.fl.us).

When you receive an **inappropriate** e-mail from a non-DEP person you know personally or from a DEP employee, you should:

- Respond to the sender by e-mail, letting the sender know they have reached your work e-mail address and their e-mail may be a violation of DEP Ethics Code and DEP 390. Ask that they send future e-mails of this nature to your personal e-mail address or not at all.
- Do not forward the original e-mail and any attachments to others.
- Click the Shift and Delete keys simultaneously on your computer to permanently delete the original e-mail.
- Report any additional receipt of unsolicited e-mails from this individual to your supervisor by e-mail to document that you have reported the incident as required.

12. Sexual Harassment

Committing any act of sexual harassment is considered a breach of DEP's Code of Ethics. Supervisors are responsible for ensuring that all employees are aware of what constitutes sexual harassment and for scheduling employees for sexual harassment training. Employees are responsible for reviewing the agency's definition of Sexual Harassment as contained in the DEP Employee Handbook and DEP Directive 435 and for refraining from any behavior that is, or has the potential to be perceived as, sexual harassment.

13. Domestic Violence In the Workplace and Workplace Safety

DEP will not tolerate any act of violence in the workplace. DEP endorses the use of early intervention and awareness strategies as a first line of defense to avoid

or minimize the occurrence and effects of violence in the workplace, both domestic and non-domestic. Engaging in acts of violence while on duty or on state property is a violation of DEP's Code of Ethics. The Bureau of Personnel Services is the agency's resource for obtaining information about and strategies for intervention, counseling and community resources. Employees are responsible for refraining from any act of violence against any individual.

14. Illegal Drug and Alcohol Use

DEP strictly prohibits the use or possession of any illegal drug or alcohol while on duty or while on state property. Illegal drug usage and use of alcohol while on duty or on state property is considered a violation of DEP's Code of Ethics. Some employees are required to submit to drug testing as a condition of employment. Employees subject to pre-employment or fitness for duty drug testing are the Secretary, Deputy Secretaries, employees required to possess a Commercial Driver's License, and any employee occupying a Safety Sensitive or Special Risk position. Any employee required to possess a Commercial Drivers License must also undergo random drug testing. All employees are subject to being drug tested when sufficient cause can be demonstrated that there is a reasonable suspicion, as defined in DEP Directive 420 (Drug-Free Workplace and Drug Testing), that an employee may be under the influence of an illegal drug or alcohol. Drug testing is strictly regulated under the provisions of DEP Directive 420.

15. Employee Assistance Program

DEP accepts an ethical responsibility to help employees who have personal/medical problems that may potentially adversely affect their job performance or personal life. DEP exercises this responsibility by providing an Employee Assistance Program (EAP). The program's contract manager is the Bureau of Personnel Services. Supervisors are responsible for ensuring employees are made aware of this employee benefit. DEP pays for the first three visits of a self-referral and for six visits for a supervisory referral. DEP also allows employees to keep EAP appointments, which are the result of supervisory referral as "time worked." The EAP provisions are governed by DEP Directive 460.

16. Safety Policy

It is DEP policy to provide employees with a safe and healthy work environment through adequate maintenance of our facilities and equipment. Each employee is required to assist in developing and maintaining this environment by observing safety regulations and employing safe work habits. DEP Directive 710 provides further guidance on workplace safety and loss control management.

17. Mandatory Use of Seat Belts/Safe Operation of Vehicles

Employees have an ethical responsibility to obey all traffic laws, including wearing a seat belt and operating state vehicles safely. All seated occupants of state-owned, leased or rented vehicles and of all personal vehicles operated on state business are required to wear seat belts. Failure to wear seat belts shall be considered improper use of a vehicle and shall subject employees to disciplinary action. If an accident resulting in injury to an employee occurs and the employee is not wearing seat belts and the failure to use the seat belts contributes to injuries received, the employee's workers' compensation benefits shall be reduced under the provisions of section 440.09(5), Florida Statutes. Employees are responsible for reviewing and being familiar with DEP Directive 620 concerning automobile safety.

18. Smoking Policy

DEP accepts its ethical responsibility for providing a smoke-free environment for employees and the public in accordance with Florida law. Smoking is prohibited in all government buildings. Employees are required to review and be familiar with DEP Directive 366 concerning DEP's smoking policy.

19. Equal Employment Opportunity/Affirmative Action and Americans with Disabilities Policy

- a. DEP endorses the ethical principle that all employees and job candidates are entitled to consideration for employment and advancement based on merit principles, and without regard to factors not related to job performance. Any employee who believes that he or she has been discriminated against may file a complaint with the Bureau of Personnel Services, the Office of Inspector General, the Florida Commission of Human Relations, or the federal Equal Employment Opportunity Commission.

- b. DEP endorses the ethical principle that employees, job applicants and members of the public with disabilities are entitled to reasonable accommodation in order to gain access to or employment in DEP's programs or activities.

20. Other Professional Codes of Ethics

Nothing in this directive relieves any attorney from any obligations under the Rules of Professional Responsibility; nor shall anything in this directive relieve any professional from any other applicable professional codes of ethics.

This update supersedes DEP 202 dated February 17, 2011, and is necessary to achieve consistency between this directive and the amendments to the Governor's directive as well as clarification to some provisions of this directive.

Responsible Office: Division of Administrative Services
Bureau of Personnel Services

Relevant Forms available via: <http://www.ethics.state.fl.us>

2. Dissecting an Air Permit

Dissecting an Air Permit

Step 1: Qualify conditions with regard to their inferred compliance status.

Compliance inherent ⊕

Compliance can/must be inferred ⊖

Compliance is directly verifiable

Event based actions where compliance presumable

General compliance obligations

Emission limit with no CEMs or test data available

Nature of equipment implies compliance

Focus of inspection.

Step 2: Consider explicit and implied tasks derived from conditions.

Tasks explicitly mandated ⊖

Action only

Action and data collection

Action, data collection, comparison to threshold

Action only under certain situation or trigger

Historical assumptions must continue to hold true

Tasks implied by condition ⊖

Past descriptions/specifications for regulated equipment still correct

Multiple actions necessary to meet broadly stated requirement

Step 3: Define and classify compliance tasks.

Permit Condition Number and Text

Process/Emission Unit ID/Name

Task Topic

Task Title/Description

Task Type (Action, Data, Event...)

Frequency

Responsible Person(s)/Group(s)

Deviation Thresholds

Associated Data Forms/Procedures

Associated SOPs

3. Full Compliance Evaluation Checklist (FCE)

FULL COMPLIANCE EVALUATION (FCE) CHECKLIST

ARMS ID			
OWNER/COMPANY			
SITE NAME			
DATE OF THIS FCE		DATE OF PREVIOUS FCE	
ASSESSMENT TYPE	☐ ON-SITE ASSESSMENT ☐ OFF-SITE ASSESSMENT (Explain reason for OFF-SITE in 'COMMENTS' Section)		
EVALUATION TYPE	☐ TITLE V ☐ TITLE V MEGA-SITE* ☐ OTHER: ☐ SYNTHETIC MINOR (SM FCE only needed where emissions limited to $\geq 80\%$ and $< 100\%$ of major source thresholds)		

*Facility with a large number of complex emissions units. It is more reasonable to evaluate a Title V Mega-Site once every 3 years instead of once every 2 years.

REVIEW OF ALL REQUIRED REPORTS

PERIODIC REPORTS		COMMENTS
☐ DONE ☐ N/A	Annual Operating	
☐ DONE ☐ N/A	Annual Statement of Compliance – Title V	
☐ DONE ☐ N/A	Title V Semi-Annual Monitoring	
☐ DONE ☐ N/A	Semi-Annual Compliance	
☐ DONE ☐ N/A	Quarterly Compliance	
☐ DONE ☐ N/A	Stack Test	
☐ DONE ☐ N/A	Visible Emissions Test	
☐ DONE ☐ N/A	Other:	

CONTINUOUS EMISSION MONITOR REPORTS		COMMENTS
☐ DONE ☐ N/A	Quarterly excess emissions	
☐ DONE ☐ N/A	Semi-annual	
☐ DONE ☐ N/A	RATA	
☐ DONE ☐ N/A	CGA	
☐ DONE ☐ N/A	Other :	

OBSERVATIONS AND RECORDS REVIEW

OBSERVATIONS AND RECORDS		COMMENTS
☐ DONE ☐ N/A	Visible emission observation(s)	
☐ DONE ☐ N/A	Review of facility records and logs	
☐ DONE ☐ N/A	Assessment of process parameters (feed rates, process rates, raw material compositions, etc.)	
☐ DONE ☐ N/A	Assessment of control equipment performance parameters (water flow rates, pressure drops, temperatures, ESP power levels, etc.)	
☐ DONE ☐ N/A	Stack test observation(s)	
☐ DONE ☐ N/A	Other :	

FULL COMPLIANCE EVALUATION (FCE) CHECKLIST

INSPECTION REPORTS (COMPLIANCE MONITORING REPORTS)

DATE OF INSPECTION	DATE OF INSPECTION REPORT	FULL/ PARTIAL (F OR P)	INVESTIGATIVE (YES OR NO)	LOCATION OF INSPECTION REPORT REQUIRED ELEMENTS:					
				FACILITY INFO	APPLICABLE REQUIREMENTS	LIST OF EUS	ENFORCEMENT HISTORY	COMPLIANCE ACTIVITIES	FINDINGS & RECOMMENDATIONS
		☐ F ☐ P	☐ Yes ☐ No	☐ EASIIR ☐ /ARMS ☐ /APDS	☐ EASIIR ☐ /ARMS ☐ /APDS	☐ EASIIR ☐ /ARMS ☐ /APDS	☐ EASIIR ☐ /ARMS ☐ /ACES	☐ EASIIR ☐ /ARMS ☐ /ACES	☐ EASIIR ☐ /ARMS ☐ /ACES
				☐ Scanned/ ☐ Paper Files	☐ Scanned/ ☐ Paper Files	☐ Scanned/ ☐ Paper Files	☐ Scanned/ ☐ Paper Files	☐ Scanned/ ☐ Paper Files	☐ Scanned/ ☐ Paper Files
		☐ F ☐ P	☐ Yes ☐ No	☐ EASIIR ☐ /ARMS ☐ /APDS	☐ EASIIR ☐ /ARMS ☐ /APDS	☐ EASIIR ☐ /ARMS ☐ /APDS	☐ EASIIR ☐ /ARMS ☐ /ACES	☐ EASIIR ☐ /ARMS ☐ /ACES	☐ EASIIR ☐ /ARMS ☐ /ACES
				☐ Scanned/ ☐ Paper Files	☐ Scanned/ ☐ Paper Files	☐ Scanned/ ☐ Paper Files	☐ Scanned/ ☐ Paper Files	☐ Scanned/ ☐ Paper Files	☐ Scanned/ ☐ Paper Files
		☐ F ☐ P	☐ Yes ☐ No	☐ EASIIR ☐ /ARMS ☐ /APDS	☐ EASIIR ☐ /ARMS ☐ /APDS	☐ EASIIR ☐ /ARMS ☐ /APDS	☐ EASIIR ☐ /ARMS ☐ /ACES	☐ EASIIR ☐ /ARMS ☐ /ACES	☐ EASIIR ☐ /ARMS ☐ /ACES
				☐ Scanned/ ☐ Paper Files	☐ Scanned/ ☐ Paper Files	☐ Scanned/ ☐ Paper Files	☐ Scanned/ ☐ Paper Files	☐ Scanned/ ☐ Paper Files	☐ Scanned/ ☐ Paper Files

In-house tools with electronic report generation features: ARMS (Air Resource Management System) database; and
EASIIR (Electronic Access System for Inspection Information Retrieval)

Internet-accessible information: ACES (Air Compliance and Enforcement Search); and
APDS (Air Permit Documents Search)
Scanned Paper Files not in APDS (e.g., Oculus or Local Program e-File Storage)

COMMENTS

Prepared by: _____

Date: _____

Reviewed by: _____

Date: _____

**4. Air Pollution
Source Inspections
Safety
Self Instructional
Course**

81-476

AIR POLLUTION SOURCE INSPECTION SAFETY SELF INSTRUCTIONAL COURSE

Prepared for:

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December 1990

DISCLAIMER

This is not an official policy and standards document. The opinions, findings, and conclusions are those of the authors and not necessarily those of the Environmental Protection Agency. Every attempt has been made to represent the present state of the art as well as subject areas still under evaluation. Any mention of products or organizations does not constitute endorsement by the U.S. Environmental Protection Agency.

The safety precautions set forth in this manual and presented in any training orientation session, seminar, or other presentation using this manual are general in nature. The precise safety precautions required for any given situation depend on and must be tailored to the specific circumstances. Richards Engineering expressly disclaims any liability for any personal injuries, death, property damage, or economic loss arising from any actions taken in reliance upon this manual or any training or orientation session, seminar, or other presentations based on this manual.

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INTRODUCTION

AIR POLLUTION SOURCE INSPECTION SAFETY SELF INSTRUCTIONAL COURSE

COURSE PURPOSE AND SCOPE:

This course provides basic orientation in air pollution source inspection health and safety. Emphasis is placed on the recognition and avoidance of common inspection hazards. The selection and use of personal protection equipment for "back-up" protection is also stressed. The specific course objectives are listed below.

- * Provide general information on techniques useful for recognizing and avoiding common inspection health and safety problems.
- * Expose new air pollution source inspectors to a wide variety of inspection (field) situations.
- * Demonstrate that the most effective safety procedure is for field personnel to recognize and avoid inspection hazards.
- * Demonstrate that personal protection equipment is necessary but not sufficient to provide protection. The significant limits of this equipment must be fully recognized.
- * Demonstrate that field personnel must exercise professional judgement and discipline with regard to safety issues.
- * Introduce new field personnel to useful health and safety literature.

The course is organized into five separate lectures. Lecture 1 presents general information on inspection health and safety. Lecture 2 concerns a wide variety of walking and climbing hazards including caged ladders, portable ladders, and roofs. Most of the walking and climbing hazards are easily avoided as long as the inspector respects the potential hazards and works at a controlled pace.

Lecture 3 concerns a wide variety of thermal burn, chemical burn, electrical, and explosion hazards. Much of this material will be entirely new to personnel without prior air pollution

inspection experience. Improper inspection procedures can result in fatal accidents.

The inhalation problems addressed in Lecture 4 are difficult to recognize and avoid. Many of the pollutants which are commonly encountered have odor or taste thresholds substantially above the concentrations considered safe. Furthermore, fugitive leaks from air pollution control systems can result in high localized concentrations in the areas where inspectors must go as part of the inspection. The recognition and avoidance of these inhalation problems is especially important. Some of the unique problems in the selection of respirators are also addressed in this lecture.

Lecture 5 concerns confined entry hazards for agency inspectors. This lecture is devoted entirely to convincing inspectors that they can not and should not enter air pollution control devices under any circumstances. They do not have sufficient time, sufficient equipment, or sufficient control of the situation to permit safe internal inspections. It is extremely important that inspectors recognize the many ways fatal accidents can and have occurred in air pollution control devices.

It is apparent that this course does not address all of the possible categories of inspection hazards. For example, there is no information on heat stress, cold stress, biological hazards, skin absorbable chemicals, and ionizing radiation. These have been omitted simply because of limited course resources. Hopefully, later revisions of this course will include these subjects and expanded coverage of the topics which have been included.

This course is based primarily on U.S. EPA Air Pollution Training Institute (APTI) Course #446 which is titled, "Air Pollution Source Inspection Health and Safety."

COURSE MANUALS AND VISUALS AIDS:

Careful reading of the manual is necessary to satisfactorily complete this course. The required reading for each lecture is listed in the lecture descriptions summaries which follow. This material must be read and understood after viewing the videotape for each section. In most cases, it will take between 2 and 4 hours to complete each lecture.

COURSE LIMITATIONS:

This course was designed to serve as an introduction for new agency personnel assigned to air pollution source inspection duties. There are a number of important limitations listed on the following page which must be considered with regards to the material presented in this course.

- * The procedures discussed in this manual do not replace, abridge, alter, or supplement agency and source safety procedures.
- * In certain cases, it will be necessary to use different or additional procedures rather than those illustrated or discussed. It is impossible to anticipate every hazard or combination of hazards at the large number of plants inspected by agency personnel.
- * This course does not concern any one brand or type of personal protection equipment. All field personnel must obtain instruction on the specific equipment issued.
- * This course is not intended to provide the basic respirator instruction required by OSHA Regulation 29 CFR 1910.134. Furthermore, this course is not intended to serve as the training required by EPA Personnel Orders 1440.2 and 1440.3.

It is highly recommended that new agency personnel take courses concerning personnel protection equipment assigned for their use. Furthermore, persons completing this self instructional course should take APTI course #446 which presents a more comprehensive summary of air pollution source inspection health and safety procedures.

LECTURE 1

INTRODUCTION

INSPECTION HEALTH AND SAFETY

OBJECTIVES:

This lecture provides a basic introduction to the subject of source inspection health and safety. Important safety principles of inspection are first presented in this lecture and then illustrated during subsequent lectures. The organization of the self instructional course is also explained in this lecture.

SCOPE:

- * Self-instructional course purpose and organization
- * Inherent characteristics of air pollution source inspection and inspector risk
- * Important principles of inspection safety and health

READING ASSIGNMENT:

- * Appendix A, pages A-3 to A-14

VISUAL AIDS: None

BASIC PRINCIPLES AND PROCEDURES:

- * Air pollution source inspection activities are not inherently safe. Air pollution agency inspectors can and have been seriously injured. Unfortunately, summaries of these accidents and illnesses are not widely reported.
- * Inspection safety procedures must be tailored to each site. Each inspection and each plant presents different combinations of hazards. In some cases, safety procedures which are different or more comprehensive than those presented in this course will be necessary. Also, the inspection procedures may have to be abbreviated or modified due to health and safety problems at a given site.

- * Recognition and avoidance of inspection health and safety hazards are the most effective safety procedures.
- * Personal protection equipment is absolutely necessary, but it is used only for back-up protection. To the maximum extent possible, inspectors must recognize and avoid potential hazards.
- * Conventional first aid procedures are difficult to implement in certain air pollution source inspection situations.
- * Air pollution emission regulations were developed and promulgated without extensive consideration of inspection safety.
- * An agency safety program is necessary. Established procedures should be followed at all times.
- * The field inspector bears the primary responsibility for inspection safety. The inspector should not abdicate safety and health judgement to others.
- * Field inspectors should not make any requests or take any actions which endanger plant personnel.
- * Field inspectors, agency managers, and source personnel must respect inherent health and safety limits to field inspections.
- * Agency personnel should always be accompanied by plant personnel who are knowledgeable about plant conditions and operations and who are safety conscious. The plant personnel must be prepared to reject inspection requests which involve unreasonable inspector or plant personnel risks.
- * Additional safety training is required on a continuing basis.

REVIEW QUESTIONS:

- 7

- 8

REVIEW QUESTIONS - ANSWERS:

1. During the inspection of a fabric filter, the available measurement ports in the exhaust duct can be reached only by crossing a very questionable roof. What should an inspector do during a Level 3 inspection?

a. Forget measuring the outlet VOC concentration.

Correct. It is sometimes necessary to limit the inspection due to health and safety problems.

b. Cross the roof carefully.

Incorrect. Often it is impossible to safely cross a roof which is heavily laden with solids, which is corroded, which is slippery, or which has obscured skylights or weak areas.

c. Ask the plant personnel to take the instrument over to the available ports and make the measurement.

Incorrect. Nothing should be done by the agency inspector which endangers plant personnel.

2. An inspector should not work alone during an inspection, unless _____.

a. Plant personnel are too busy to accompany the inspector.

Incorrect. Plant personnel who are familiar with plant operations and potential safety problems are essential for a safe inspection. Furthermore, a source inspection is an important event and plant personnel should make the time to accompany the inspector.

b. The inspector is very familiar with the plant.

Incorrect. It is impossible for an agency inspector to be familiar with all of the possible hazards.

c. No entry into partially confined or totally confined areas is anticipated.

Incorrect. There are many safety and health hazards that do not involve entry into confined or partially confined areas.

d. None of the above

Correct. Responsible plant personnel should always accompany the agency inspector.

3. Should regulatory agency inspectors conduct internal inspections of air pollution control devices during periods when the unit is off-line?

a. Yes, when plant personnel are working inside.

Incorrect. Serious accidents can and have occurred when plant personnel are inside.

b. Yes, when plant personnel have adhered to a written confined entry.

Incorrect. Serious accidents can occur even though plant personnel have fully adhered to their own written safety procedures.

c. Yes, when the control device has just been built and has not yet been operated.

Incorrect. Serious accidents can occur even though the unit has never been operated.

d. No.

Correct. Agency inspectors should never enter air pollution control devices or other equipment. Inspectors do not have the necessary time, safety equipment, and control of plant operations to ensure safety. Furthermore, all inspection objectives can be fully achieved without internal inspections.

4. During an inspection of a hospital waste incinerator, the agency inspector has been asked not to wear a respirator since this would unnecessarily concern plant operators. What should the inspector do?

- a. An inspector should wear whatever personal protective equipment is routinely used at the plant. In this case, no respirator is needed.

Incorrect. An agency inspector should never abdicate his or her judgement to plant personnel. It is often advisable to use personal protection equipment even when it is not required or to use more sophisticated and capable safety equipment than being used by plant personnel.

- b. Respect the plant representative's wishes despite concerns about possible airborne particulate and pathogens.

Incorrect. The inspector must choose personnel protection equipment based on plant policy, agency policy, and observed plant conditions. In this case, a respirator is prudent.

- c. Wear the respirator.

Correct. To the extent possible, the inspector should attempt to avoid areas of potential exposure. However, since it may be impossible to recognize fugitive pathogen emissions a respirator is advisable for "back-up" protection.

- d. Take off the respirator since it probably is not effective for airborne pathogens.

Incorrect. The effectiveness of the respirator depends partially on the physical form of the airborne pathogens. If they are on the surfaces of airborne particles, they may be collected. An inspector should consult the agency's staff industrial hygienist or safety coordinator to determine the effectiveness of a respirator for a given source.

5. The inspection checklist provided by the agency indicates that a complete Level 2 inspection of a wet scrubber system includes: (1) an observation of the plume opacity, (2) recording scrubber pressure drops over a complete process cycle, (3) recording the indicated gas inlet temperatures over a complete process cycle, (4) recording the recirculation pH, (5) recording scrubber nozzle operating pressures, and (6) recording the process operating rates. Due to a leak of pollutant-laden air out of the inlet duct, strong odors exist around the systems static pressure drop gauge. What should the inspector do during the Level 2 inspection?

- a. Put on the appropriate respirator and walk over to the location of the static pressure gauge.

Incorrect. Respirators are used for "back-up" protection only. Inspectors should not knowingly walk into an area with potentially high contaminant concentrations. The concentrations are probably much higher than the maximum allowable limits of the respirator. Furthermore, the fugitive emissions are often composed of several types of pollutants and most respirators are only effective for one type.

- b. Do not attempt to get the static pressure drop during this inspection.

Correct. It is sometimes necessary to limit an inspection due to potential health and safety problems. Plant personnel should be asked to correct this fugitive problem in the near future so that (1) emissions to the atmosphere are reduced, and (2) complete inspections can be conducted at a later date.

- c. Ask the plant personnel to walk over to the instrument and observe the present static pressure drop.

Incorrect. Nothing should be requested by agency inspectors which endangers plant personnel.

Required Readings

APPENDIX A

This is a October, 1990 revision of
information originally provided in
the manual titled,

"Air Compliance Inspection Manual" ,
Chapter 5

AIR POLLUTION CONTROL FIELD ACTIVITY

HEALTH AND SAFETY

The performance of field inspection and testing activities always involves a certain degree of risk. Safety procedures and policies are designed to minimize this risk. General procedures are summarized in this chapter for most common health and safety problems encountered during the evaluation of air pollution sources and control devices.

POTENTIAL HEALTH AND SAFETY HAZARDS

The preferred method of minimizing potential health and safety hazards is through the application of engineering controls which eliminate the problem. This is not usually possible in the case of field activities. Accordingly, the inspector or stack tester must be constantly aware of potential problems and avoid these to the extent possible. When the environmental conditions demand personal protection equipment, the agency employee must know how to select and use this equipment. The limitations of this personal protection equipment must also be appreciated.

Types of Health and Safety Hazards

The inspection of air pollution control systems inherently involves a large number of potential health and safety problems. A partial list of these potential hazards is provided in Table 1. It should be noted that they occur relatively frequently. Therefore, the air pollution control agency employee must be constantly alert so that they can be avoided.

Inhalation hazards are often created by fugitive leaks of pollutant laden gases out of worn expansion joints, cracked welds, and corroded shells of the control system itself. The sudden downdraft from nearby stacks and vents can also lead to acute exposures. The partially confined areas formed by weather enclosures, walkways between compartments, fan houses, and areas adjacent to large ducts allow high concentrations of toxic material to accumulate even when the fugitive emission rates are comparatively small. Most of the high pollutant concentrations occur by accident and without the knowledge of plant personnel. The highly variable conditions make any monitoring data highly questionable even in the rare instance when exposure monitoring has been done. These problems complicate the selection of the proper respirator for these conditions.

Table 1. Potential Health and Safety Risks

- * Acute exposure to toxic gases such as aromatic hydrocarbons, chlorinated hydrocarbons, nitrogen oxides, and sulfur dioxide
- * Exposure to chemical asphyxiants such as hydrogen sulfide and carbon monoxide
- * Exposure to toxic fumes and dusts containing asbestos, lead, beryllium, and arsenic
- * Falls through roofs or through horizontal surfaces weakened by the accumulation of excessive solids or the corrosion of supports
- * Falls on wet and/or icy walking surfaces
- * Falls from ladders with mud or ice on the foot rungs
- * Falls from improperly maintained or secured portable ladders
- * Head injuries from falling objects, overhead beams, and protruding obstacles
- * Static electrical shock during measurements conducted downstream of electrostatic precipitators or in any fiberglass ducts
- * Duct explosions initiated by static accumulation on measurement probes
- * Entrapment in rotating mechanical equipment such as fan sheaves and conveyors
- * Explosions of fans operating at excessive tip speeds and operating severely out-of-balance
- * Asphyxiation due to free flowing solids discharged from hopper access hatches
- * Injuries due to fast moving plant equipment such as fork lifts and overhead cranes
- * Burns due to contact with hot objects such as uninsulated flue gas ducts and stacks
- * Burns due to acid spray from leaking process equipment
- * Burns due to high pressure steam leaks

Table 1. (Continued)

- * Eye injuries due to splashing chemicals and flying objects
- * Hearing impairment due to exposure to high noise levels
- * Burns due to contact with highly alkaline dusts and liquids
- * Static electrically initiated explosions while obtaining samples of fuel oils, waste oils, or coatings
- * Electrical shock due to exposed high voltage lines
- * Electrical shock due to contact with exposed parts within an electrical cabinet
- * Insect stings due to approaching nests which are often located in the warm and sheltered areas around hoppers, weather enclosures, and electrical cabinets of air pollution control systems
- * Inhalation of bacteria, viruses, and fungi from material being handled by the control system
- * Exposure to toxic clouds of chlorine or ammonia released during plant upsets
- * Heat stress due to hot process equipment, hot gas ducts, and stacks
- * Cold stress due to work at elevated portions of a plants or in areas unprotected from the wind
- * Lightning injuries due to work at elevated portions of the plant
- * Absorption of chemicals through the skin
- * Asphyxiation in oxygen deficient atmospheres

The risk due to the sudden release of chlorine, ammonia, and high temperature steam is compounded by the location of most air pollution control equipment, continuous emission monitors, and emission testing sites at elevated portions of the plant. Rapid egress from high platforms is difficult in the majority of cases.

The elevated and isolated locations of many control systems also increase the inspection safety risk. It is usually necessary to climb permanent or portable ladders to reach the equipment. In some cases, the equipment can only be reached by crossing roofs or elevated walkways. Since these portions of the plant are not regular work areas, even the plant personnel may not be aware of some of the potential problems involved with the ladders and roof areas. Some areas do not have guard rails, and some have only improperly secured guard rails. Roofs which can not take the weight of one or more individuals are relatively common. Furthermore, there are frequently cables, hoses, and debris along the elevated platforms and roofs since plant maintenance personnel find it difficult to remove this material. Injuries which occur in these portions of the plant can be very serious. Rescue of injured personnel is difficult and time consuming due again to the isolated and elevated locations of the equipment.

There are several factors which make an agency employee more at risk to the potential hazards than plant personnel. The agency employee is rarely familiar with the numerous walking hazards such as missing grate sections, protruding beams and valves, weakly supported ladders and guard rails, and exposed electrical lines. Plant personnel may take such conditions for granted and forget to point them out to visiting inspectors and stack testers. Also, the agency personnel can easily become so preoccupied with conversations with the plant personnel that supposedly obvious hazards are not recognized. On occasion, plant personnel attempt to hurry the agency employee so that they can get back to more pressing production-related duties. This inadvertently increases the risk of injury.

The agency employee who often does his work in a different place each day does not have the opportunity to physically acclimate to the heat stress caused by some systems. Also, he or she may be sensitive to certain materials used in or certain pollutants generated by the process.

Due to the numerous potential hazards, it is very important that each agency inspector and stack tester adhere to established safety policies and procedures. It is also necessary that agency personnel recognize unusual and extreme conditions in which additional or extreme safety precautions are warranted.

General Precautions

To minimize the risk of potential hazards, each inspector should follow the general rules summarized in Table 2. Work should be interrupted whenever an agency employee encounters any non-specific symptoms of exposure such as headache, nausea, drowsiness, chest pains, shortness of breath, lightheadedness and/or eye irritation. While these feelings may not be due to any exposure which occurred at the plant, the agency inspector or stack tester can not afford to base his actions on this assumption. These are the initial symptoms of exposure to a variety of pollutants. If the agency employee and/or plant personnel have been exposed, they can be disabled in a very short time. When these symptoms are experienced, the agency inspector or stack tester should immediately go to a well ventilated area.

It is important that the agency employee work at a controlled pace to minimize the chances of accidents while walking and climbing at the plant and while making measurements. They must never shortcut safety procedures.

Occasionally, it is necessary to terminate field work due to serious safety risks. The most common reasons include inclement weather, severely vibrating fans, apparently weak walkways or roofs leading to the collector, high concentrations of fugitive pollutants, and intermittent releases from process equipment. If there is a significant health and safety risk for any reason, the field work should be terminated. The agency employee should notify his or her supervisor of the problem, and alternative inspection or testing procedures should be established by follow-by negotiations with the plant management. The field work should then be completed immediately after the necessary changes are made in the plant conditions and/or the field inspection or testing procedures.

Table 2. General Inspection Safety Requirements

- * The work should be halted immediately when the agency employee suffers one or more of the nonspecific symptoms of exposure.
- * The work should be conducted at a controlled pace.
- * If the work can not be done safely, it should be postponed until the appropriate engineering controls and/or plant operational procedures are changed.
- * Nothing should be done which risks the health and safety of the inspector. Nothing should be done which risks the health and safety of plant personnel or which risks the condition of plant equipment.
- * All agency and plant safety requirements must be satisfied.

Often there are equipment related factors which limit the effectiveness of the field work. For example, many control systems do not have test ports to facilitate the measurement of static pressures, temperatures, and oxygen concentrations. An agency inspector or stack tester must never demand that such ports be installed while the equipment is operating since it is possible to cause an explosion within the ducts of numerous types of sources. Often when ports are available, they are at dangerous locations. The agency employee should not attempt to use such ports and should not ask plant personnel to make these measurements.

It is the responsibility of each agency inspector or stack tester to know all of the applicable safety requirements for each plant inspected and to know all of the agency safety requirements. The most stringent of these must be followed. Even when plant personnel are not using common safety equipment such as hard hats and safety shoes, the agency personnel must always use this equipment. The agency employee can not afford to abdicate judgement on safety procedures to plant personnel.

U.S. ENVIRONMENTAL PROTECTION AGENCY HEALTH AND SAFETY POLICY

Health and safety policy for EPA field personnel is set forth in EPA Order 1440.2 dated July 12, 1981. All EPA field personnel are responsible for obtaining a copy of this order and any revisions to this order. Supervisory personnel are responsible for ensuring that all employees have access to this order and have the necessary training and personal protective equipment as required by the order. All inspectors have a responsibility to use the personal protective equipment and to fully adhere to the policies and procedures established.

Training

An important aspect of Administrative Order 1440.2 is the requirement for safety training directed at the specific types of field activities performed by EPA personnel. There is a basic course for all field personnel, an intermediate course for individuals involved in hazardous waste site work and other potentially dangerous activities, and an advanced course for individuals who manage investigations at hazardous waste sites.

The basic course consists of 24 hours of in-class training. It should be completed prior to involvement in the routine field activities. The subjects addressed include, but are not limited to the subjects listed in Table 3.

At the conclusion of this course, the inspector should appreciate the importance of proper safety procedures, understand how to recognize and avoid common health and safety hazards, understand how to select and use personal protective equipment, and know how to use portable inspection equipment.

Table 3. Subjects Addressed in Basic Safety Course

- * Employee rights and responsibilities
- * Nature of anticipated hazards
- * Emergency help and self-rescue
- * Vehicles - mandatory rules and regulations
- * Safe use of field equipment
- * Use, handling, storage, and transportation of hazardous materials
- * Use and care of personal protective equipment and clothing.
- * Safe sampling techniques

In addition to classroom instruction, it is important that each person accompany an experienced agency employee for a minimum of three days of field work within 3 months of the classroom sessions. Following this work, the individual will be awarded a certification for completing the Basic Level Instruction from the Occupational Health and Safety Designee at the Reporting Unit. Without this certification, no EPA employee should be involved in field activities.

Intermediate Level training is necessary for any inexperienced personnel who will be working with experienced employees at uncontrolled hazardous waste and hazardous spill site investigations. Such training is also required for individuals involved in other activities which have been ascertained to include unique hazards. This course consists of a minimum of 8 hours and emphasizes topics relevant to health and safety problems potentially involved in this type of field work. In the case of hazardous waste site work, these topics would include those listed in Table 4.

Table 4. Intermediate Level Safety Training

- * Site surveillance, observation, and safety plan development
- * Use and decontamination of totally enclosed protective clothing and equipment
- * Use of field test equipment for radioactivity, explosivity, and other measurements
- * Topics specific to other identified activities.

There are a number of situations which warrant Intermediate Level training for field personnel who are inspecting air pollution control systems. A partial list includes inspection of sources of toxic materials, inspection of sources of hazardous materials (designated under Section 112 of the Clean Air Act), inspection of sources of hydrogen sulfide, inspection of coke oven batteries, and inspection of sources of highly explosive dusts such as coal dust, flour, grain, and metallic fumes. In such cases, the training should emphasize the potential hazards in lieu of the first three items in Table 4.

As with the Basic Level Course, each agency employee must complete three days of field demonstration work under the supervision of an experienced agency inspector. The individual taking the course must demonstrate the ability to train others to perform routine inspection activities. Employees completing these requirements will be issued a certificate by the Occupational Health and Safety Designee.

The Advanced Level training is necessary for any EPA employees who will be managing uncontrolled hazardous waste site and spill site monitoring, sampling, investigations and cleanup operations. This involves a minimum of 8 hours of classroom instruction concerning the topics exclusively involving hazardous waste site field activities. This training is not necessary for field personnel who work only with air pollution control systems.

All EPA employees are required to complete at least 8 hours of refresher training annually to maintain safety certification. This training must be oriented toward the specific Training Level desired and include topics relevant to the type of work performed by the individual. Also, inspectors must demonstrate that they have sufficient practical field experience to ensure that the work can be conducted in a safe and healthful manner. A record of the current level of certification must be maintained in the employee's file.

Occupational Medical Monitoring Requirements

All field personnel involved in field work must be included in an Occupational Medical Monitoring Program regardless of the level of the work conducted by the individual. A complete description of the U.S. Environmental Protection Agency Medical Monitoring Program Guidelines should be available to each person assigned to field activities.

There should be a baseline medical examination performed on each person who will be assigned field duties. This provides a frame of reference for later medical examinations and can therefore be of use in identifying changes due to occupational exposure. There should also be a periodic reexamination. This is performed at a frequency dependent on the type of work done by the individual. For most agency field personnel involved with air pollution control sources, it should be done biannually. There should also be an examination whenever an individual is terminating any field work due either to reassignment to other agency duties or due to leaving government service.

The scope of each type of medical examination is shown in Table 5 which is based on the Attachment 1 of the EPA Medical Monitoring Guidelines. Specific blood tests and urinalysis tests are described in the Medical Monitoring Guideline. Agency personnel should also consult the Medical Monitoring Guidelines to determine the types of immunizations that are recommended.

Table 5. MEDICAL MONITORING EXAMINATIONS

	Baseline	Periodic	Termination
History and Physical Examination			
Complete Medical History	x	-	x
Interval History	-	x	-
Physical Exam by Physician	x	x	x
Visual Acuity	x	x	x
Routine Laboratory Tests and Procedures			
Pulmonary Function	x	x	x
Audiometry	x	x	x
Electrocardiogram	x	o	x
Chest X-ray	x	x	x
Complete Blood Count	x	x	x
Blood Chemistry	x	x	x
Special Tests			
Cholinesterase	o	x	o
Methemoglobin	o	x	o
Heavy Metal Screen	o	x	o
Urine and Sputum Cytology	o	o	o
Toxicological Studies	o	o	o

Notation: x - Recommended
o - As Indicated

Note: See EPA Medical Monitoring Program Guidelines (1984) concerning recommendations for unscheduled medical examinations and concerning research oriented tests and procedures.

Written Safety Procedures

The EPA Policy and Responsibilities are set forth in an Administrative Directive dated May 14, 1982. As stated in Section 5, paragraph b of this directive, the provisions do apply to EPA personnel conducting field work at private facilities. Some of the most important requirements of this directive concerning the air pollution control field activities are described in the paragraphs below.

- * "EPA employees may be withdrawn from private sector facilities if safe and healthful working conditions cannot be assured by the use of administrative controls and personal protective equipment."

- * "Supervisors are responsible, to the extent of their authority, for the health and safety of their employees and for furnishing them employment and a place of employment which are free of recognized hazards that are likely to cause death or serious harm. They shall comply with the Agency's occupational health and safety standards and with all rules, regulations, and orders issued by the Agency with respect to the occupational health and safety programs and shall enforce correct work practices."

- * "Employees shall comply with the Agency's occupational health and safety standards, rules, regulations, and orders which are applicable to their own actions and conduct. Employees shall also use the safety equipment, personal protective equipment, and other health and safety devices and shall follow the procedures, provided or as directed, that the Agency deems necessary for their protection."

The work should be terminated whenever it is apparent that the field activities involve a significant health and/or safety risk. Administrative procedures on the part of the source, revised or modified procedures on the part of the agency employee, and the use of personal protective equipment may be required before the field work can be performed.

This directive clearly requires that supervisors take an active role in the health and safety program. They must ensure that each field unit has copies of the latest health and safety policy guidelines, rules, regulations, and written procedures. Also, supervisory personnel should review each employee's record to confirm that each has had the certified training necessary for the types of assigned duties and that each has had the specified medical monitoring examination. The supervisor is responsible for continually stressing the importance of proper safety procedures. In the event that an employee has to interrupt a field job due to a suspected safety or health related issue, the supervisor must work with the agency employee and the source personnel to work out alternative approaches free of these recognized hazards. It is often necessary for the supervisory personnel to contact agency specialists and management personnel to develop the alternative procedures.

The individual agency employee must bear a significant portion of the overall responsibility in ensuring safe field practices. All agency and source safety procedures must be satisfied even when others at a facility are ignoring these requirements. Furthermore, the employee must be constantly alert for unusual conditions which are not directly addressed by the safety procedures. If there is any question concerning the appropriateness or completeness of the safety procedures, the field work should be terminated immediately.

Further guidance should be obtained from supervisory personnel before resuming the work. The employee must exercise common sense at all times while conducting field activities.

The agency employee should report all occupational accidents and illnesses, regardless of the assumed level of severity. All incidents which could have resulted in accidents or pollutant exposure should be reported to supervisory personnel so that the Agency procedures can be refined as necessary to minimize future health and safety problems. Furthermore, any conditions at a specific plant which could cause injuries to Agency field personnel should be reported so that other EPA personnel who visit the facility can be advised of the potential conditions.

HEALTH AND SAFETY PROCEDURES FOR AIR POLLUTION FIELD ACTIVITIES

Safe working procedures begin with a full understanding and respect for potential hazards. Some of the hazards most frequently encountered while evaluating air pollution control systems are addressed in this section. Procedures to minimize risk to the agency employee, the plant personnel, and the plant equipment are discussed.

GENERAL SAFETY PROCEDURES

Personal Protective Equipment - Agency employees should bring whatever personal protective equipment is necessary to conduct the inspection of the facility. Facility personnel should not be asked to supply such equipment for the inspector. All personal protective equipment used by the agency employee should be in good working order, and the employee should be trained in the use and limits of the equipment.

Internal Inspections - Under no circumstances should agency inspectors or stack testers enter any confined spaces. Serious safety hazards can exist even when the equipment is out-of-service and locked off-line. These hazards can include, but are not limited to asphyxiants, high concentration of toxic pollutants, hot free flowing solids, high gas temperatures, and high static charges. All of the information necessary to satisfy agency objectives can be obtained efficiently without entry to the equipment.

Unaccompanied Inspections - Agency inspectors should insist that at least one responsible plant representative accompany the inspector at all times. The plant representative can identify areas known to be unsafe (weak ladders and catwalks, poorly ventilated areas, moving equipment, spraying chemicals, high voltage cables in exposed locations) and can warn the agency inspector about intermittent plant operations which can result in health and safety

risks such as overhead cranes, molten metal transfer, and high temperature steam releases.

Warning Codes and Sirens - Prior to conducting field work, agency personnel should learn the warning codes and sirens used at the plant to indicate blasting and emergencies such as plant fires, chlorine releases, ammonia releases, and vinyl chloride releases. The agency employee should move to a safe location as rapidly as possible after hearing the warning sirens. Upon reaching a secure area, the employee (and plant representative) should call to the appropriate authorities so that no attempt is made to "rescue" them from the affected area.

In the case of high pressure steam leaks, the agency employee should follow the established safety procedures at the facility. The steam leaks can persist as invisible, high velocity streams for long distances. Contact can cause serious or fatal injuries. The dispersing cloud of steam can be invisible and extremely hot.

Rescue - If an agency employee observes another individual who has been overcome, help must be summoned before any attempt is made to rescue the individual. Usually high concentrations of asphyxiants such as hydrogen sulfide, carbon monoxide, or oxygen deficient gases will persist in the area around the stricken person. Attempting to rescue the person can lead to the death of the rescuer unless the proper procedures are used. Rescue should be attempted only if the proper equipment is available to ensure the safety of the rescuer. The agency employee should never assume that he or she can hold his/her breath long enough to pull the stricken individual to safety.

Inclement Weather Conditions - Except in the case of Public Health Emergencies, field activities should be interrupted or postponed whenever severe weather conditions present a significant safety risk to either the agency employee or the plant representative. The specific criteria for interrupting or postponing the field activities should be determined by each office with the assistance of the agency's health and safety office. As general guidelines, the work should be delayed whenever the ambient temperature is less than -20 degrees Fahrenheit (Wind Chill), the ambient temperature is greater than 100 degrees Fahrenheit, the wind speed is greater than 25 mph, and/or whenever there are sleet and freezing rain conditions.

WALKING AND CLIMBING HAZARDS

Hard Hats - Agency personnel should wear hard hats at all facilities whether or not these are required by plant personnel. These hats provide protection against collision with overhead beams and protruding obstacles. They also provide limited protection against falling objects. Each employee should take reasonable precautions not to drop the hard hat when working on elevated platforms.

LECTURE 2

WALKING AND CLIMBING HAZARDS

OBJECTIVES:

Walking and climbing hazards can generally be avoided if the inspector understands and respects the possible problems. The general purpose of this lecture is to introduce these hazards and to illustrate how the risks can be minimized.

SCOPE:

- * Walking hazards on the ground
- * Walking hazards on elevated surfaces
- * Ladder climbing hazards

READING ASSIGNMENT: Appendix A, pages A-14 to A-17

VISUAL AIDS: Videotape #1

BASIC PRINCIPLES AND PROCEDURES:

- * Avoid roofs whenever possible. Follow knowledgeable plant personnel if it is necessary to cross.
- * Follow knowledgeable plant personnel across potentially slippery areas.
- * Avoid edges of ponds and settling basins. Plant personnel should take all samples.
- * Climb ladders one person at a time. Do not carry clip boards or other objects in hands.
- * Use only secure and properly slopped portable ladders.
- * Do not walk close to rotating equipment such as partially exposed fan sheaves.
- * Do not walk or climb on storage piles.
- * Limit inspections whenever walking and climbing hazards preclude safe access.

REVIEW QUESTIONS:

1. A fabric filter serving one of the particulate sources at a fiberboard plant can be reached only by crossing a 20 foot section of flat, corrugated metal roofing. There is a light covering of dust. However, there are no substantial deposits present on the roof. Overall, the roof appears to be in good condition. What is the proper procedure for crossing this roof?
 - a. No special safety procedures are needed in this case. Simply walk over to the baghouse.
 - b. Follow the plant personnel but avoid overloading any one location.
 - c. Take a different route to the baghouse than the plant personnel so that the localized areas on the roof will not be overloaded by too many people at one time.
 - d. Refuse to cross the roof under any circumstances and limit the inspection to a visible emission observation.
2. There are two side-by-side wet scrubber systems mounted approximately 40 feet above the ground. After the inspection on one unit, the plant representative places a ladder horizontally from one platform to the other and crosses over the 5 foot gap. What should you do?
 - a. Insist that he hold the ladder so that you can cross.
 - b. Insist that both sides of the ladder be tied down to the two platforms.
 - c. Refuse to cross over on the ladder under any circumstances.
3. You are attempting to make visible emission observations on a set of baghouses serving coal-fired boilers. There are several observation sites which satisfy the Method 9 criteria. Which one should be used?
 - a. The coal storage pile approximately 50 yards from the stacks and in a direction which is normal to the flow of the plumes
 - b. A rail siding (used for coal unloading) at which point the sun is directly behind you and the plumes are traveling approximately normal to your line of sight
 - c. An 80 foot high silo used for boiler ash which allows you to be at approximately the same elevation as the stacks
 - d. A site located away from vehicular traffic which is only marginally acceptable for visible emissions observation

4. During the inspection of a wet scrubber system, it is necessary to obtain a sample of the recirculation liquor to evaluate frequent nozzle problems. The only place to get a sample is the settling pond. What is the proper procedure for getting this sample?

- a. Dip a small sample out of the side of the pond.
- b. Walk on the floating platform for the centrifugal pump and get a sample of the pond water at this location.
- c. Ask the plant personnel to get the sample.

5. Should an inspector wear safety shoes and a hardhat at plants where they are not required and where plant personnel do not wear them?

- a. Usually
- b. No

REVIEW QUESTION - ANSWERS

1. A fabric filter serving one of the particulate sources at a fiberboard plant can be reached only by crossing a 20 foot section of flat, corrugated metal roofing. There is a light covering of dust. However, there are no substantial deposits present on the roof. Overall, the roof appears to be in good condition. What is the proper procedure for crossing this roof?

- a. No special safety procedures are needed in this case.

Incorrect. You should never assume that a roof is secure.

- b. Follow the plant personnel but avoid overloading any location

Correct. This is generally the best procedure for crossing the roof since plant personnel are familiar with the locations of hidden weak areas of the roof.

- c. Take a different route to the baghouse than the plant personnel so that the localized areas of the roof will not be overloaded by too many people.

Incorrect. The light covering of dust may obscure weak areas.

- d. Refuse to cross the roof under any circumstances and limit the inspection to a visible emission observation.

Correct. This is the best approach for this situation.

2. There are two side-by-side wet scrubber systems mounted approximately 40 feet above the ground. After the inspection on one unit, the plant representative places a ladder horizontally from one platform to the other and crosses over the 5 foot gap. What should you do?

- a. Insist that he hold the ladder so that you can cross.

Incorrect. The plant representative should not have crossed between the two platforms in this manner.

- b. Insist that both sides of the ladder be tied down.

Incorrect. See answer "a" directly above.

- c. Refuse to cross over on the ladder under any circumstances.

Correct. Climb down the first platform and then climb up to the second platform. Never use a horizontal ladder, plank, or structural beam to cross between two elevated platforms.

3. You are attempting to make visible emission observations on a set of baghouses serving coal-fired boilers. There are several observation sites which satisfy the Method 9 criteria. Which one should be used?

a. The coal storage pile approximately 50 yards from the stacks and in a direction which is normal to plumes.

Incorrect. You should never climb on a storage pile.

b. A rail siding (used for coal unloading) at which point the sun is directly behind you and the plumes are traveling approximately normal to your line of sight.

Incorrect. There are remote controlled engines and the operators may not be aware of your presence on the siding.

c. An 80 foot high silo used for boiler ash which allows you to be at approximately the same elevation as the stacks.

Incorrect. You should stay off silos to the extent possible.

d. A site located away from vehicular traffic which is only marginally acceptable for visible emissions observation.

Correct. It should be noted that selecting a safe and acceptable location for visible emission observations generally takes some time.

4. During the inspection of a wet scrubber system, it is necessary to obtain a sample of the recirculation liquor to evaluate frequent nozzle problems. The only place to get a sample is the settling pond. What is the proper procedure?

a. Dip a small sample out of the side of the pond.

Incorrect. Only plant personnel should take samples.

b. Walk on the floating platform for the centrifugal pump and get a sample of the pond water at this location.

Incorrect. See answer "a" above.

c. Ask the plant personnel to get the sample.

Correct. However, if you suspect that plant personnel will be endangered you should withdraw the request for the present. You must then determine if there are other ways to evaluate the problem and/or discuss alternative sampling techniques with plant managers.

5. Should an inspector wear safety shoes and a hardhat at plants where they are not required and where plant personnel do not wear them?

a. Usually

Correct. There are often trip hazards and low clearance areas which inspectors may not immediately see while walking through the plant. However, there are a very few plants in which hard hats are not necessary.

b. No

Incorrect. See answer "a" above.

Required Readings

APPENDIX A

This is a October, 1990 revision of
information originally provided in
the manual titled,

"Air Compliance Inspection Manual" ,
Chapter 5

risks such as overhead cranes, molten metal transfer, and high temperature steam releases.

Warning Codes and Sirens - Prior to conducting field work, agency personnel should learn the warning codes and sirens used at the plant to indicate blasting and emergencies such as plant fires, chlorine releases, ammonia releases, and vinyl chloride releases. The agency employee should move to a safe location as rapidly as possible after hearing the warning sirens. Upon reaching a secure area, the employee (and plant representative) should call to the appropriate authorities so that no attempt is made to "rescue" them from the affected area.

In the case of high pressure steam leaks, the agency employee should follow the established safety procedures at the facility. The steam leaks can persist as invisible, high velocity streams for long distances. Contact can cause serious or fatal injuries. The dispersing cloud of steam can be invisible and extremely hot.

Rescue - If an agency employee observes another individual who has been overcome, help must be summoned before any attempt is made to rescue the individual. Usually high concentrations of asphyxiants such as hydrogen sulfide, carbon monoxide, or oxygen deficient gases will persist in the area around the stricken person. Attempting to rescue the person can lead to the death of the rescuer unless the proper procedures are used. Rescue should be attempted only if the proper equipment is available to ensure the safety of the rescuer. The agency employee should never assume that he or she can hold his/her breath long enough to pull the stricken individual to safety.

Inclement Weather Conditions - Except in the case of Public Health Emergencies, field activities should be interrupted or postponed whenever severe weather conditions present a significant safety risk to either the agency employee or the plant representative. The specific criteria for interrupting or postponing the field activities should be determined by each office with the assistance of the agency's health and safety office. As general guidelines, the work should be delayed whenever the ambient temperature is less than -20 degrees Fahrenheit (Wind Chill), the ambient temperature is greater than 100 degrees Fahrenheit, the wind speed is greater than 25 mph, and/or whenever there are sleet and freezing rain conditions.

WALKING AND CLIMBING HAZARDS

Hard Hats - Agency personnel should wear hard hats at all facilities whether or not these are required by plant personnel. These hats provide protection against collision with overhead beams and protruding obstacles. They also provide limited protection against falling objects. Each employee should take reasonable precautions not to drop the hard hat when working on elevated platforms.

Safety Shoes - Agency personnel should wear safety shoes approved for the specific type of facility being visited. In all cases, the shoes should be slip resistant to minimize the risk of falls in wet and icy areas. Plant personnel should be consulted to determine if it is necessary to have shoes with conductive soles to prevent static accumulation, to have shoes with wooden soles, or to have metatarsal protection. Under no circumstances should street shoes or soft shoes (tennis shoes) be worn for field activities.

Gloves - Gloves should be worn whenever the field work will involve climbing ladders or handling hot instrument probes. The gloves reduce the risk of burns on hot ladders and the risk of falls due to wet or muddy foot rungs. Gloves also reduce the risk of cuts on corroded or sharp foot rungs.

Contaminated Shoes, Gloves, and Belts - Any personal protection equipment or clothing which has been grossly contaminated due to contact with chemicals should be disposed of properly. Decontamination may not be effective, and long term exposure to the wearer can occur as the contaminants slowly diffuse to the inside surfaces of the shoes, gloves, belts and other personal protection equipment.

Slippery Areas - Portions of the facility with potentially slippery surfaces should be avoided to the extent possible. Common slippery areas include concrete surfaces under hoppers, areas adjacent to wet scrubber pumps, and oily surfaces. Icy surfaces along catwalks and in depressions around roof mounted collectors should be avoided.

Temporary Walkways - Agency personnel should not use temporary "walkways" such as planks and horizontal ladders. Specially constructed temporary walkways should be used only when both ends are firmly secured, and the construction materials can take the intended weight.

Elevated Walkways - Before walking on elevated catwalks around control systems or leading to control systems, the agency employee should confirm, to the extent possible, that the supports are intact and have not corroded or rotted.

Roofs - Accumulations of solids and snow can easily exceed the rated load bearing capacity of roofs. Furthermore, portions of the roof can be made of materials with only a limited load bearing capability. For these reasons, roofs and other elevated, horizontal surfaces should be approached very cautiously. If the roof is sloped, is covered with fugitive dust or fibers, or has obvious deficiencies, it should be avoided. If the roof or surface appears to be secure, agency personnel should follow plant personnel in such areas and should remain on defined walkways.

Climbing Ladders (All Types) - In climbing any ladder, the foot rungs should be grasped when climbing even when the rungs are wet or muddy. Holding the ladder side rails is not recommended by industrial safety specialists since, in this position, it is impossible to maintain a grip on the ladder if the feet slip off due to wet or muddy conditions. Under no circumstances should an agency employee attempt to climb a ladder covered with ice or snow.

Both hands must be free for climbing ladders. Therefore, portable instruments, probes, and sample bags must not be carried in the hands when climbing ladders. Only one person should be on a ladder segment at a time (except in emergencies) to prevent injuries due to falling objects.

Portable Ladders - Only portable ladders in good physical condition which satisfy OSHA requirements should be used. They should be inclined on an angle (1 foot out for every 4 feet of height) to minimize the chances of slippage or toppling. The portable ladder must have secure footing on the bottom to prevent slippage. The ladder must extend above the surface being reached by a minimum of 3.5 feet. It must be a safe distance from high voltage electrical lines and out of the possible path of low elevation steam vents and pollutant vents.

Fixed Ladders - Only ladders in good physical condition which satisfy OSHA requirements should be used. The cage (if present) must have an opening ranging from 18 inches to 24 inches at the top. The cage should not be severely distorted since this would prevent easy movement inside. The ladder must have at least 9 inches clearance behind the ladder to allow secure placement of the feet on the rungs. The rungs must be evenly spaced. The ladders must be a safe distance from high voltage electrical lines. The caged ladder should extend at least three feet above the platform or surface being reached. Entry to the ladder at the top should be blocked by a chain or passive restraint.

Guard Rails - These should not be used for climbing under any circumstances. The agency employee should not lean against these guard rails since the supports occasionally weaken. Heavy equipment should not be supported on the guard rails.

Protruding Obstacles - While walking through the plant, agency employees must be alert for protruding obstacles such as conduit supports, beams, valves, conveyors, and support wires. Often these are difficult to spot in the dimly lit portions of plants. It is advisable to wait several minutes for the eyes to adjust whenever entering inside area from the outdoors.

Rotating Equipment - Loose clothing should not be worn when conducting field work since this can result in entrapment in rotating equipment. Ties are never appropriate. Exposed rotating equipment such as incompletely shielded sheaves should not be approached.

Agency employees must be cautious when in the vicinity of all rotating equipment since it is often impossible to see the components moving at high speed. Equipment which operates intermittently, such as hoists, should never be touched since this equipment starts automatically and without warning.

Elevated Platforms - Exposed platforms around air pollution control systems or around stacks should be left immediately if there is a release of toxic gases or steam from process equipment. These areas should also be avoided during thunderstorms.

Planks, Horizontal Ladders, and Beams - Agency employees should not use planks, horizontally oriented ladders, or structural beams to cross from one elevated area to another.

Rail Sidings - Agency inspectors should stay at least 75 feet from all stationary rail cars at sidings since these are sometimes coupled to remote controlled engines run by an operator without a complete view of the siding areas. Also, areas near car pullers should not be approached since failure of the cable can lead to serious injuries.

Material Piles - Agency employees should not stand on coal piles and other material stockpiles since it is possible to become entrapped in the conveying equipment which is often underneath these piles. Also, agency personnel should not stand on fixed sludge lagoons since the material may not have much load bearing capability.

EYE PROTECTION

Contact Lenses - These should not be used during field work unless specifically allowed by the agency health and safety office and by the plant industrial hygiene office.

Safety Glasses - Field personnel should use prescription safety glasses while performing field activities. Side shields should be used whenever there is a possibility of exposure to flying materials. Splash goggles should be used in addition to the safety glasses whenever there is potential exposure to acid mist and/or liquid chemicals.

Minimizing Potential Eye Injuries - To the extent possible, agency personnel should avoid areas directly underneath downward pointed vents and horizontal vents. The gas streams leaving these sources are often moving at 1500 to 3000 feet per minute, and the particulate is difficult to see when the particle size range is large. Also, agency employees should not take liquid samples downstream of pumps (or in other high pressure locations) since splashing of the liquor is likely because of the high line pressures. Agency personnel should not lean over tanks containing chemicals in an attempt to assess hood capture effectiveness.

LECTURE 3

BURN, ELECTRICAL, AND EXPLOSION HAZARDS

OBJECTIVES:

There are numerous burn, electrical, and explosion hazards in source inspections of many different types of industrial processes. Many of these hazards may not be immediately obvious. The primary objective of this lecture is to identify inspection activities or situations which must be handled properly to avoid there potentially serious injuries.

SCOPE:

1. Steam burns
2. Chemical burns
3. Electrical shock
4. Static electricity
5. Sampling flammable liquids
6. Fan disintegration

READING ASSIGNMENT: Appendix A, pages A-17 to A-20, and A-25

VISUAL AIDS: Videotape #2

BASIC PRINCIPLES AND PROCEDURES:

- * Use an explosion proof flashlight and intrinsically safe instruments.
- * Ground/bond all sample probes after electrostatic precipitators, after dry scrubbers, and/or in fiberglass ducts.
- * Do not use any outdoor line powered electrical equipment which is not on a ground fault interrupter (GFI) served circuit.
- * Avoid any exposed electrical wires.
- * Stay off stacks, elevated platforms, and roofs during threatening weather.

* Learn and adhere to plant safety policies during chemical leaks and steam leaks. During chemical leaks, plant personnel usually proceed cross wind away from the leak and then notify a central authority of their position. For high pressure steam leaks, it is often necessary to stop immediately since the leak is invisible.

* Side shields on safety glasses provide only limited protection against dripping chemicals. Areas of potential exposure must be recognized and avoided.

* Downward oriented stacks and vents must be avoided.

* Do not look into unprotected/shielded incinerator viewing hatches.

* Immediate eye washing is necessary if chemicals splash into the eye. For sources without adequate eye wash stations in the vicinity of the air pollution control equipment, it will be necessary to carry small quantities of sterile eye wash.

* Agency policies and plant policies regarding use of contact lenses during inspections should be reviewed. In most cases, use of contact lenses is prohibited.

REVIEW QUESTIONS:

1. A centrifugal fan located after a venturi wet scrubber is vibrating severely. What should the inspector do?
 - a. Stay at least 50 feet away from the fan during the remainder of the inspection.
 - b. Stop the inspection immediately and notify responsible plant personnel of the potential consequences of the problem.
 - c. This is not an environmental problem and should be ignored by the inspector.
2. What is generally recommended when splashed by possibly toxic chemicals?
 - a. Remove all affected clothing and shower for at least 15 minutes.
 - b. Consult a first aid manual concerning the proper procedures for the chemical or chemicals involved.
 - c. Terminate the inspection and seek medical attention.
3. Under what circumstances can inspectors open the electrical cabinets of electrostatic precipitators or other control devices?
 - a. When high voltage equipment within the cabinets is at least 1 foot from the equipment being inspected
 - b. When a plant electrician is accompanying the inspector
 - c. Never
4. What is the most important safety consideration when using a pitot tube in (1) a fiberglass duct, (2) in a duct handling hot, dry gas, or (3) after an electrostatic precipitator?
 - a. Use gloves to minimize skin burns in handling the hot pitot tube.
 - b. Use a grounding/bonding cable to avoid static shock.
 - c. Cover the measurement port to avoid skin and eye burns due to fugitive emissions of hot gas.
5. What should be done while sampling flammable liquids?
 - a. Ask the plant personnel to take the sample and use glass bottles.
 - b. Ask the plant personnel to take the sample and use metal bottles with bonding cables.
 - c. Use plastic bottles.
 - d. Use glass bottles with bonding cables.

6. How long should you flush you eye if a small quantity of strong alkali has splashed into it?
 - a. Until it stops hurting
 - b. Approximately 1 minute
 - c. 1 to 5 minutes
 - d. 5 to 10 minutes
 - e. 15 to 30 minutes
7. During an inspection of a large venturi scrubber system, the inspector asks the plant representative to take a sample of the recirculation liquor from a 3" ball valve downstream from the main recirculation pump. The plant representative refuses to take this sample due to the potential safety risks involved. What should the inspector do?
 - a. Insist that the plant representative obtain the sample and take whatever safety precautions necessary.
 - b. Attempt to find another sampling port in which the sample can be taken safely. If a mutually acceptable port is not found, the request should be withdrawn at the present time.
 - c. The inspector should take the sample and use whatever protective equipment is necessary.
8. What potential eye hazards are involved in observing the firing conditions of municipal incinerators and hospital waste incinerators?
 - a. Exposure to hot gases due to internal pressure fluctuations
 - b. Shrapnel from exploding aerosol cans or gas cylinders
 - c. Pathological organisms in partially combusted wastes
 - d. Radiation exposure
 - e. All of the above

REVIEW QUESTIONS - ANSWERS

1. A centrifugal fan located after a venturi wet scrubber is vibrating severely. What should the inspector do?
- a. Stay at least 50 feet away from the fan during the remainder of the inspection.

Incorrect. If the fan disintegrates, it could send metal parts like shrapnel several hundred yards. Fan disintegration on wet scrubber systems is relatively common due to the problems of fan wheel erosion, fan wheel corrosion, fan wheel deposits, improper changes in fan sheaves, and aerodynamic imbalances resulting from system resistance changes.

- b. Stop the inspection immediately and notify responsible plant personnel of the potential consequences of the problem.

Correct. There is a significant risk to plant personnel due to this condition.

- c. This is not an environmental problem and should be ignored by the inspector.

Incorrect. See answer "b".

2. What is generally recommended when splashed by possibly toxic chemicals?

- a. Remove all affected clothing and shower for at least 15 minutes.

Correct. Plant personnel should direct you to the closest available shower that is operable. If available, modesty curtains should be used. However, it is important to recognize that showering is an important first aid procedure to minimize the overall dose of the chemical and to minimize other adverse effects. Showering should not be delayed for any reason. Medical treatment should be obtained in all cases after showering.

- b. Consult a first aid manual concerning the proper procedures for the chemical or chemicals involved.

Incorrect. The generally accepted safety procedure is immediate showering.

- c. Terminate the inspection and seek medical attention.

Incorrect. Medical treatment should be obtained after showering.

3. Under what circumstances can inspectors open the electrical cabinets of electrostatic precipitators or other control devices?

- a. When high voltage equipment within the cabinets is at least 1 foot from the equipment being inspected

Incorrect. It is easy to contact high voltage parts which are several feet away from the components (i.e. automatic voltage controllers, rapper timers) of interest.

- b. When a plant electrician is accompanying the inspector

Incorrect. An inspector should never open an electrical cabinet or extend a hand into an electrical cabinet.

- c. Never

Correct.

4. What is the most important safety consideration with using a pitot tube in (1) a fiberglass duct, (2) in a duct handling hot, dry gas, (3) or after an electrostatic precipitator?

- a. Use gloves to minimize skin burns in handling the hot pitot tube.

Incorrect. It is prudent to use gloves. However, the primary problem is falls due to static electrical shock.

- b. Use a grounding/bonding cable to avoid static shock.

Correct. A static shock can result in an involuntary muscle reaction which can result in a fall.

- c. Cover the measurement port to avoid skin and eye burns due to fugitive emissions of hot gas.

Incorrect. While it is necessary to seal the port, the static shock is the most important safety consideration.

5. What should be done while sampling flammable liquids?

- a. Ask the plant personnel to take the sample and use glass bottles.

Incorrect. In certain circumstances glass bottles could allow a significant static charge to accumulate which in turn could cause a fire or an explosion.

- b. Ask the plant personnel to take the sample and use metal bottles with bonding cables.

Correct.

- c. Use plastic bottles.

Incorrect. Plastic bottles are especially prone to static charge accumulation. This can result in a fire or explosion. Furthermore, plant personnel should obtain all samples.

- d. Use glass bottles with bonding cables.

Incorrect. Bonding cables are ineffective for glass bottles since glass is not an electrical conductor.

6. How long should you flush your eye if a small quantity of strong alkali has splashed into it?

- a. Until it stops hurting .

Incorrect. There could be significant quantities of the material still present in the eye.

- b. Approximately 1 minute
c. 1 to 5 minutes
d. 5 to 10 minutes

Answers b, c and d are Incorrect. These washing times are not long enough to remove most contaminants.

- e. 15 to 30 minutes

Correct. It is generally recommended that the eye be flushed for up to 30 minutes when exposed to alkali. This is an especially serious contaminant since alkali continues to damage tissue and does not scar over. Even less serious eye splashes require at least 15 minutes of flushing. It is equally important to begin eye flushing almost immediately. Due to the remote and elevated locations of many air pollution control systems, this is very difficult. It is important that inspectors recognize and avoid potential eye exposures.

7. During an inspection of a large venturi scrubber system, the inspector asks the plant representative to take a sample of the recirculation liquor from a 3" ball valve downstream from the main recirculation pump. The plant representative refuses to take this sample due to the potential safety risks involved. What should the inspector do?

- a. Insist that the plant representative obtain the sample and take whatever safety precautions necessary.

Incorrect. Nothing should be requested which may endanger plant personnel.

- b. Attempt to find another sampling port in which the sample can be taken safely. If a mutually acceptable port is not found, the request should be withdrawn at the present time.

Correct. If a safe and convenient port is not presently available, the inspector should request that a sampling tap be installed during the next system outage.

- c. The inspector should take the sample and use whatever protective equipment is necessary.

Incorrect. Inspectors should never take samples.

8. What potential eye hazards are involved in observing the firing conditions of municipal incinerators and hospital waste incinerators?

- a. Exposure to hot gases due to internal pressure fluctuations
b. Shrapnel from exploding aerosol cans or gas cylinders
c. Pathological organisms in partially combusted wastes
d. Radiation exposure

Answers a, b, c, and d all are correct but incomplete. When conducting an inspection and when selecting eye protection it is important to recognize all of the potential problems. In the case of incinerators, it is difficult to find anything which provides protection from all of the potential hazards.

- e. All of the above

Correct.

Required Readings

APPENDIX A

This is a October, 1990 revision of
information originally provided in
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"Air Compliance Inspection Manual" ,
Chapter 5

Agency employees must be cautious when in the vicinity of all rotating equipment since it is often impossible to see the components moving at high speed. Equipment which operates intermittently, such as hoists, should never be touched since this equipment starts automatically and without warning.

Elevated Platforms - Exposed platforms around air pollution control systems or around stacks should be left immediately if there is a release of toxic gases or steam from process equipment. These areas should also be avoided during thunderstorms.

Planks, Horizontal Ladders, and Beams - Agency employees should not use planks, horizontally oriented ladders, or structural beams to cross from one elevated area to another.

Rail Sidings - Agency inspectors should stay at least 75 feet from all stationary rail cars at sidings since these are sometimes coupled to remote controlled engines run by an operator without a complete view of the siding areas. Also, areas near car pullers should not be approached since failure of the cable can lead to serious injuries.

Material Piles - Agency employees should not stand on coal piles and other material stockpiles since it is possible to become entrapped in the conveying equipment which is often underneath these piles. Also, agency personnel should not stand on fixed sludge lagoons since the material may not have much load bearing capability.

EYE PROTECTION

Contact Lenses - These should not be used during field work unless specifically allowed by the agency health and safety office and by the plant industrial hygiene office.

Safety Glasses - Field personnel should use prescription safety glasses while performing field activities. Side shields should be used whenever there is a possibility of exposure to flying materials. Splash goggles should be used in addition to the safety glasses whenever there is potential exposure to acid mist and/or liquid chemicals.

Minimizing Potential Eye Injuries - To the extent possible, agency personnel should avoid areas directly underneath downward pointed vents and horizontal vents. The gas streams leaving these sources are often moving at 1500 to 3000 feet per minute, and the particulate is difficult to see when the particle size range is large. Also, agency employees should not take liquid samples downstream of pumps (or in other high pressure locations) since splashing of the liquor is likely because of the high line pressures. Agency personnel should not lean over tanks containing chemicals in an attempt to assess hood capture effectiveness.

Agency personnel should not attempt to observe combustion conditions using unshielded observation hatches on incinerators and boilers. Potential eye hazards include, but are not limited to metal fragments from exploding aerosol cans, hot gas puffs due to gas pressure fluctuations, fugitive emission of toxic gases, and thermal radiation.

Eye Washes - Standard first aid procedures should be used in the event of chemical splashes or contact with the eye. Generally, these procedures require immediate irrigation of the eye with water. The eye wash is usually continued for at least 15 minutes, and in the case of alkalis for 30 minutes. Medical attention should be sought immediately after eye washing.

HEARING PROTECTION

Use of Hearing Protection - Agency personnel should use hearing protection whenever required by plant policies and whenever it is difficult to hear another person talking in a normal tone of voice at a distance of 2 feet.

Minimizing Hearing Loss - Areas of the plant with high noise levels should be avoided to the extent possible. It is rarely necessary to spend extended periods of time in the vicinity of high noise equipment such as compressors, grinders, pulverizers, screens, steam vents, fans, and sonic horns.

ELECTRICAL HAZARDS

Ground Fault Interrupters - The agency personnel should not use line powered equipment or instrumentation not served by an approved ground fault interrupter.

Control Cabinets - Under no circumstances should an agency employee open an electrical cabinet in an attempt to measure operating conditions such as fan or pump currents, or to evaluate the operational status of precipitator automatic voltage control circuits.

High Voltage Lines - Prior to inspecting any facility, the agency employee must ask responsible plant personnel to identify any high voltage cables in the area(s) to be visited. It is important to find any lines which could be inadvertently approached by long sampling probes and any lines which could be accidentally touched while walking through the plant. It must be noted that it is sometimes difficult for the agency employee to identify these lines since some of the lines are incompletely labelled and some of the identification signs are covered with dust.

Bonding of Probes - Agency employee should electrically bond all probes used in gas streams downstream of electrostatic precipi-

tators and in gas streams flowing in fiberglass ducts. The high static electricity charge which can develop on the probes can cause a severe involuntary reaction which in turn can lead to a serious fall.

EXPLOSIONS

Bonding of Probes - Agency personnel should electrically bond all probes whenever making measurements in gas streams containing potentially explosive dusts. Due to the finely divided nature of the dusts contained in most air pollution control systems, static charges can accumulate on the probes due to the friction between the impacting particles and the electrically isolated probe. The build-up of static electricity on the probes can cause a spark within the duct which in turn can initiate an explosion.

Grounding/Bonding of Sample Bottles - Agency personnel should electrically bond all sample bottles and funnels used to collect samples of fuel oils, waste oils, solvents, coatings and other flammable liquids. Only metallic sample containers and funnels should be used. Prior to taking the sample, the adequacy of the ground line for the main storage vessel should be visually checked. To properly bond the sample bottle and funnel, both must be constructed of a conducting metal. Failure to take the sample in this manner can lead to a static electricity initiated explosion. Agency personnel should leave the area while samples are being taken if plant personnel fail to heed warnings concerning improper sample acquisition techniques. Serious fires and explosions are possible due to this problem.

Portable Equipment - Agency personnel should never take battery powered portable equipment such as non-explosion proof flashlights, pH meters, and thermocouples into portions of the plant where there are potentially explosive dusts and/or vapors. The equipment can become a source of ignition.

Smoking - Smoking materials including, but not limited to matches and lighters should never be taken into any facility. Many areas of plants visited by agency personnel can have explosive dusts and vapors.

Severely Vibrating Fans - The field work should be terminated immediately whenever a severely vibrating fan is encountered. When a fan disintegrates, shrapnel can be sent over a large area resulting in very serious injuries. Plant personnel should be notified immediately if this problem is detected.

BURNS

Hoppers - Agency personnel should not stand in the immediate vicinity of hopper doors being opened and should not ask plant personnel to open hopper hatches. Accumulations of hot solids can frequently be resting behind such doors even when the hoppers appear to be empty and cold.

Solids Handling Lines - These lines should not be touched since they are often carrying solids at temperatures of several hundred degrees Fahrenheit.

Probes - Sampling probes withdrawn from hot stacks and vents should be allowed to cool before being touched. The large port plugs commonly used should only be handled with gloves since they can remain hot for several hours after being removed from the stack.

Steam Leaks - In the event of high pressure steam leaks, the inspector should immediately follow the recommended safety procedures at the plant. If the inspector is in the general vicinity of the leak, such procedures generally require very little movement since it is practically impossible to identify the location of the leak. The inspector must be familiar with the plant warning codes in order to recognize the emergency and take the proper action.

Hot Ductwork - The areas immediately around hot ducts should be avoided to the extent possible.

Hot roofs - Uninsulated hot roofs should be avoided to the extent possible. Unfortunately, many common sources such as coke ovens and asphalt concrete plants typically have hot roofs, and it is sometimes necessary to visit these areas. In such cases, the proper foot wear must be worn. When climbing to potentially hot roofs, gloves should be worn and the roof should not be touched.

IONIZING RADIATION

Nuclear Instrumentation - Areas around damaged level detectors and flow monitors must be avoided since the lead shielding around the Cesium 137 radiation source can be damaged.

Flow Monitors - Under no circumstances should an agency employee reach between the source and detector of a ionizing radiation type flow rate monitor such as are often used on sewage sludge incinerators.

SKIN ABSORBABLE CHEMICALS

Personal Protective Equipment - Agency personnel should consult published reference materials concerning the selection and use of clothing (including gloves) whenever working with or near chemicals which are readily adsorbed by the skin. A partial list of such chemicals is provided in the OSHA Pocket Guide to Occupational Hazards.

Sampling - Agency personnel should exercise extreme caution when sampling liquids containing skin absorbable chemicals. Under no circumstances should the employee allow direct contact between such liquids and the skin while acquiring a sample.

Fluid-Resistant Clothing - Agency personnel should wear fluid resistant clothing and shoe coverings when working in the vicinity of blood-borne pathogens.

Showers - Standard first aid procedures should be used if splashed with chemicals. Generally these procedures require the removal of all affected clothing and showering for 15 minutes. Medical attention should be sought immediately after showering. Persons assisting injured individuals should summon help and take steps to prevent shock.

TRANSPORTATION OF MATERIALS AND SUPPLIES

Compressed Gas Cylinders - All compressed gas cylinders transported in cars and trucks must be secured in accordance with D.O.T. Specifications. These should never simply be placed in the back of a station wagon, in the back of a pick-up truck, or in the trunk of a car.

Potentially Hazardous Samples and Supplies - All such materials must be packaged and transported in accordance with D.O.T. Specifications. This is necessary to ensure that the material does not leak during routine transport or following an accident.

BIOLOGICALLY ACTIVE MATERIALS

Sampling - Agency personnel should exercise extreme caution whenever sampling any solid or liquid material potentially containing bacteria and/or viruses. Such materials can be present in materials including, but not limited to the scrubbing liquors for sewage sludge incinerators, the wastes charged to medical waste incinerators, and the ash from poorly operating medical waste incinerators. The proper personal protective equipment and proper sampling procedures must be used.

LECTURE 4

INHALATION HAZARDS

OBJECTIVES:

The primary objective of Lecture 3 is to illustrate the proper procedures for recognizing and avoiding inhalation hazards. The uses and limitations of respirators is also addressed.

SCOPE:

- * Typical inhalation problems
- * Selection and use of respirators
- * Avoiding pollutant exposure
- * Symptoms of exposure

READING ASSIGNMENT:

- * Appendix A, pages A-21 to A-23
- * Appendix B

VISUAL AIDS: Videotape #3

BASIC PRINCIPLES AND PROCEDURES:

- * Respirators can only be used if all requirements of 29 CFR 1910.134 are satisfied.
- * Respirators can be used only at pollutant concentrations below the protection factor limits.
- * Respirators are generally adequate for a single pollutant or a single group of similar pollutants.
- * Fugitive emissions from air pollution sources often create moderately high concentrations, well above the allowable levels for respirators.
- * A chemical cartridge or canister is exhausted when there is a detectable odor or taste. They don't last long!
- * If there are oxygen deficiencies or IDLH concentrations, air purifying respirators can not be used.
- * Measurement of pollutant concentrations is difficult.

REVIEW PROBLEMS:

1. When an air pollution control device is after the fan, there is a tendency for _____.
 - a. Pollutant laden gas to leak out into the surrounding areas
 - b. Ambient air to leak into the control system
2. What is the normal procedure for determining when an organic vapor cartridge of a half-face mask respirator is exhausted?
 - a. Evaluation of the color change indicator strip
 - b. Laboratory analysis of pollutant removal efficiency
 - c. Detection of odor, taste, or organic vapor while wearing the respirator
 - d. Observation of color of cartridge material
3. What is normally considered an oxygen deficient atmosphere?
 - a. Less than 80% oxygen
 - b. Less than 25% oxygen
 - c. Less than 20.9% oxygen
 - d. Less than 19.5% oxygen
 - e. Less than 16.0% oxygen
 - f. Less than 12% oxygen
4. What is the normally accepted protection factor for a half-face mask respirator used by an individual who has been properly fit tested?
 - a. 0.1
 - b. 1.0
 - c. 10.0
 - d. 90.0
 - e. 95.0
 - f. 99.0
5. What areas are especially prone to high concentrations of pollutants around air pollution sources?
 - a. All equipment downstream from fans
 - b. All positive pressure control devices and ducts
 - c. Around fugitive leaks
 - d. Downstream of fugitive emissions from solids storage piles and bins
 - e. Above liquor recirculation tanks
 - f. On the roofs of external, floating roof tanks
 - g. Around plant operations with poor pollutant capture
 - h. Near stack discharge
 - i. Near leaking bypass vents
 - j. On roofs having multiple building vents
 - k. All of the above plus many other areas not listed

REVIEW QUESTIONS - ANSWERS:

1. When an air pollution control device is after the fan, there is a tendency for _____.
 - a. Pollutant laden gas to leak out into the surrounding areas

Correct. It is important to recognize that significant pollutant concentrations can accumulate in poorly ventilated areas around air pollution control devices after fans. Similar conditions can exist in concentric stack liners where transmissometers and gas analyzers are often mounted.
 - b. Ambient air to leak into the control system

Incorrect. The entire control system is at a greater pressure than the outside air and there is a potential for fugitive emissions of pollutants outward into the areas visited by agency inspectors.
2. What is the normal procedure for determining when an organic vapor cartridge of a half face mask respirator is exhausted?
 - a. Evaluation of the color change indicator strip

Incorrect. There are no color indicator strips on any type of half-face mask respirator cartridges.
 - b. Laboratory analysis of pollutant removal efficiency

Incorrect. While this is conceivably possible, the cost of the analyses are much greater than the cost of new cartridges.
 - c. Detection of odor, taste, or organic vapor while wearing the respirator

Correct. This is the only means to determine if the cartridge is still removing pollutants efficiently. This is the reason that the cartridges are allowed only for contaminants with an odor or taste threshold below the Permissible Exposure Limits for the pollutant.
 - d. Observation of color of cartridge material

Incorrect. It is not possible to observe the color of the adsorbent and the color does not change when it becomes saturated.

3. What is normally considered an oxygen deficient atmosphere?

a. Less than 80% oxygen

Incorrect. Ambient air has 20.9% oxygen

b. Less than 25% oxygen

Incorrect. See answer "a"

c. Less than 20.9% oxygen

Incorrect. Slight decreases in the oxygen apparently have no physiological effect and are therefore allowed by OSHA regulations.

d. Less than 19.5% oxygen

Correct. At or below this concentration, OSHA regulations prohibit air purifying respirators. Much more sophisticated respirators are necessary.

e. Less than 16.0% oxygen

Incorrect. The promulgated minimum oxygen level is 19.5%

f. Less than 12% oxygen

Incorrect. See answer "e".

4. What is the normally accepted protection factor for a half-face mask respirator used by an individual who has been properly fit tested?

a. 0.1

b. 1.0

Both incorrect. Re-read the Appendix B.

c. 10.0

Correct. This means that the respirator can be used at a concentration which is a factor of 10 above the Permissible Exposure Limit.

d. 90.0

e. 95.0

f. 99.0

All incorrect. Re-read the Appendix B.

5. What areas are especially prone to high concentrations of pollutants around air pollution sources?

a. All equipment downstream from fans

b. All positive pressure control devices and ducts

c. Around fugitive leaks

d. Downwind of fugitive emissions from solids storage piles and bins

e. Above liquor recirculation tanks

f. On the roofs of external, floating roof tanks

g. Around plant operations with poor pollutant capture

h. Near stack discharges

i. Near leaking bypass vents

j. On roofs having multiple building vents

All of the above are correct but insufficient.

k. All of the above plus many other areas not listed

Correct. This point of this question is simply that there are many locations which can have high pollutant concentrations. Often these concentrations are above the limits of half-face and full face air-purifying respirators. It is important that inspectors recognize areas having potentially high pollutant concentrations and avoid these locations during the inspection.

Required Readings

APPENDIX A

This is a October, 1990 revision of
information originally provided in
the manual titled,

"Air Compliance Inspection Manual" ,
Chapter 5

INHALATION HAZARDS

Partially Confined Areas - To the extent possible, agency personnel should avoid areas which allow the accumulation of airborne pollutants. Such areas commonly found around air pollution control systems include weather enclosures on hoppers and roofs, fan houses, pump houses, walkways between compartments of the collector, protected areas near large ducts, and areas on top of floating roof storage tanks.

Selecting Respirators - The appropriate respirators should be selected in accordance with the procedures discussed during basic and intermediate safety training and in accordance with EPA Administrative Order 1440.3, dated July 24, 1981 (and revisions). The latter specifies that each individual required to wear a respirator must have training concerning the selection, use, fitting, and maintenance of the respirators. Furthermore, the respirator must not be worn whenever any condition would prevent a good seal. The most common reason for an improperly fitted respirator is facial hair.

Respirator Limits - Each employee must understand the protection factor limits of each respirator. They must be used only for the specific contaminants listed and only for the concentration range listed. Since monitoring data is rarely available, the agency employee must exercise some judgement when selecting the appropriate respirator. Selection of the type of respirator must not be done by smell or taste perception, since some of the most toxic pollutants can not be detected at high concentrations.

Oxygen Deficient Atmospheres - Agency personnel should use only a self contained breathing apparatus (pressure demand) or an air line respirator (if trained on the specific respirator system) when entering areas believed to have less than 19.5% oxygen. Each individual using such a respirator must be trained in the proper fitting, use, maintenance, and storage procedures of the respirator. Under no circumstances should an air pollution control device or parts of the process equipment be entered using these respirators.

Respirator Maintenance - Proper inspection, maintenance, storage, and repair of respiratory protection devices are required by EPA Administrative Order 1440.3 to ensure that these devices protect the health and safety of employees when in use. The respirator must be inspected before and after each use. Equipment used only for emergencies should be inspected at least monthly. A record should be kept by date with the results of all inspections. All respirators must be cleaned and disinfected after each use. All filters and cartridges must be replaced whenever necessary. Replacement of other than disposable parts and any repair should be done only by personnel with adequate training and test equipment to ensure the equipment will function properly after the work is

completed. Only certified parts supplied by the manufacturer for the product being repaired should be used. The respirators should be stored in atmospheres that will protect them from dust, sunlight, extreme heat or cold, and damaging chemicals.

Single Use Disposable Respirators

Agency personnel should not use single use, disposable respirators without an elastomer-type face piece.

Cartridge or Canister Service Life - Agency personnel should discard all cartridges or canisters for air purifying respirators after a single day's use. These materials may be replaced more frequently than once per day if there are any indications that the capacity of these devices is being approached or exceeded. New cartridges and canisters should be protected from moisture and heat until they are to be used.

Respirator Contamination - The respirator face piece, straps, or other components should be properly discarded if they have been grossly contaminated by splashing chemicals or toxic dusts. Decontamination of the equipment is not sufficient since small quantities of contaminants can diffuse into the material and slowly permeate back out to the surface where they can be absorbed by the respirator wearer.

Respirator Transportation - The respirator components should be protected during transport in vehicles and during movement to the inspection or testing sites. This protection must prevent permanent distortion of the face piece and chemical contamination of all of the components.

Respirator Fit Testing - All agency personnel should satisfactorily complete a condensation nuclei type quantitative fit test demonstrating that the respirator(s) they have chosen provides an adequate fit.

Eyeglasses in Respirators - The agency should supply individualized eyeglasses mounted to the face piece of full face mask respirators whenever such respirators are necessary for the field duties assigned. Spectacle temple bars or straps that pass between the sealing surface and the wearer's face prevent a good seal and should not be permitted with a full-face respiratory protection device.

Physical Limits to the Use of Respirators - Employees with perforated ear drums should not wear respirators. Employees who have not demonstrated by means of regular physical examination that they are capable of withstanding the additional physical stress imposed by respirators should not wear respirators. Since respirators are necessary for field activities, such individuals should not perform field duties.

Contact Lenses and Respirators - Contact lenses should not be worn when agency employees are wearing respirators.

Gum and Tobacco Chewing with Respirators - Agency employees should not chew gum or tobacco while wearing a respirator.

USE OF PORTABLE INSTRUMENTS

Positive Pressure Ports - Agency personnel should not attempt to use measurement ports on positive pressure ducts or collectors that are more than 1 inch in diameter when the static pressure exceeds 1 inch of water. At this pressure, a high velocity gas stream, possibly containing toxic pollutants, can quickly engulf the area of the measurement port.

All measurement ports under positive pressure must be opened carefully and be sealed while the measurements are being made. A glove is not recommended for sealing the port since there is usually significant gas leakage through portions of the glove.

Negative Pressure Ports - The measurement probe and associated equipment must be secured so that nothing is sucked into the ductwork or collector. This can result in significant damage to the plant air pollution control system, fan, and process equipment. It is recommended that ports less than 1 inch in diameter be used whenever the static pressures are less than minus 1 inch of water.

Lifting Equipment - A rope should be used when lifting large and bulky equipment to elevated platforms. These material should not be carried up a ladder. Each article must be securely tied to the rope before being lifted. This should not be attempted if the wind speed is high, since it will be difficult to control the equipment being lifted. Under no circumstances should small tools, probes, or samples be allowed to drop from elevated platforms.

HEAT STRESS

Drinking Water - Agency employees working in moderate and hot climates should carry drinking water in their vehicles. It should be remembered that heat stress can occur while working near air pollution control systems even when the ambient temperatures are low. The close proximity of high temperature ducts and the limited air movement around portions of the control system provide areas of high heat stress. The work involved in climbing to the various platforms around the control equipment and the work involved in making some of the measurements contribute to the heat stress conditions.

Heat Exhaustion - The field work should be interrupted immediately whenever an agency employee experiences the symptoms of heat

APPENDIX B

This is an October, 1990 revision
of an EPA publication titled,
RESPIRATORY PROTECTION PROGRAM GUIDELINE

RESPIRATORY PROTECTION PROGRAM GUIDE

1.0 PURPOSE AND SCOPE

The purpose of this guideline is to provide management personnel with sufficient information to establish and operate a respiratory protection program to adequately protect employees as required by EPA Order 1440.3, Respiratory Protection, and by the Occupational Safety and Health Administration (OSHA) Regulations 29 CFR 1910.134.

2.0 BACKGROUND

OSHA has set maximum exposure standards for many airborne toxic materials. If employee exposure to these substances exceeds the standards, the regulations require that feasible engineering controls and/or administrative controls be installed or instituted to reduce employee exposure to acceptable levels. If these controls do not prove feasible, or while they are being instituted, the agency is required to provide approved, appropriate respiratory protection for its employees. Respirators are the least acceptable means for reducing personnel exposures; they only provide good protection if properly selected and fitted, worn by employees when needed, and replaced when their service life is over. Additionally, some employees may not be able to wear a respiratory protective device. Despite these difficulties, respiratory protective devices are the only means of protection available to employees when engineering and work practice controls are inadequate or not feasible, i.e., during field operations.

3.0 DEFINITIONS

Approved A respiratory protective device that has been tested and listed as satisfactory by the Bureau of Mines (BOM) of the U.S. Department of Interior, or jointly by the Mine Safety and Health Administration (MSHA) of the U.S. Department of Labor and the National Institute for Occupational Safety and Health (NIOSH) of the U.S. Department of Health and Human Services.

Canister (air-purifying) A container with a filter, and/or sorbent, and/or catalyst which removes specific contaminants from the air drawn through it.

Canister (oxygen-generating) A container filled with a chemical which generates oxygen by chemical reaction.

Ceiling concentration The concentration of an airborne substance that shall not be exceeded.

Confined space A space defined by the concurrent existence of the following conditions:

- * Existing ventilation is insufficient to remove dangerous air contamination and/or oxygen deficiency which may exist or develop.
- * Ready access or egress for the removal of a suddenly disabled employee is difficult due to the location and/or size of the opening(s).

Contaminant A harmful, irritating, or nuisance material that is foreign to the normal atmosphere.

Corrective lens The lens ground to the wearer's individual corrective prescription to permit normal visual acuity.

Dusts Solid particles produced by such processes as grinding, crushing, and mechanical attrition.

Emergency respirator use Wearing a respirator when a hazardous atmosphere suddenly occurs which requires its immediate use.

Fumes Solid condensation particles of extremely small particle size.

Hazardous atmosphere Any atmosphere, either immediately or not immediately dangerous to life or health, which is either oxygen deficient or which contains a toxic or disease-producing contaminant exceeding the legally established permissible exposure limit (PEL), or where applicable, the Threshold Limit Value (TLV) established by the American Conference of Governmental Industrial Hygienists (ACGIH).

Immediately Dangerous to Life or Health (IDLH) Any atmosphere that poses an immediate hazard to life or produces immediate irreversible effects on health that will be debilitating.

Mists Tiny liquid droplets dispersed whenever a liquid is sprayed, mixed vigorously, or otherwise agitated.

Odor threshold limit The lowest concentration of a contaminant in air that can be detected by the olfactory sense.

Permissible Exposure Limit (PEL) The legally established time-weighted average (TWA) concentration or ceiling concentration of a contaminant that shall not be exceeded. (OSHA 29 CFR 1910.1000 Table Z-A-1 Promulgated 3-1-90)

Protection factor The ratio of the ambient concentration of an airborne substance to the concentration of the substance inside the respirator at the breathing zone of the wearer. The protection factor is a measure of the degree of protection provided to the wearer.

Recommended Exposure Limit (REL) An 8 or 10 hour time-weighted average (TWA) or ceiling (C) exposure concentration recommended by NIOSH that is based on an evaluation of the health effects data.

Threshold Limit Value (TLV) An 8 hour time-weighted average (TWA) or ceiling (C) exposure concentration recommended by the American Conference of Governmental Industrial Hygienists .

Time-weighted average The average concentration of a contaminant in air during a specific time period.

4.0 THE RESPIRATORY PROTECTION PROGRAM

EPA Order 1440.3, Respiratory Protection, sets out the agency policy, responsibilities, and basic requirements for a respiratory protection program to protect its employees whose jobs require the use of respiratory protective devices. EPA management is required to establish and implement a respiratory protection program at each agency location where the activities of employees may cause them to encounter respirator hazards. Such areas include but are not necessarily limited to: atmospheres that contain or are suspected of containing unhealthy quantities of airborne contaminants, atmospheres with insufficient oxygen content, and areas where there is the threat of an imminent release of toxic agents. Respiratory protection may also be necessary for routine but infrequent operations and for non-routine operations in which the employee is exposed briefly to high concentrations of a hazardous substance, i.e., during maintenance or repair activities or during emergency conditions. At a minimum, a respiratory protection program must contain all the elements outlined in EPA Order 1440.3.

- * There must be a determination of the need for respiratory protective devices.
- * Approved respiratory protective devices must be properly selected.
- * An employee training program must be established in which the employee becomes familiar with the respiratory protective devices and is trained in the selection, use, and limitations of respirators.
- * There must be provisions for the following.
 - * There must be provisions for routine inspection, storage and repair of the respirators.
 - * There must be provisions for proper fit testing of the respirators.
 - * There must be provisions for routine surveillance of the work area employee exposure.
 - * There must be medical screening of each employee assigned to wear respiratory protective devices to determine if he/she is physically and psychologically able to wear a respirator.
- * Written standard operating procedures must exist for the selection and use of respiratory protective devices.

5.0 ESTABLISHMENT OF THE RESPIRATORY PROTECTION PROGRAM

EPA managers should designate one person to administer the respirator program at their location. This person should have the responsibility for the entire respirator program and for developing standard operating procedures. To administer the respiratory protection program effectively, the designated person must have the following capabilities.

- * Sufficient training in all aspects of respiratory protection to adequately manage the program
- * The ability to make sound judgments based on hazard evaluation and an understanding of the workplace hazards
- * The knowledge and authority to coordinate equipment purchasing, maintenance, cleaning, and repair
- * The knowledge and authority to assure that written operating procedures are prepared for specific operations and that these procedures are being followed
- * The knowledge and authority to assure compliance with OSHA and agency respiratory protection requirements
- * The resources to maintain all records associated with the program, i. e., monitoring, medical surveillance and job assignment data, respirator care and maintenance records, emergency equipment inspection/maintenance tags, and training records

The individual assigned the respiratory program responsibility may be a safety specialist/manager, safety engineer, industrial hygienist, or supervisory person. This individual must have the full support of management at the workplace.

6.0 SELECTION OF RESPIRATORY PROTECTIVE DEVICES

The proper selection of respiratory protective devices involves two steps.

- * Identification and evaluation of the hazard.
- * Selection of approved respiratory devices based on the first consideration.

6.1 IDENTIFICATION AND EVALUATION OF THE HAZARD

The person who evaluates respiratory hazards must have the cooperation of others in obtaining information on the work area, activities, and materials to properly evaluate and determine the appropriate respiratory protective device that will provide the best protection for the employee. Consideration of these questions will help in the selection of the correct equipment.

- * Does the atmosphere oxygen level meet standards? Is the atmosphere oxygen level expected to remain constant or decrease?
- * What is the contaminant? Is it a gas, vapor, mist, dust, or fume?
- * What is the estimated concentration of the contaminant? Have measurements been taken?
- * Could the contaminant be considered immediately dangerous to life or health?
- * Is the contaminant flammable? Does the concentration approach the lower explosion limit? Do dust concentrations create a potential explosion problem?
- * Does the contaminant have adequate warning properties such as smell, taste, or irritation?
- * Will the contaminant irritate the eyes at the estimated concentration? Is eye protection also needed?
- * What type(s) of respirators will provide the required degree of employee protection?
- * Is the recognized contaminant the only contaminant present?
- * If the contaminant is a gas or vapor, is there an effective sorbent for the respirator canister?
- * Can the contaminant be absorbed through the skin? If it can, will it result in a serious injury?

6.2 SELECTION OF APPROVED RESPIRATORY PROTECTIVE DEVICES

The person designated as the respiratory protection program manager should have an approval authority for the purchase of respiratory protective devices. Any respiratory protective devices should be approved for the particular contaminants for which they will be used. The NIOSH approval on a respirator has the following information.

- * An assigned identification number placed on each unit
- * A label identifying the type of hazard for which the respirator is approved
- * Additional information on the label which gives limitations and identifies the component parts approved for use with the basic unit

Respiratory protective devices fall into two broad categories: air purifying and supplied air.

6.2.1 Air-Purifying Respirators

These devices remove the contaminant from the breathing air before it is inhaled. For each model of air-purifying respirator, there are usually many air-purifying cartridges available for protection against specific contaminants. Combination cartridges for protection against both particulates and organic vapors are also available.

6.2.1.1 Types

Single use dust, dust/mist, and dust/mist/fume The single-use respirator is completely disposed of after use. It is for individual use and should be discarded when resistance becomes excessive or the respirator is damaged. These are no longer recommended for use for any air pollution source inspection activities.

Quarter-mask, dust and mist; half-mask dust and must The quarter-mask covers the mouth and nose; the half-mask fits over the nose and under the chin. The half-mask usually produces a better facepiece to face seal than does the quarter-mask, and is therefore preferred for use against more toxic materials. Dust and mist respirators are approved for protection against dusts and mists whose PEL is greater than 0.05 milligram particulate matter per cubic meter of air (mg/M^3).

Half-mask, high efficiency These masks are the same as the units mentioned above but use a high efficiency filter. Because of this filter, they can be used against dusts, mists, fumes and combinations of those whose PEL is less than 0.05 mg/M^3 .

Full facepiece Full facepiece respirators cover the face from the hairline to below the chin. In addition to providing more protection to the face and a measure of eye protection, the full facepiece gives a better seal than the half- or quarter-masks. The protection these respirators provide against dusts, mists, fumes, or any combination of these contaminants depends upon the type of filter used.

Powered air-purifying These respirators use a blower that passes the contaminated air through the cartridge or canister where the contaminant is removed. The purified air is then passed into the facepiece. The air purifying element can be a filter to remove particulates, a cartridge or canister to remove gases or vapors, or a combination to remove both. The face covering can be a half-face, full-face mask, or hood/helmet.

Powered air-purifying respirators must deliver at least 4 cubic feet per minute (cfm) to a tight fitting facepiece such as a mask and at least 7 cfm to a loose fitting helmet or hood. If the powered air-purifying respirator is battery operated, it should provide the air flows mentioned for at least 4 hours without having to recharge the battery.

6.2.1.2 Limitations

Air-purifying respirators should not be used in concentrations which are potentially above the product of the Permissible Exposure Limit for the pollutant and the protection factor of the respirator. Commonly used protection factors for respirators are listed in the table below.

RESPIRATORY PROTECTION FACTORS

Type of Respirator	Protection Factor	Facepiece Pressure
AIR PURIFYING		
Single-use, dust, dust/mist, and dust/mist/fume	5	Negative
Half-mask	10	Negative
Full facepiece	50	Negative
Powered air purifying, tight fitting	50	Negative
Powered air purifying, loose fitting	25	Negative
ATMOSPHERE-SUPPLYING		
Self-Contained Breathing Apparatus (SCBA): Open-circuit, pressure-demand, full facepiece	10.000	Positive

Air-purifying respirators do not provide oxygen, so they must never be worn in oxygen deficient atmospheres which are defined as areas having less than 19.5% oxygen. Also, air-purifying respirators for particulate offer no protection against atmospheres containing contaminant gases or vapors.

The air flow resistance of a particulate removing respirator filter element increases as the quantity of particles it retains increases. As a rule of thumb, the filter should be replaced when comfortable breathing is impaired because of dust build-up.

Chemical cartridges and canisters for gas and vapor removing respirators must not be used for any chemical which lacks adequate warning properties such as odor, taste, or irritation, unless their use is permitted by applicable OSHA or MSHA standards. These warning properties are necessary to alert the user that the sorbent is saturated and that the contaminant is passing through the cartridge or canister into the respiratory tract. It should also be noted that the canisters and cartridges are intended for use only for the compounds for which they were specifically tested and approved. They will be ineffective for other gases and vapors.

None of the air-purifying respirators should be used in atmospheres immediately dangerous to life or health except in escape situations.

6.2.2 Supplied-Air respirators

Supplied-air respirators provide clean air from an independent source, rather than removing hazardous materials from the workplace air. There are two types: (1) supplied air respirators in which the user is supplied with respirator air through a hose (air-line), and (2) self-contained respirators in which the user carries a supply of respirable air.

6.2.2.1 Types

Supplied-air (air-line) respirators - These use a central source of breathing air that is delivered to the wearer through an air supply line or hose. As visitors to a site, air pollution control agency field personnel do not generally qualify as users of these types of respirators.

Self-Contained Breathing Apparatus (SCBA) - This type of respirator allows the user to carry a respirable breathing supply with him/her, and does not need a stationary air source such as a compressor to provide breathable air. The air supply may last from 3 minutes to 4 hours depending on the device. There are numerous commercial styles. However, the only type which should be used by air pollution control agency field personnel is a pressure-demand unit. This type of SCBA has a regulator and valve design which maintains a positive pressure in the facepiece at all times regardless of the demand of the user. Because of this, there is no problem of contaminant leakage into the facepiece. This is a

significant advantage of the pressure demand device. The use time of this device may be reduced considerably by air leakage outward from the facepiece.

6.2.2.2 Limitations

The air supply of pressure-demand SCBAs is limited to the amount in the cylinder. The respirator can not be used for extended periods without recharging or replacing the cylinders. Also, the respirators should not be worn in areas in which explosive contaminants are potentially present at concentrations equal to or above 10% of the lower explosive limit (LEL).

7.0 RESPIRATOR USE

All employees required to wear respiratory protection devices should, if practical, be assigned the protective equipment for their personal use. A system should be established to facilitate the accounting of users and of the equipment. When a respirator is assigned to a user, it should be permanently marked to indicate to whom it is assigned. It must be marked in a way that does not interfere with respirator performance. Records should indicate the date of initial issue, the dates of reissue, and a listing of repairs.

7.1 EMPLOYEE RESPONSIBILITIES

As a respiratory protective device user, employees have the following responsibilities.

- * Use respiratory protective equipment as instructed.
- * Guard against damaging the respirator.
- * Go immediately to an area of "clean" air if the respirator malfunctions.
- * Report any malfunctioning of respiratory protective devices to their supervisor. These malfunctions include but are not limited to discomfort, resistance to breathing, fatigue due to respirator usage, interference with vision or communication, and restriction of movement.

7.2 SUPERVISION OF RESPIRATOR USE

Respirators in use must be randomly inspected at frequent intervals. This periodic monitoring should include the following.

- * Determination that the proper respirator is being used
- * Determination that the respirator is being worn properly and that the respirator is in good condition.
- * Consultation with users about discomfort, resistance to breathing, fatigue, interference with vision or communication, restriction of movement, interference with job performance, and confidence in the respirator.

Problems discovered during the random inspection should be rectified.

7.3 RESPIRATOR USE UNDER SPECIAL CONDITIONS

There are several conditions when the use of respiratory protective devices requires special preparation.

7.3.1 Dangerous Atmospheres

If respiratory protective devices are to be used in atmospheres immediately dangerous to life or health, a standard operating procedure for work in high hazard areas must be written. The standard operating procedure must, as a minimum, cover the following points.

- * Individuals designated to enter into dangerous atmospheres must have training with the proper equipment. These individuals must be equipped with safety harnesses and safety lines so that they can be removed from the atmosphere if necessary.
- * A standby individual should be designated and equipped with proper rescue equipment. This individual must be present in a nearby safe area where he/she can observe workers in the hazard area so that assistance can be summoned if necessary.
- * Provision for communication between persons in the dangerous atmosphere and the standby person must be made. Communication may be visual or by voice, signal line, telephone, radio or other suitable means.

Other important data such as toxicological information and emergency phone numbers should be included.

7.3.2 Low and High Temperatures

The use of respiratory protective devices in low temperatures can create several problems. The lens of the full face piece respirator may fog due to condensation of the water vapor in the exhaled breath. Coating the inner surface of the lens with an antifogging compound will reduce fogging. Nose cups that direct the warm, moist exhaled air through the exhalation valve without touching the lens are available from manufacturers for insertion into the full facepiece. Respirator usage in hot environments can put additional stress on the user. The stress can be minimized by using a light-weight respirator with low breathing resistance.

The exhalation valve can freeze onto the valve seat due to the moisture in the exhaled air. The user will be aware when this situation occurs by the increased pressure in the facepiece. When unsticking the valve, care should be taken so as not to tear the rubber diaphragm.

7.4 SPECIAL PROBLEMS IN RESPIRATOR USE

7.4.1 Facial Hair

Facial hair lying between the sealing surface of a respirator facepiece and the wearer's skin will prevent a good seal. If the respirator permits negative air pressure inside the facepiece during inhalation, there will be excessive contaminant penetration. Even one day's growth of stubble will permit excessive contaminant penetration. Any employee who has stubble, a mustache, sideburns, or a beard that passes between his face and the sealing surface must not wear a respirator that allows negative pressure inside the facepiece during inhalation.

7.4.2 Corrective Lenses

Spectacle temple bars or straps that pass between the sealing surface of a full facepiece and the wearer's face prevent a good seal. Therefore, spectacles that have temple bars or straps must not be used when a full-facepiece respirator must be worn. Spectacles with short temple bars that do not protrude between the sealing surface and the user's face, or spectacles without temple bars which are taped to the wearer's face may be used temporarily. Special corrective lenses that can be mounted inside the full facepiece are available and should be used by employees who need them. The special corrective lenses must be mounted in the full facepiece by a qualified person to ensure good vision, comfort, and proper sealing of the facepiece. Spectacles or goggles may also interfere with quarter- or half-masks. They must be worn so as not to interfere with the seal of the facepiece. If there is interference, a full facepiece respirator should be worn to avoid sealing problems.

Contact lenses must not be worn while wearing a respirator in a contaminated atmosphere. A properly fitted respirator may stretch the skin around the eyes, creating the possibility that the contact lens will fall out. Also contaminants that do penetrate the respirator could get underneath the contact lens and cause severe discomfort. The user's first reaction would be to remove the facepiece to remedy the situation which could be fatal in a lethal environment.

7.4.3 Other Sealing Problems

Scars, hollow temples, very prominent cheekbones, deep skin creases, and lack of teeth or dentures may cause respiratory facepiece sealing problems. Full dentures should be retained when wearing a respirator, but partial dentures may or may not have to be removed, depending upon the possibility of swallowing them. With full lower dentures, problems in fitting quarter-masks can be expected as the lower part of the mask tends to unseat the dentures. Persons with punctured ear drums also should not wear respirators.

8.0 TRAINING AND FITTING

8.1 TRAINING

Selecting the respirator appropriate for a given hazard is important, but equally important is using the selected device properly. Proper use can be ensured by carefully training both supervisors and users in selection, use, and maintenance of respiratory protective devices. The content of a training program can vary widely, depending on the needs of the respirator users. However, OSHA requires that the training of both users and supervisors include the following no matter what the circumstances.

- * An opportunity to handle the respirator
- * Proper fitting
- * Testing of facepiece to face seal
- * A long familiarization period of wear in normal air

The training of users and supervisors for specific use situations should also include

- * Discussion of the engineering and administrative controls in use and why respirators are needed
- * Explanation of the nature of the respiratory hazard and the consequences of not using the respirator properly
- * Explanation of why a particular type of respirator has been selected
- * Discussion of how to recognize and handle emergencies

The training requirements apply to both large and small groups or units of employees required to wear respiratory devices, with no differentiation to meet individual needs.

8.1.1 Supervisors

Supervisors who oversee the daily activities of one or more employees who wear respirators should have a knowledge of respirators and respiratory protection practices. Supervisory training should include, but not be limited to the following areas.

- * Basic respiratory protection practices
- * Selection and use of respirators to protect each employee against every respiratory hazard to which he/she may be exposed
- * The nature and extent of the respiratory hazards
- * The structure and operation of the entire respirator program - the supervisor should understand his/her responsibility to facilitate the implementation of the program, including issuance of respirators, control of their use, maintenance that the employee may be expected to perform, and evaluation of the effectiveness of the program.
- * The legal requirements pertinent to use of respirators in his/her area of jurisdiction

These supervisory training requirements apply to large groups or field units with employees required to use respiratory protective devices. A smaller group or field unit may have to combine the supervisor training with that of the employees. This will benefit the employees because they will receive more comprehensive training.

8.1.2 Employees

EPA Order 1440.3 requires that employees receive a minimum of six hours of initial training and two to four hours annually thereafter. This is a minimum requirement. The extent and frequency of the employee's training will depend on the nature and extent of the hazard. If the hazard is a nuisance particulate, for example, the danger from misuse of the respirator is not likely to be serious. However, against highly toxic particulate, a single misuse may have serious consequences. The same is true for gases and vapors. If the respirator is to be used in an emergency, training in its use should be very thorough and complete. In any case, the employee must be given some instruction and training in respiratory protection practices. Because proper respirator use depends on the employee's motivation, it is important that the need for respiratory protection be explained fully. The following points should be included in a minimum acceptable respiratory protection training program.

- * Instruction in the nature of the hazard, whether acute, chronic or both and an honest appraisal of the consequences of not using a respirator
- * Explanation of why more positive control is not immediately feasible - this should include recognition that every reasonable effort is being made to reduce or eliminate the need for respirators.
- * Discussion of why the proper type of respirator must be used for each particular hazard
- * Discussion of respirator capabilities and limitations
- * Instruction and training in actual use of the respirator
- * Classroom and field training in recognition of and coping with emergencies
- * Proper fitting
- * Other special training as needed

8.2 FITTING

The proper fitting of respiratory protective devices requires the use of some type of fit test. The fit test is needed to determine a proper match between the facepiece of the respirator and the face of the user.

There are two types of tests for fitting respirators: qualitative and quantitative. The selection of one or both types of tests depends on the severity and extent of the respiratory hazard and the size of the unit or number of employees involved in wearing respiratory protective devices. During any fitting test, the respirator headstraps must be as comfortable as possible. Tightening the straps will sometimes reduce facepiece leakage, but the user may be unable to tolerate the respirator for any length of time.

8.2.1 Qualitative Tests

Qualitative tests are fast, require no complicated expensive equipment, and are easily performed. However, these tests rely on the user's subjective response and therefore are not entirely reliable. There are two major qualitative tests: isoamyl acetate and irritant smoke.

8.2.1.1 Isoamyl Acetate Test

Isoamyl acetate, a low toxicity substance with a banana oil like odor, is used widely in testing the facepiece fit of organic vapor cartridge/canister respirators. The user should put on the respiratory protective device in an area away from the test enclosure so that there is no prior contamination of the cartridge or pre-exposure to the isoamyl acetate. The user should perform the following.

- * Normal breathing
- * Deep breathing, as during exertion - this should not be done long enough to cause hyperventilation.
- * Side-to-side and up-and-down head movements - these should be exaggerated, but should approximate those that take place on the job.
- * Talking - this is most easily accomplished by reading a prepared text loudly enough to be understood by someone standing nearby.
- * Other exercises may be added depending on the need.

The major drawback of the isoamyl acetate test is that the odor threshold varies widely among individuals. Also, the sense of smell is easily dulled and may deteriorate during the test so that the user can detect only high vapor concentrations. Another

disadvantage is that isoamyl acetate smells pleasant, even in high concentrations. Therefore, a user may say that the respirator fits although it has a leak. A user may say that a respirator fits because he/she likes the fit of the particular respirator or is following the respirator selection of another employee. Conversely, a user may claim that a particular respirator leaks if it is uncomfortable. Therefore, unless the employee is highly motivated toward wearing a respirator, the results of this test must sometimes be suspect.

8.2.1.2 Irritant Smoke Test

The irritant smoke test, similar to the isoamyl acetate test in concept, is used widely in testing the facepiece fit of particulate filter respirators. This test can be used for both air-purifying and atmosphere-supplying respirators, but an air-purifying respirator must have a high-efficiency filter. The test substance is an irritant (stannic chloride or titanium tetrachloride) which is available commercially in sealed glass tubes. When the tube ends are broken and air passes through them, a dense irritating smoke is emitted. In this test, the user steps into a test enclosure, and the irritant smoke is sprayed into the test hole. If the user detects any of the irritant smoke, there is a defective fit, and adjustment or replacement of the respirator is required. The irritant smoke test must be performed with caution because the aerosol is highly irritating to the eyes, skin, and mucous membrane. As a qualitative means of determining respirator fit, this test has a distinct advantage in that the wearer usually reacts involuntarily to leakage by coughing or sneezing. The likelihood of giving a false indication of proper fit is reduced.

8.2.2 Quantitative Tests

Quantitative respirator performance tests involve the use of an instrument that detects condensation nuclei in room air. The condensation nuclei inside the respirator is sampled continuously through a probe in the respiratory-inlet covering. The leakage is expressed as a percentage of the condensation nuclei outside the respirator, called "percent of penetration." The greatest advantage of a quantitative test is that it indicates respirator fit numerically and does not rely on a subjective response. The quantitative fit test is highly recommended when facepiece leakage must be minimized for work in toxic atmospheres.

9.0 RESPIRATORY PROTECTIVE DEVICE INSPECTION, CLEANING, MAINTENANCE, AND STORAGE

Scrupulous respirator maintenance must be made an integral part of the overall respirator program. Wearing poorly maintained or malfunctioning respirators is, in one sense, more dangerous than not wearing a respirator at all. The employee wearing a defective device thinks he/she is protected when, in reality, he/she is not. Emergency escape and rescue devices are particularly vulnerable to poor maintenance as they generally are used infrequently and then in the most hazardous and demanding circumstances. The possible consequences of a user wearing a defective emergency escape and rescue device are lethal.

A proper maintenance program ensures that the user's respirator remains as effective as when it was new. All programs are required to include as a minimum:

- * Inspection for defects including a leak check
- * Cleaning and disinfecting
- * Repair
- * Storage

9.1 INSPECTION

An important part of a respirator maintenance program is the inspection of the devices. If performed carefully, inspections will identify damaged or malfunctioning respirators.

9.1.1 Inspection Schedules

All respiratory protection devices must be inspected

- * Before and after each use, and
- * During cleaning.

Equipment designated for emergency use must be inspected

- * After each use
- * During cleaning, and
- * At least monthly.

Self-contained breathing apparatuses must be inspected at least monthly.

9.1.2 Recordkeeping

A record must be kept of inspection dates and findings for respirators maintained for emergency use.

9.1.3 Inspection Considerations

The primary defects to look for in the inspection of the components of the respirator are itemized below. Information within the parentheses are suggested actions to be taken.

9.1.3.1 Air-Purifying Respirators

- * Rubber facepiece
 - ** Excessive dirt (Clean all dirt from facepiece.)
 - ** Cracks, tears, or holes (Obtain new facepiece.)
 - ** Distortion (Allow facepiece to "sit" free from any constraints and check if distortion disappears; if not obtain new facepiece.)
 - ** Cracked, scratched, or loose fitting lenses (Contact respirator manufacturer to see if replacement is possible; if not obtain new facepiece.)
- * Headstraps
 - ** Breaks or tears (Replace headstraps.)
 - ** Loss of elasticity (Replace headstraps.)
 - ** Broken or malfunctioning buckles (Obtain new buckles.)
 - ** Excessively worn serrations on the head harness which might allow the facepiece to slip (Replace headstrap.)
- * Inhalation valve, exhalation valve
 - ** Detergent residue, dust particles, or dirt on valve or valve seat (Clean residue with soap and water.)
 - ** Cracks, tears or distortions in the valve material or valve seat (Contact manufacturer for instructions.)
 - ** Missing or defective valve cover (Obtain valve cover from manufacturer.)
- * Filter element(s)
 - ** Proper filter for the hazard
 - ** Approval designation
 - ** Missing or worn gaskets (Contact manufacturer for replacement.)
 - ** Worn threads - both filter threads and facepiece threads (Replace filter or facepiece, whichever is applicable.)
 - ** Cracks or dents in filter housing (Replace filter.)
 - ** Deterioration of gas mask canister harness (Replace harness.)
- * Canister service life indicator or end of service date,
- * Corrugated breathing tube
 - ** Cracks or holes (Replace tube.)
 - ** Missing or loose hose clamps (Obtain new clamps.)
 - ** Broken or missing end connectors (Obtain new connectors.)

9.1.3.2 Atmosphere Supplying Respirators

- * Facepiece headstraps, valves and breathing tube - These items should be checked as for the air-purifying respirators.
- * Hood, helmet, blouse, or full suit, if applicable
 - ** Rips and torn seams (Replace if unable to repair adequately.)
 - ** Headgear suspension (Adjust properly for the individual.)
 - ** Cracks or breaks in faceshield (Replace faceshield.)
 - ** Protective screen (If not intact or fitting correctly over the faceshield, obtain new screen.)

9.1.3.3 Self-contained breathing apparatus (SCBA)

See manufacturer's instructions.

9.2 Cleaning and Disinfecting

When respiratory protective devices are used routinely, they should be cleaned and disinfected daily. If they are used only occasionally, periodic cleaning and disinfecting is appropriate.

The respiratory protective device should be washed with detergent in warm water (<120 degrees Fahrenheit or per manufacturer's instructions) using a brush, thoroughly rinsed in clean water, and air dried in a clean place. Care should be taken to prevent damage from rough handling. This method is an accepted procedure for a small group or unit of employees where each employee cleans his/her own respirator.

A standard domestic type dish or clothes washer may be used if a rack is installed to hold the facepieces in a fixed position. If facepieces are placed loosely, they may be damaged. This method is especially useful in a large unit or group where respirator usage is extensive.

Organic solvents should not be used as they can deteriorate the rubber facepiece. Detergents containing a bactericide should be used. If these are not available, a detergent may be used followed by a disinfecting rinse. Reliable disinfectants may be made from some household solutions.

- * Hypochlorite solution (50 ppm of chlorine) made by adding two tablespoons of chlorine bleach per gallon of water.

- * Aqueous solution of iodine (50 ppm) made by adding approximately one teaspoon of tincture of iodine per gallon water.

A two-minute immersion is sufficient to disinfect the respirators and will not damage the rubber or plastic in the facepieces. Check with the manufacturer for proper temperatures for the solutions.

If respirators are washed by hand, a separate disinfecting rinse may be provided. If a dish or clothes washing machine is used, the disinfectant must be added to the rinse cycle, and the amount of water in the machine at the time will have to be known in order to determine the correct quantity of disinfectant to be added.

The cleaned and disinfected respirators should be rinsed thoroughly in clean water (120 degrees Fahrenheit maximum) to remove all traces of detergent, cleaner, sanitizer, and disinfectant. This is very important to prevent dermatitis.

The respirators may be allowed to air dry on a clean surface. They may also be hung from a horizontal line, but care must be taken not to damage the facepiece.

9.3 MAINTENANCE

Continued usage of respiratory protective devices may require periodic repair or replacement of component parts of the equipment. Such repairs and parts replacement must be done by qualified individuals.

In most cases, replacement of parts and repair of air-purifying respirators present few problems. Most equipment manufacturers supply literature which details the component parts of their respirators and includes servicing information. The manufacturer will also provide replacement parts. Replacement parts for respiratory protective devices must be those of the manufacturer of the equipment. Substitution of parts from a different brand or type of respirator will invalidate the approval of the respirator.

Defective air-supplying respiratory protective equipment, with the exception of the SCBA, can be repaired and worn if broken parts are replaced by a qualified individual - with the aid of the manufacturer's literature and parts. Maintenance of SCBA equipment is more difficult primarily because of the valve and regulator assembly. Regulations require that SCBA equipment be returned to the manufacturer for repair.

9.4 STORAGE

All the care that has gone into cleaning and maintenance of a respirator can be negated by improper storage. Respiratory protective equipment must be stored to protect it from dust, sunlight, heat, extreme cold, excessive moisture, and damaging chemicals. Leaving a respirator unprotected can lead to damage of the working parts or permanent distortion of the facepiece, thus making it ineffective.

After cleaning and disinfecting, the respirators should be placed individually in heat-sealed or resealable plastic bags until reissue or reuse. They should be stored in a single layer with the facepiece and exhalation valve in a more or less normal position to prevent the rubber or plastic from taking a permanent distorted "set".

Air purifying respirators kept ready for nonroutine use or emergency use should be stored in a cabinet in individual compartments. A storage chest can be purchased from the manufacturer for air-supplying respiratory protective equipment. All storage cabinets should be located in noncontaminated, but readily accessible areas.

10.0 MEDICAL ASPECTS OF RESPIRATORY PROTECTION EQUIPMENT USAGE

EPA Order 1440.3, Respiratory Protection, requires that employees assigned to tasks requiring the use of respiratory protective devices must have medical evaluations as defined by the Agency's Occupational Medical Monitoring Guidelines. There must be a determination that employees are physically capable of performing the work while wearing the devices. These requirements are necessary because the use of any type of respirator may impose some physiological stress on the user. Air-purifying respirators, for example, make breathing more difficult because the filter or cartridge impedes the flow of air. The special exhalation valve on an open circuit pressure demand respirator requires the user to exhale against significant resistance. The bulk and weight of a SCBA can be a burden. If the employee is using an airline respirator, he/she might have to drag up to 300 feet of hose around. All of these factors can significantly increase the employee's workload.

So that the examining physician can give a qualified opinion regarding the ability of an employee to use a respirator, the agency should provide the following information.

- * Type of respiratory protection equipment to be used
- * The tasks that the employee will perform while wearing the respirator
- * Visual and audio requirements associated with the task
- * Length of time that the employee will wear the respirator
- * The substance(s) to which the employee will be exposed and the related toxicity data

The following checklist will give the Respiratory Protection Program Manager a good indication of the employee's ability to wear a respirator.

- | | | |
|-------|-----|-------------------------------------|
| Lung | ___ | History of asthma or emphysema |
| | ___ | Difficulty in breathing |
| | ___ | Previously documented lung problems |
| Heart | ___ | High blood pressure |
| | ___ | Artery diseases |
| | ___ | Documented heart problems |
| Other | ___ | Missing or arthritic fingers |
| | ___ | Facial scars |
| | ___ | Claustrophobia |
| | ___ | Poor eyesight |
| | ___ | Perforated ear drum(s) |

A "yes" answer to any of these questions would constitute a warning sign regarding the use of respirators by an employee. A medical opinion to confirm any of these situations should then be obtained.

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5. American National Standards Institute, Standard Z88.2-1969, Respirator Practices, ANSI, 1430 Broadway, New York, N.Y. 10018
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7. American Conference of Governmental Industrial Hygienists, Threshold Limit Values for 1973 (and current year), ACGIH, 1014 Broadway, Cincinnati, Ohio 45202.

LECTURE 5

CONFINED ENTRY HAZARDS

OBJECTIVES:

Entry into air pollution control devices or the ductwork upstream and downstream is exceptionally dangerous for agency inspectors. The objective of this lecture is to demonstrate why inspectors should not enter these devices under any circumstances.

SCOPE:

- * Problems of isolating air pollution control devices
- * Problems concerning hot, free flowing solids
- * Falls through corroded tube sheets
- * High voltage conditions
- * Inhalation and oxygen deficiency problems
- * Burns due to high gas and metal temperatures
- * Heat stress
- * Extreme noise exposure
- * Falls on slippery surfaces
- * Sudden equipment start-up

READING ASSIGNMENTS: None

VISUAL AIDS: Videotape #4

BASIC PRINCIPLES AND PROCEDURES:

- * Agency inspectors do not have the time necessary to ensure that an air pollution control system has been properly prepared for internal entry.
- * Agency inspectors do not have the necessary personal protection equipment and safety equipment to perform internal inspections.
- * All of the data and information necessary to evaluate compliance can be obtained without going inside air pollution control systems or ductwork.
- * It is inherently difficult to completely isolate air pollution control systems.

- * Adherence to confined entry permit requirements provides only limited protection.
- * Most confined entry procedures are primarily concerned with inhalation or oxygen deficiency problems. However, in the case of air pollution control sources, these represent only some of the numerous problems which can exist simultaneously.
- * A control device is not inherently safe just because it is new and has not yet been operated.
- * A control device is not inherently safe just because plant personnel are inside working.

REVIEW QUESTIONS:

1. A person from the plant's safety staff has just completed measurements of the scrubber internal gas temperature, oxygen concentration, hydrogen sulfide concentration, carbon monoxide concentration, and combustible gas concentration. All measurements indicate safe working conditions. Is it safe to enter?
 - a. Yes
 - b. No
2. There are approximately 20 people inside an electrostatic precipitator working on straightening warped collection plates. This is occurring during the early stages of a planned two week outage. Is it safe to enter to review the improvements in the alignment?
 - a. Yes
 - b. No
3. You have entered a fabric filter serving a cement kiln. The compartment's inlet and outlet dampers have been closed to isolate the compartment from the gas stream. After allowing the compartment to cool, is it safe to enter?
 - a. Yes
 - b. No
4. You are in a new electrostatic precipitator which has been installed downstream from an older unit which could not maintain compliance on a continuous basis. The boiler has been offline approximately three weeks to tie in the newer unit. A number of plant personnel are inside the new precipitator. Is it safe to enter this new unit?
 - a. Yes
 - b. No
5. Should agency inspectors enter air pollution control devices or ductwork?
 - a. Yes
(Choosing this answer automatically results in a failing grade for this self instructional course.)
 - b. No, under any circumstances

REVIEW QUESTIONS - ANSWERS:

1. A person from the plant's safety staff has just completed measurements of the scrubber internal gas temperature, oxygen concentration, hydrogen sulfide concentration, carbon monoxide concentration, and combustible gas concentration. All measurements indicate safe working conditions. Is it safe to enter?
 - a. Yes

Incorrect. The plant personnel often measure the conditions within several feet of the hatch. This is not representative of the pollutant and oxygen concentrations in the interior areas of the collector. Much more extensive measurement efforts are generally necessary to confirm that a device is safe for entry. Inspectors should not rely on the plant's confined entry permit system or procedures.
 - b. No

Correct. The problem discussed in answer "a" is only one of many reasons why internal entry is unsafe for agency inspectors.
2. There are approximately 20 people inside an electrostatic precipitator working on straightening warped collection plates. This is occurring during the early stages of a planned two week outage. Is it safe to enter to review the improvements in the alignment?
 - a. Yes

Incorrect. For example, the entire electrostatic precipitator could suddenly be filled with high temperature steam vented from another source in the plant. This would result in the deaths of most of the individuals inside the unit since it takes a reasonable amount of time to climb out of the small hatches usually provided.
 - b. No

Correct. The problem discussed in answer "a" is only one of many reasons why internal entry is unsafe for agency inspectors.

3. You have entered a fabric filter serving a cement kiln. The compartment's inlet and outlet dampers have been closed to isolate the compartment from the gas stream. After allowing the compartment cool is it safe to enter?

a. Yes

Incorrect. Most dampers leak and it is possible for fatal concentrations of carbon monoxide or fatal oxygen deficiencies to develop while inside the compartment.

b. No

Correct. The problem discussed in answer "a" is only one of many reasons why internal entry is unsafe for agency inspectors.

4. You are in a new electrostatic precipitator which has been installed downstream from an older unit which could not maintain compliance on a continuous basis. The boiler has been offline approximately three weeks to tie in the newer unit. A number of plant personnel are inside the new precipitator. Is it safe to enter this new unit?

a. Yes

Incorrect. If the personnel working on the first precipitator conducted an air load test, fatal concentrations of ozone would be generated. Due to natural stack draft, this material would be transported to the second precipitator and would immediately kill anyone inside the new unit. One of the reasons this problem can occur is that some plants have lock-out systems which address particular equipment units but do not consider the entire system.

b. No

Correct. The problem discussed in answer "a" is only one of many reasons why internal entry is unsafe for agency inspectors.

5. Should agency inspectors enter air pollution control devices or ductwork?

a. Yes

(Choosing this answer automatically results in a failing grade for this self instructional course.)

This is absolutely the incorrect answer.

b. No, under any circumstances

This is absolutely the correct answer.

5. SOP for Conducting and Reporting Air Source Inspections

Standard Operating Procedure (SOP) for Conducting and Reporting Air Source Inspections.

Section I - General Procedures Section

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Standard Operating General Procedures for Conducting and Reporting Air Source Inspections

Background

The Florida Department of Environmental Protection (FDEP), as part of its 1999 Air Planning 105 Workplan Grant Agreement with the United States Environmental Protection Agency (USEPA), is required to develop and maintain procedures for the Quality Assurance of Air Source Inspections in the State of Florida. To accomplish this task, the Division of Air Resource Management, Bureau of Air Regulation, Air Compliance Section developed the “Standard Operating Procedure (SOP) for Conducting and Reporting Air Source Inspections.” The objective of the SOP is to uniformly interface Tallahassee Headquarters and each FDEP District and State Approved Local Air Program Office in providing consistent, accountable and comprehensive statewide documentation for conducting and reporting Title V Major and Synthetic Minor facility

air compliance inspections in the State of Florida satisfying the state's commitment to the USEPA.

Standard Operating Procedure (SOP)

Air source compliance inspections require an in-depth look at a facility's processes, controls and procedures to ensure that the facility is maintaining and can demonstrate compliance consistent with the conditions of the air operating permit. The "Standard Operating Procedure (SOP) for Conducting and Reporting Air Source Inspections establishes the procedures, guidelines and requirements necessary for conducting thorough inspections, preparing quality reports and securing records necessary for inspection, reinspection, enforcement and the on-going monitoring and evaluation of facility compliance histories.

Standardization is composed of the following inspection-related components:

- 1) Standardized Inspection Procedures – defines the inspection process and the method and manner for preparation and conducting inspections
- 2) Standardized Inspection Recording - establishes field inspection guidelines for the determination of compliance recommendations
- 3) Standardized Inspection Reporting –defines the process for data based inspection information collection in order to communicate, store and retrieve inspection results in a consistent and reliable format

Standardization provides a uniform method for the interpretation and implementation of air compliance regulations and a uniform structure for increasing levels of environmental overview, thereby increasing inspection accountability and consistency. Inspections based on a standardized process help minimize negative impacts of inconsistent and ineffective reporting and maximize efforts to positively impact and regulate industry in a fair and consistent manner.

The Electronic Access System for Inspection Information Retrieval (EASIIR)

Compliance inspectors with the Department of Environmental Protection and approved Local Air Programs are responsible for inspecting air facilities to determine if they are in compliance with the regulations pertaining to the state's air compliance standards. This inspection task is supported by information contained in the Air Permit, information data contained in the Air Resource Management System (ARMS) Oracle Database, and the results of previous inspection histories and other pertinent reference information.

The task of assembling, organizing, conducting and reporting an inspection can be a complicated, detailed and time consuming process. Consistent with the development of the standardized operating procedures was a departmental initiative for integrated compliance management and the desire to provide a support mechanism for inspectors to make their duties less complicated, reduce inspection-related paperwork and to eliminate the time consuming manual recording and the loading of inspection information back into the inspection database. The result was the development of the “Electronic Access System for Inspection Information Retrieval (EASIIR).”

The Electronic Access System for Inspection Information Retrieval (EASIIR) was developed to assist the inspector by reducing the process for manual assemblage of information necessary to properly prepare for an inspection while providing a method for automatic inspection reporting. EASIIR takes information contained in the ARMS database, the permit, inspection histories and related reference information and transfers this information to an electronic handheld field device that can be easily carried and used by the inspector in the field. The inspector then utilizes information contained by the device in the form of Electronic Compliance Inspection Templates to determine those field conditions necessary for inspection recording and inspection reporting. Inspection observations and results are captured electronically and uniformly within the electronic templates. Once the inspection information is field captured, it can then be electronically transferred to an application residing on an office server where the inspector can revise the report, retain the completed electronic copy of the inspection compliance recommendations and then electronically update inspection results into ARMS. The record of the inspection is then permanently accessible in electronic format for use in reporting the results of the inspection and to compile an inspection history for the facility.

The objectives of EASIIR are:

- Provide permit related information efficiently and consistently for each facility to be inspected
- Provide standardized procedures to ensure uniform and consistent inspections
- Make it easier for the inspector to determine if a facility is properly demonstrating compliance
- Reduce the chance of inaccurate information due to data entry mistakes, inability to decipher notes or failure to observe all processes while in the field
- Provide for the transfer of data electronically and the avoidance of data re-entry
- Provide for the future expansion of the process to include digital imaging, scanning of printed documents and records and the wireless transmission of instantaneous inspection reporting
- Provide for the retention of the inspection information for future use in an electronic format

Inspection and Reporting Frequency

Inspection Year

An inspection year begins October 1 and ends September 30.

Inspection Schedule

Full Compliance Evaluation Schedule

It is the responsibility of each District or Local Air Program Office to establish its respective program's Full Compliance Evaluation Schedule as defined in EPA's Compliance Monitoring Strategy.

The Full Compliance Evaluation Schedule for the State is submitted to EPA Region 4 and consists of all Title V and Synthetic Non-Title V facilities scheduled to receive a full compliance evaluation during the federal fiscal year.

The District or Local Air Program Office should plan to perform Full Compliance Evaluations for a minimum of 50% of the Title V facilities and 20% of the Synthetic Non-Title V facilities during each federal fiscal year.

Complaints

A complaint is a citizen, individual, business, community or concerned group, organization or other entity's referral to the Department regarding an existing atmospheric condition that may or may not be associated with the operation, nuisance or compliance of a particular aspect or aspects of a facility's operation(s). The following procedure is specific to complaints associated with facilities.

A complaint activity is a partial review of a facility conducted to resolve specific matters related to the complaint only. A complaint activity, as stated, relates only to the complaint and/or matters discovered as a result of investigating the complaint and may or may not necessarily require the physical presence of an inspector at the facility. For example, a complaint activity may be resolved simply by telephone or electronic mail. If a complaint activity requires the on-site presence of the inspector due to the inability to resolve conditions contained in the complaint, the severity of the complaint, the specific conditions anticipated to be found at the facility, the past history of the facility or the desire to receive credit toward an annual inspection of the facility, the visit should be unannounced to the facility. If the event occurs announced to the facility, any completed report should adequately contain an explanation of the greater benefit.

At this time, EASIIR is not designed to accommodate complaint activities. Complaint activities (CI activity code) must be manually entered into ARMS per the Compliance Assurance Guidance Document. However, if a compliance activity is conducted at the

time of a compliance inspection, EASIIR should be used for the compliance inspection portion only.

Biological Waste Incinerator Inspections

Biological waste incinerators are required to be inspected by the DARM Guidance Memo-SS/CE-02 on a quarterly basis. Quarterly inspections on biological waste incinerators are to be included in the inspection schedule but are not part of the 105 Grant commitment.

Inspection

An inspection is an on-site Level II or above inspection and record review conducted between October 1 and September 30 at a designated air source. It must be reported in accordance with the Electronic Access System for Inspection Information Retrieval (EASIIR).

A facility is to be selected for inspection by means of the Inspection Schedule.

An inspection may be announced or unannounced to the facility.

Inspectors shall prepare for an inspection prior to facility site-visit by reviewing the permitted conditions, the facility compliance inspection history, the Annual Operating Report and any other information relevant to properly conduct an inspection, including procedures and methods available to the inspector by means of the Electronic Access System for Inspection Information Retrieval (EASIIR). This includes the downloading of information from the ARMS System per procedure prescribed by EASIIR and prepare and organize the inspection process on the EASIIR application templates.

An inspection should address, at a minimum, all facility information available and relevant to the inspection from the period of the previously completed inspection to the present inspection.

An initial introductory interview consisting of proper introductions, an explanation of the purpose for the inspection and a brief description of the intended inspection process should be conducted with the facility contact person or their representative(s). A discussion of the permitted requirements, overview of the general conditions of the facility and a review of process flow diagrams of the facility's operations, if necessary, should be made prior to beginning the physical inspection of the facility.

A physical inspection of the facility is to be conducted as part of the inspection process. The results of the inspection shall be documented and prescribed by the Electronic Access System for Inspection Information Retrieval (EASIIR).

Personal notes, copies of logs, records, reports, strip charts, CEM records (calibrations, emissions, etc.), dates, times, usage, volumes, weights, contents, number of units, purchases, operation and maintenance logs and any other data which are maintained by the facility or are obtained during the inspection to substantiate a compliance recommendation should be attained and included into the electronic record of the inspection or, where not feasible, the inspection record should make note of the file and location where such items are kept.

Once the introductory interview and physical inspection has been completed, an exit interview shall be conducted consisting of an overview of the inspection and collection of any remaining data, records or logs.

For facilities that are seasonal or temporarily shut down, the inspection should be scheduled when the facility is in operation.

If a facility is permanently shut down or on extended standby, either a letter from the company stating that fact or a brief report should be made explaining the status of the facility is necessary.

An on-site inspection to verify the facility's status (shutdown or extended standby) may be

Appropriate if the inspecting authority deems it necessary.

Completed Inspections

Completion of the inspection report is strictly an office function. Inspections are not finalized until all established program procedures including peer, supervisory and enforcement review of proposed inspection compliance recommendations have been satisfied and compliance determinations finalized.

An annual inspection for an individual facility is complete if the following criteria are met:

- 1) All active emissions units have been reviewed and a compliance determination finalized by appropriate supervisory and enforcement personnel for the current inspection year. An inspector makes compliance recommendations from facts gathered in the field. A compliance determination is largely a function of supervisory and enforcement review.
- 2) All return visits are completed. This includes all return visits to observe processes that were not in operation during the initial or subsequent visits when the inspector deems that such return visits or observations are needed.
- 3) All relevant records have been properly reviewed.

- 4) A final upload of the EASIIR electronic templates have been sent to ARMS.

The final upload of the inspection results listing a final compliance determination for each emissions unit inspected is to be electronically uploaded, as specified in EASIIR, into the ARMS database no later than the 10th day of the month following the inspection.

The final upload of inspection results to ARMS shall not commence until any additional information is identified, follow-up inspections are completed, and supervisory or enforcement discussions are concluded.

The Inspector of Record is the person responsible for completing the inspection and submitting the final upload of inspection information to ARMS. The designation of the Inspector of Record serves as the electronic signature for the inspection and identifies the individual verifying the content and compliance determination. This allows the information uploaded to serve as the official record of inspection. The Inspector of Record is usually the person assigned to conduct the initial annual inspection visit. If an inspection cannot be completed by the originally assigned Inspector of Record, an alternate inspector should be assigned the responsibility of Inspector of Record and a note made in the inspection record as to the reassignment of this responsibility in Section IV: Comments.

Completed inspection reports are to be kept on file and serve as an inspection history for the facility.

Inspection Compliance Determination Guidelines

Volatile Organic Compound (VOC) Source Compliance Determination Guidelines

Permit conditions with VOC material usage limits are usually expressed in terms of total VOC-containing materials by volume or weight (or mass) used per some unit of time or the total VOC content per unit of volume or weight (or mass).

Examples:

- 1) Gallons per year, gallons per month, gallons per week, gallons per day,
- 2) Tons per year (TPY),
- 3) Pounds of VOC per gallon of coating applied,

- 4) Pounds of VOC per gallon of coating as applied per square foot of surface coated,
- 5) Pounds of VOC less water and exempt solvent per gallon of solids applied,
and
- 6) Amounts of organic solvents.

The specific condition noted for an inspection determination should be defined in the Title V Permit, contained in the ARMS database and if properly entered into ARMS, expressed in the appropriate electronic template. This material usage limit must be compared to the permit condition when determining compliance.

VOC Compliance Time Interval

Compliance determinations of permitted VOC material volumetric usage limits for any source should be by comparison of the time interval given by the respective permit condition.

Examples:

- 1) If a usage limit is stated in terms of gallons per month, then the number of gallons used during the entire calendar month will be used to determine compliance, with each month standing alone.
- 2) If a usage limit is stated in terms of gallons per 12-month period, then the number of gallons used during the entire yearly period will be used to determine compliance, with each month comprising a segment of a rolling total limit.

VOC Compliance Logs

Records or logs may be required by specific conditions contained in the source's permit. Facility material usage logs, hours of source operation logs and MSDS VOC data may be used to determine compliance. Respective sources without such logs, inadequate logs or illegible logs will be found in non-compliance. The respective permit condition is to be noted and appropriate action taken.

Examples for determining compliance:

VOC Compliance - Case 1

If a log-keeping requirement for VOC material usage or operating hours is specified by permit and the logs do not provide the information required to

demonstrate compliance, the source shall be found to be in non-compliance.

VOC Compliance - Case 2

Permitted VOC sources that are found to exceed the usage or operating limitations of the specific permit condition shall be found to be in non-compliance.

VOC Compliance - Case 3

If a log-keeping requirement for VOC material usage or operating hours is specified by permit condition and no such log is kept, the source shall be found to be in non-compliance.

VOC Non-Compliance Reporting

If non-compliance is discovered concerning a specific point source log, those portions of the log that document the non-compliance are to be included as part of the inspection report.

Operating Capacity Limit Compliance Determination Guidelines

Permit conditions with Operating Capacity Limits are used when the potential emissions of an emissions unit are directly related to its operating capacity. These may be defined as maximum heat input rates, maximum incineration rates, maximum process rates, maximum throughput rates or maximum production rates.

Although other terms may be used, typically the above are expressed as:

Maximum Heat Input Rate - millions of BTUs per hour

Maximum Incineration Rate - pounds per hour and tons per day

Maximum Process or Throughput Rate - the maximum process rate of which the unit is capable

Maximum Production Rate - the maximum production rate of which the source is capable

In addition, a Maximum Emissions Unit Operating Schedule may be contained as a condition of the permit and may be expressed in terms of maximum hours per day, days per week, weeks per year and/or hours per year, etc.

For Electric Utilities, the heat input limitations have been placed in each permit to identify the capacity of each unit for the purposes of confirming that emissions testing is conducted within 90 to 100 percent of the unit's rated capacity (or to limit future

operation to 110 percent of the test load), to establish appropriate emissions limits and to aid in determining future rule applicability. Regular record keeping is not required for heat input. Instead, the owner or operator is expected to determine heat input whenever emissions testing is required, to demonstrate at what percentage of the rated capacity the unit was tested. Rule 62-297.310(5), F.A.C., included in the permit, requires measurement of process variables for emissions tests. Such heat input determination may be based on measurements of fuel consumption by various methods, including but not limited to: fuel flow metering, tank drop measurements and the heat value of the fuel (determined by the fuel vendor or the owner/operator to calculate average hourly heat input during the test).

Operating Capacity Limit Non-Compliance Reporting - If non-compliance is discovered concerning a specific limit, documentation is to be included as part of the inspection report.

Visible Emissions (VE) Compliance Determination Guidelines

Visible Emissions Minimum Requirements

During an on-site inspection, the inspector will conduct and document a visible emissions test for any emissions unit or source that appears to be in excess of the permitted opacity standard or limit. The observance needs to be documented as part of the completed inspection report.

If a source is not operating, that fact needs to be noted and a decision made as to whether to return when it is operating.

CEM Compliance Determination Guidelines

Appendix F to Part 60- Quality Assurance Procedures is the reference for CEM compliance determinations.

The following are of interest for the inspection record:

- 1) The last CEM calibration
- 2) The expiration date of the calibration gases

Other items that may be of interest, depending on applicability, are:

- 1) CEMs emissions, production rate(s), heat input, etc.
- 2) Do CEMs meet all applicable and QA plan requirements?

- 3) Are any CEM data missing?
- 4) Were spare parts for CEMs kept?
- 5) Were all applicable CGAs, RATA and opacity audits conducted and reported?
- 6) Are all original strip chart recordings for continuous monitoring instrumentation and copies of all reports required by the permit available and in order?

Content Compliance Limit Determination Guidelines

As Applicable:

- 1) Is there a fuel oil sulfur content compliance limit or a fuel analysis compliance demonstration condition?

6. CATSOP

CATSOP
(Compliance Advisory Team For Standard Operating Procedures)

Dennis Tober & Jim Pennington
DEP State Coordinators
Tallahassee

Members of the Team:

- *Debbie Telemeco Anders, Sarasota County*
- *Raisa Naginsky, S.E. District*
- *Wanda Parker-Garvin, DEP Central District*
- *Ray Gordon, Dade County*
- *John Kasper, Orange County*
- *Ajaya Satyal, South District*
- *Sheila Schneider, DEP Tallahassee*
- *Bill Schroeder, DEP S.W. District*
- *Paul Shelton, Broward County*
- *Elizabeth F. Susky, Broward County*
- *Wayne Tutt, Duval County*

Photography Management Standard Operating Procedure (SOP)

Objective: Photographic evidence can be a vital part of establishing an enforcement case. This SOP provides guidance to compliance inspectors on equipment, general photography documentation procedures, and archiving photographic records. The SOP is intended to provide a basic set of procedures that offer statewide consistency on obtaining and maintaining evidence. However, the following procedures will not limit the admissibility or use of photographic evidence in any litigation proceeding. For details on inspection protocol and procedures, see also the SOP for Conducting and Reporting Air Source Inspections.

Contents

- I. Equipment
- II. Staff Protocol On-Site
- III. Staff Protocol Off-Site (Data Storage)

I. Equipment

A. Camera

- i. It is necessary for all compliance staff to have access to a camera. Though a 35mm film camera is still acceptable, a digital camera is the prevalent technology and is recommended for use. The camera should be durable enough and relatively simple to use in harsh environments.
- ii. Ideally, the camera should be capable of taking flash photos, wide-angle photos, macro-photos and telephotos.
- iii. Inspectors should carry extra batteries and memory cards/sticks (or film).

B. Storage media

- i. It is necessary for all compliance staff to have access to a password-protected computer in order to store digital photos.

- ii. It is necessary for the computer to have software that will facilitate the saving and viewing of digital photos. [If a film camera is used, the film should be developed onto a photo cd (compact disc) or other comparable digital media in addition to, or instead of, having of prints made.]

C. Photo Log

A paper or electronic record should be maintained to log photos taken in the field.

II. Staff Protocol On-Site

- A. Staff should take an adequate number of photos to illustrate the points of concern at a facility, in particular, any potential violations.

To the extent possible, these photos should show fixed points or landmarks that can be used to pinpoint where a potential violation occurred. Placing an item in the photograph can convey size adequately (e.g., a person, pencil, or paper clip). Staff should take a close-up shot, mid-range shot, and wide angle shot of the subject when it is difficult to convey dimensions of a particular emission or facility component. Photos should accurately reflect what the inspector is seeing.

- B. A photo log should be created, with entries made at the time that a photograph is taken, identifying to the extent possible:
 - i. the date and time the picture is taken (Note: if possible, the camera should be set up to have the correct time and date stamped on the face of the photo. However, the photograph should be composed in such a way as to avoid having this stamp cover any object of importance in the shot.)
 - ii. number of each photograph (to correspond with site map)
 - iii. name of facility

- iv. description of object/subject of photo (emissions unit, source, potential violation, etc.)
- v. the type of camera (digital or film camera and, if film, film type; phone camera; etc.)
- vi. picture/frame number (if a site map was obtained, also place this number on the map where the subject/object of the photo is located.)
- vii. description of the location of the subject/object of the photo
- viii. description of where the photographer was located relative to the location of the subject/object
- ix. the name, title, and company of any other individual present when the photos were taken.

C. An audio recording involves the electronic communications privacy act so, if a digital camera is used in "video" or other mode which includes sound, let any recorded party know or consent to the recording prior to beginning the recording.

III. Staff Protocol Off-Site (Data Storage)

- A. Once a compliance inspection is completed, staff should treat all photographs as evidence and as part of the inspection report. An effort should be made to complete the download of any photo cd, or memory disc or stick, to the inspector's password-protected computer (or develop the film) and properly label the photographs as soon as possible. Photographs should be filed with the inspection report for the facility in a manner consistent with office policy. Photographs that have been requested and agreed to be filed as confidential should be labeled and filed as such.
- B. Original photographs should not be altered and should be stored in their original format (e.g., .jpg, etc.) If the inspector plans to edit a photo to better delineate what was observed, then a second photo must be created, saved and identified as such. If any techniques are applied for enhancement it should be noted in the description of the copied photograph.
- C. Once the original photographs have been saved to a password-protected computer, the photographs can additionally be stored in a general folder for other staff to utilize. However, if an enforcement case has been initiated, it is preferable to do this after the enforcement case is closed in order to maintain confidentiality by limiting access to the photos to the attorneys, management, and administrative staff.
- D. The photo log should be stored in the same file as the photos.

Chapter 4

Chapter 4

Air Pollution Sources



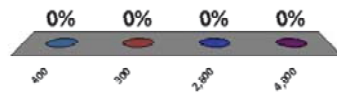
Florida Air Inspector Reference (FAIR)
Training Program

Overview

- > Introduction
- > Locations throughout Florida
- > Typical compliance issues
- > Major sources with Title V permits
- > Minor sources with non-Title V permits
- > Minor sources with air general permit registrations

How many Title V regulated air pollution sources are there in Florida?

- ✓ A. 400
- B. 900
- C. 2,600
- D. 4,000



As an Inspector

- > It is important to understand the industrial process being regulated, its emissions sources, compliance points, and applicable regulatory requirements.
- > There is a wide variety of industrial source types and facility sizes throughout Florida.
- > There are approximately 4,000 regulated air pollution sources in Florida: 400 with Title V permits; 1,000 with minor permits; and 2,600 with air general permit registrations.

See Chapter 4 Appendix for number of facilities by industry type, office, and regulatory size.

Florida Regulated Sources

Title V Major Sources

For the approximately 400 Title V major sources, there are currently 34 different industrial source types including one for "other".

The following five categories represent more than half of the number of Title V sources in Florida:

- Power Plants
- Municipal Waste Combustors
- Fiberglass Products Manufacturing
- Surface Coating Operations
- Municipal Solid Waste Landfills

In this presentation, "NESHAP" refers to regulations under 40 CFR Part 61 and "MACT" refers to regulations under 40 CFR Part 63.

Coal-fired Power Plants Quick Facts

- > Source of Emissions:
 - ❖ Products of Combustion (PM₁₀, PM_{2.5}, VOC, NO_x, SO₂, Pb, CO, CO₂)
 - ♦ PM including metal HAPs, including Hg
 - ♦ VOCs including organic HAPs
 - ♦ Acid HAPs are also emitted
 - ❖ Fuel Handling and Storage
 - ♦ PM from coal and ash movement and storage piles
 - ♦ PM from fly ash handling
- > Types of Controls:
 - ❖ PM - Baghouse, ESP, Scrubber
 - ❖ SO₂ - Scrubber (both wet and dry)
 - ❖ NO_x - SCR, SNCR
- > Source Category:
 - ❖ Title V - Major
 - ❖ PSD - Major

<http://www.epa.gov/ttn/chief/ap42/ch01/final/c01s01.pdf>

Coal Facts

- > Combination of Organic and Inorganic Matter
- > Types:
 - ❖ Anthracite
 - ❖ Bituminous Coal - Largest Group
 - ♦ Lower fixed carbon
 - ♦ Higher volatile matter
 - ❖ Subbituminous Coal
 - ♦ Higher moisture and volatile matter
 - ♦ Lower sulfur content

Coal is a complex combination of organic matter and inorganic mineral matter formed over eons from successive layers of fallen vegetation. Coals are classified by rank according to their progressive alteration in the natural metamorphosis from lignite to anthracite. Coal rank depends on the volatile matter, fixed carbon, inherent moisture, and oxygen, although no single parameter defines a rank. Typically, coal rank increases as the amount of fixed carbon increases and the amount of volatile matter and moisture decreases.

Bituminous coals are by far the largest group and are characterized as having lower fixed carbon and higher volatile matter than anthracite. The key distinguishing characteristics of bituminous coal are its relative volatile matter and sulfur content as well as its slagging and agglomerating characteristics. Subbituminous coals have higher moisture and volatile matter and lower sulfur content than bituminous coals and may be used as an alternative fuel in some boilers originally designed to burn bituminous coals. Generally, bituminous coals have heating values of 10,500 to 14,000 Btu/lb on a wet, mineral-matter-free basis. As mined, the heating values of typical U.S. bituminous coals range from 10,720 to 14,730 Btu/lb. The heating values of subbituminous coals range from 8,300 to 11,500 Btu/lb on a wet, mineral-matter-free basis, and from 9,420 to 10,130 Btu/lb on an as-mined basis.

Coal-Fired Boilers

> Classified by:

❖ Types

- ❖ Heat transfer method
- ❖ Arrangement of heat transfer surfaces
- ❖ Firing configuration

❖ Fuel

❖ Method of Construction

> Most common heat transfer method for coal-fired boilers in the watertube method.

Coal-fired boilers can be classified by type, fuel, and method of construction. Boiler types are identified by the heat transfer method (watertube, firetube, or cast iron), the arrangement of the heat transfer surfaces (horizontal or vertical, straight or bent tube), and the firing configuration (suspension, stoker, or fluidized bed). The most common heat transfer method for coal-fired boilers is the watertube method in which the hot combustion gases contact the outside of the heat transfer tubes, while the boiler water and steam are contained within the tubes. Coal-fired watertube boilers include pulverized coal, cyclone, stoker, fluidized bed, and handfed units.

Coal-Fired Boilers

> Fluidized Bed Combustor (FBC)

- ❖ Coal introduced to a bed of sorbent or inert material
- ❖ Two major categories
 - ❖ Atmospheric
 - ❖ Pressurized
- ❖ Atmospheric FBCs are more advanced than pressurized FBCs

In a fluidized bed combustor (FBC), the coal is introduced to a bed of either sorbent or inert material (usually sand) which is fluidized by an upward flow of air.

FBCs, while not constituting a significant percentage of the total boiler population, have nonetheless gained popularity in the last decade. There are two major categories of FBC systems:

- atmospheric, operating at or near ambient pressures
- pressurized, operating from 4 to 30 atmospheres

At this time, atmospheric FBCs are more advanced (or commercialized) than pressurized FBCs.

Coal-Fired Boilers

> Pulverized Coal Fired Boilers

- ❖ Fuel pulverized
- ❖ Pneumatically injected through the burners into furnace
- ❖ Two firing types
 - ♦ Wall
 - ♦ Tangential

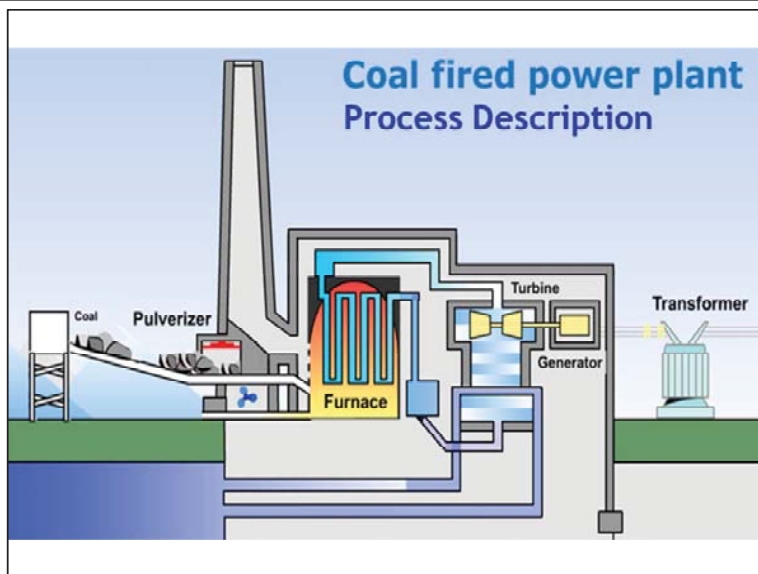
In pulverized coal-fired (PC-fired) boilers, the fuel is pulverized to the consistency of talcum powder and pneumatically injected through the burners into the furnace. Combustion in PC-fired units takes place almost entirely while the coal is suspended in the furnace volume. PC-fired boilers are classified as either dry bottom or wet bottom, depending on whether the ash is removed in a solid or molten state. In dry bottom furnaces, coals with high fusion temperatures are burned, resulting in dry ash. In wet bottom furnaces, coals with low fusion temperatures are used, resulting in molten ash or slag. Depending upon the type and location of the burners and the direction of coal injection into the furnace, PC-fired boilers can also be classified into two different firing types, including wall, and tangential. Wall-fired boilers can be either single wall-fired, with burners on only one wall of the furnace firing horizontally, or opposed wall-fired, with burners mounted on two opposing walls. Tangential (or corner-fired) boilers have burners mounted in the corners of the furnace. The fuel and air are injected tangent to an imaginary circle in the plane of the boilers. Cyclone furnaces are often categorized as PC-fired systems even though the coal is crushed to a maximum size of about 4-mesh.

Coal-Fired Boilers

> Stoker Fired Systems

- ❖ Underfeed stokers
 - ❖ Overfeed stokers
 - ❖ Spreader stokers
- > Most common heat transfer method for coal-fired boilers in the watertube method

Stoker-fired systems account for the vast majority of coal-fired watertube boilers for industrial, commercial, and institutional applications. Most packaged stoker units designed for coal firing are small and can be divided into three groups: underfeed stokers, overfeed stokers, and spreader stokers. Underfeed stokers are generally either the horizontal-feed, side-ash-discharge type or the gravity-feed, rear-ash-discharge type. An overfeed stoker uses a moving grate assembly in which coal is fed from a hopper onto a continuous grate which conveys the fuel into the furnace. In a spreader stoker, mechanical or pneumatic feeders distribute coal uniformly over the surface of a moving grate. The injection of the fuel into the furnace and onto the grate combines suspension burning with a thin, fast-burning fuel bed. The amount of fuel burned in suspension depends primarily on fuel size and composition, and air flow velocity.



Small, coal-fired boilers and furnaces are found in industrial, commercial, institutional, or residential applications and are sometimes capable of being hand-fired. The most common types of firetube boilers used with coal are the horizontal return tubular (HRT), Scotch, vertical, and the firebox. Cast iron boilers are also sometimes available as coal-fired units in a handfed configuration. The HRT boilers are generally fired with gas or oil instead of coal. The boiler and furnace are contained in the same shell in a Scotch or shell boiler. Vertical firetube boilers are typically small singlepass units in which the firetubes come straight up from the water-cooled combustion chamber located at the bottom of the unit. A firebox boiler is constructed with an internal steel-encased, water-jacketed firebox. Firebox firetube boilers are also referred to as locomotive, short firebox, and compact firebox boilers and employ mechanical stokers or are hand-fired.

Examples of coal-fired power plants in Florida: Big Bend, Cedar Bay, Seminole, Stanton Energy Center, Indiantown Cogen, etc.

Coal-fired Power Plants Regulations to Consider

- > NSPS:
 - ❖ Subparts D, Da, Db, Dc (Boilers)
 - ❖ Subparts OOO & Y (Coal Prep and Delivery)
- > NESHAPs:
 - ❖ None
- > MACT:
 - ❖ Subpart DDDDD (Boilers less than 250 MMBtu/hr)
 - ❖ Subpart UUUUU (Boilers 250 MMBtu/hr and greater)
- > Other:
 - ❖ Clean Air Interstate Rule (CAIR)
 - ❖ Acid Rain Rule (federal allowance trading program for NO_x and SO₂)
 - ❖ Rule 62-296.405 and 62-296.406, F.A.C. (fossil fuel steam generators)
 - ❖ Rule 62-296.702, F.A.C. (PM RACT in non-attainment /maintenance areas - fossil fuel generators)

NSPS Subpart D - Standards of Performance for Fossil-Fuel-Fired Steam Generators.

NSPS Subpart Da—Standards of Performance for Electric Utility Steam Generating Units.

NSPS Subpart Db—Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units.

NSPS Subpart Dc—Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units.

NSPS Subpart OOO—Standards of Performance for Nonmetallic Mineral Processing Plants.

NSPS Subpart Y—Standards of Performance for Coal Preparation and Processing Plants.

MACT Subpart DDDDD—National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters.

MACT Subpart UUUUU—National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units.

CAIR = Ozone and Particulates for Florida.

Acid Rain – 40 CFR Part 75.

FL Coal Plants

Coal Plants

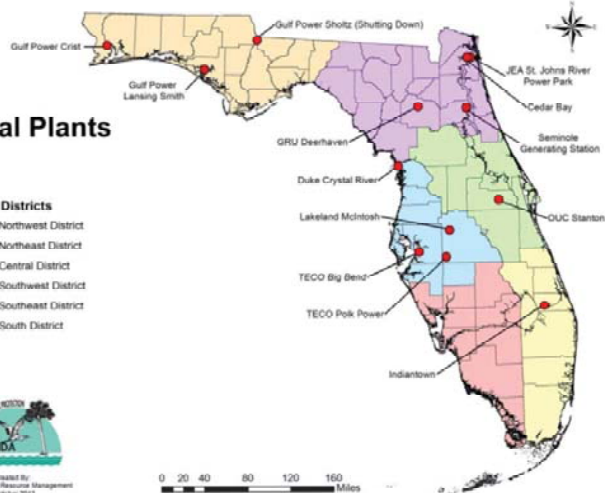
FDEP Districts

- Northwest District
- Northeast District
- Central District
- Southwest District
- Southeast District
- South District



Created by:
Division of Air Resource Management
October 2013

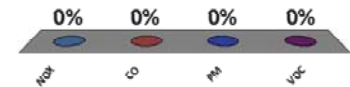
0 20 40 80 120 160 Miles



Map also provided in Chapter 4 Appendix.

What emissions are controlled by an SCR?

- ✓ A. NO_x
- B. CO
- C. PM
- D. VOC



Oil-fired Power Plants Quick Facts

- > Source of Emissions:
 - ❖ Products of Combustion (PM₁₀, PM_{2.5}, VOC, NO_x, SO₂, Pb, CO, CO₂)
 - PM including metal HAPs
 - VOCs including organic HAPs
 - ❖ Fuel Storage
 - VOCs from oil storage including organic HAPs
- > Types of Controls:
 - ❖ SO₂ - Scrubber (both wet and dry)
 - ❖ NO_x - SCR, SNCR
- > Source Category:
 - ❖ Title V - Major
 - ❖ PSD - Major

<http://www.epa.gov/ttn/chief/ap42/ch01/final/c01s03.pdf>

Oil-fired Power Plants Quick Facts - Burned Fuels

- > Distillate oils: more volatile and less viscous than residual oils
 - ❖ Grade numbers 1 and 2
 - ❖ Negligible nitrogen and ash contents and usually contain less than 0.3 percent sulfur (by weight)
- > Residual oils: more viscous and less volatile than distillate oils
 - ❖ Grade numbers 5 and 6 (Bunker C)
 - ❖ May need to be heated for ease of handling and to facilitate proper atomization
 - ❖ Contain significant quantities of ash, nitrogen, and sulfur
- > Grade No. 4: either distillate oil or a mixture of distillate and residual oils

- Distillate oils: used mainly in domestic and small commercial applications, and include kerosene and diesel fuels.
- Residual oils: used mainly in utility, industrial, and large commercial applications.
 - Residual oils are produced from the residue remaining after the lighter fractions (gasoline, kerosene, and distillate oils) have been removed from the crude oil.

Oil-fired Power Plants

Quick Facts - Boiler Configurations

- > Boilers are classified according to:
 - ❖ design and orientation of heat transfer surfaces
 - ❖ burner configuration
 - ❖ size
- > These factors can strongly influence emissions as well as the potential for controlling emissions.
- > Major boiler configurations for fuel oil-fired combustors are:
 - ❖ Watertube
 - ❖ Firetube
 - ❖ cast iron
 - ❖ tubeless design

Oil-fired Power Plants

Quick Facts - Watertube Boilers

- > Applications: ranging from supplying large amounts of process steam to providing space heat for industrial facilities.
- > Combustion heat: transferred to water flowing through tubes which line the furnace walls and boiler passes.
- > The tube surfaces in the furnace (which houses the burner flame) absorb heat primarily by radiation from the flames.
- > The tube surfaces in the boiler passes (adjacent to the primary furnace) absorb heat primarily by convective heat transfer.

Oil-fired Power Plants

Quick Facts - Firetube Boilers

- > Applications: primarily for heating systems, industrial process steam generators, and portable power boilers.
- > Combustion heat: hot combustion gases flow through the tubes while the water being heated circulates outside of the tubes.
- > Firetube boilers are typically small and are used primarily where boiler loads are relatively constant.
- > Mostly sold as packaged units because of their relatively small size.

At high pressures and when subjected to large variations in steam demand, firetube units are more susceptible to structural failure than watertube boilers.

This is because the high-pressure steam in firetube units is contained by the boiler walls rather than by multiple small-diameter watertubes, which are inherently stronger.

Oil-fired Power Plants

Quick Facts - Cast Iron Boilers

- > Applications: used primarily in the residential and commercial sectors.
- > Combustion heat: combustion gases rise through a vertical heat exchanger and out through an exhaust duct. Water in the heat exchanger tubes is heated as it moves upward through the tubes.
- > Cast iron boilers produce low pressure steam or hot water, and generally burn oil or natural gas.

Oil-fired Power Plants Process Description

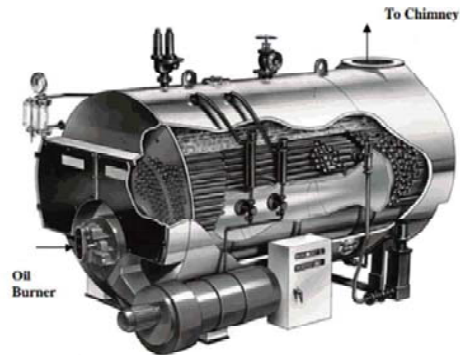


Figure 4. A typical 3 Pass, Oil fired packaged boiler
(BIB Cochran, 2003)

Another type of heat transfer configuration used on smaller boilers is the tubeless design. This design incorporates nested pressure vessels with water in between the shells. Combustion gases are fired into the inner pressure vessel and are then sometimes recirculated outside the second vessel.

Oil-fired power plants owned by FPL, JEA, Gulf Power, Duke Energy, etc.

Oil-fired Power Plants Regulations to Consider

- > NSPS:
 - ❖ Subparts D, Da, Db, Dc (Boilers)
 - ❖ Subparts K, Ka, Kb (Oil Storage)
- > NESHAPs:
 - ❖ None

NSPS Subpart D - Standards of Performance for Fossil-Fuel-Fired Steam Generators.

NSPS Subpart Da—Standards of Performance for Electric Utility Steam Generating Units.

NSPS Subpart Db—Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units.

NSPS Subpart Dc—Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units.

NSPS Subpart K—Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978.

NSPS Subpart Ka—Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984.

NSPS Subpart Kb—Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984.

Oil-fired Power Plants Regulations to Consider

- > MACT:
 - ❖ Subpart DDDDD (Boilers less than 250 MMBtu/hr)
 - ❖ Subpart UUUUU (Boilers 250 MMBtu/hr and greater)
- > Other:
 - ❖ Clean Air Interstate Rule (CAIR)
 - ❖ Acid Rain Rule (federal allowance trading program for NO_x and SO₂)
 - ❖ Rule 62-296.405 and 62-296.406, F.A.C. (fossil fuel steam generators)
 - ❖ Rule 62-296.702, F.A.C. (PM RACT in non-attainment /maintenance areas - fossil fuel generators)

MACT Subpart DDDDD—National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters.

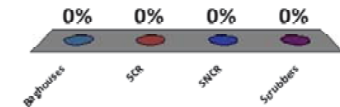
MACT Subpart UUUUU—National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units.

CAIR = Ozone and Particulates for Florida.

Acid Rain – 40 CFR Part 75.

Which of the following PM control devices is commonly used at coal-fired power plants but not oil-fired power plants?

- ✓ A. Baghouses
- B. SCR
- C. SNCR
- D. Scrubbers



Combustion Turbine Power Plants Quick Facts

- > **Source of Emissions:**
 - ❖ Products of Combustion (PM₁₀, PM_{2.5}, VOC, NO_x, SO₂, Pb, CO, CO₂)
 - VOCs including organic HAPs
 - ❖ Fuel Storage
 - VOCs from oil storage including organic HAPs
- > **Types of Controls:**
 - ❖ NO_x - SCR, SNCR
 - ❖ CO & VOC - Oxidation Catalyst
- > **Source Category:**
 - ❖ Title V - Major
 - ❖ PSD - Major (Base-load Plants), Minor (Some Peaking Plants)

<http://www.epa.gov/ttn/chief/ap42/ch03/final/c03s01.pdf>

Combustion Turbine Power Plants Quick Facts

- > A gas turbine, also called “combustion turbine”, is an internal combustion engine that operates with rotary rather than reciprocating motion.
- > Applications: gas and oil industry, emergency power generation facilities, independent electric power producers (IPP), electric utilities, and other industrial applications.
- > Size: power outputs range in size from 220 kilowatts (kW) to over 200,000 kW, with an average size of 30,000 kW.
- > Fuels: The primary fuels used in gas turbines are natural gas and distillate (No. 2) fuel oil.

The petroleum industry typically uses simple cycle gas turbines with a size range from 220 kW to 200,000 kW. The gas turbine is used to provide shaft horsepower for oil and gas production and transmission.

Emergency power generation sites also utilize simple cycle gas turbines. Here the gas turbine is used to provide backup or emergency power to critical networks or equipment. Usually, gas turbines under 3,730 kW (5,000 hp) are used at emergency power generation sites.

Independent electrical power producers generate electricity for resale to larger electric utilities. Simple, regenerative, or combined cycle gas turbines are used at IPP; however, most installations use combined cycle gas turbines. The gas turbines used at IPP can range from 746 kW to over 74,600 kW (or 74 MW).

The larger electric utilities use gas turbines mostly as peaking units for meeting power demand peaks imposed by large commercial and industrial users on a daily or seasonal basis. Simple cycle gas turbines ranging from 14,900 kW to over 149,000 kW (or 149 MW) are used at these installations.

Other industrial applications for gas turbines include pulp and paper, chemical, and food processing.

Combustion Turbine Power Plants Quick Facts - Combustion Process

> Diffusion flame combustion:

- ❖ the fuel/air mixing and combustion take place simultaneously in the primary combustion zone
- ❖ this generates regions of near-stoichiometric fuel/air mixtures where the temperatures are very high

The combustion process in a gas turbine can be classified as diffusion flame combustion, or lean-premix staged combustion.

Combustion Turbine Power Plants Quick Facts - Combustion Process

> Lean-Premix Combustors:

- ❖ Fuel and air are thoroughly mixed in an initial stage resulting in a uniform, lean, unburned fuel/air mixture which is delivered to a secondary stage where the combustion reaction takes place.
- ❖ Manufacturers use different types of fuel/air staging, including fuel staging, air staging, or both; however, the same staged, lean-premix principle is applied.
- ❖ Gas turbines using staged combustion are also referred to as Dry Low NO_x combustors.
- ❖ The majority of gas turbines currently manufactured are lean-premix staged combustion turbines.

Hot gases from the combustion section are diluted with additional air from the compressor section and directed to the power turbine section at temperatures up to 2600°F. Energy from the hot exhaust gases, which expand in the power turbine section, are recovered in the form of shaft horsepower. More than 50% of the shaft horsepower is needed to drive the internal compressor and the balance of recovered shaft horsepower is available to drive an external load. Gas turbines may have one, two, or three shafts to transmit power between the inlet air compression turbine, the power turbine, and the exhaust turbine. The heat content of the exhaust gases exiting the turbine can either be discarded without heat recovery (simple cycle); recovered with a heat exchanger to preheat combustion air entering the combustor (regenerative cycle); recovered in a heat recovery steam generator to raise process steam, with or without supplementary firing (cogeneration); or recovered, with or without supplementary firing, to raise steam for a steam turbine Rankine cycle (combined cycle or repowering).

Combustion Turbine Power Plants

Quick Facts - Components

- > **Compressor section:** ambient air is drawn in and compressed up to 30 times ambient pressure and directed to the combustor section.
- > **Combustor section:** where fuel is introduced, ignited, and burned. Can either be annular, can-annular, or silo.
 - ❖ **Annular combustor:** doughnut-shaped, single, continuous chamber that encircles the turbine in a plane perpendicular to the air flow.
 - ❖ **Can-annular combustors:** similar to the annular; however, they incorporate several can-shaped combustion chambers rather than a single continuous chamber.
 - ❖ **Silo (frame-type) combustor:** has one or more combustion chambers mounted external to the gas turbine body.

Gas turbines are essentially composed of three major components: compressor, combustor, and power turbine.

Annular and can-annular combustors are based on aircraft turbine technology and are typically used for smaller scale applications.

Silo combustors are typically larger than annular or can-annular combustors and are used for larger scale applications.

The most thermally efficient type of power plant is typically a simple cycle power plant.

A. True

✓ B. False



Combustion Turbine Power Plants

Quick Facts - Simple Cycle

- > Definition: the most basic operating cycle of gas turbines.
- > Thermal efficiency: ranging from 15 to 42 %.
 - ❖ The cycle thermal efficiency is defined as the ratio of useful shaft energy to fuel energy input.
- > Typical use: for shaft horsepower applications without recovery of exhaust heat.
- > Example: simple cycle gas turbines are used by electric utilities for generation of electricity during emergencies or during peak demand periods.

Combustion Turbine Power Plants

Quick Facts - Regenerative Cycle

- > Definition: a simple cycle gas turbine with an added heat exchanger. The heat exchanger uses the turbine exhaust gases to heat the combustion air which reduces the amount of fuel required to reach combustor temperatures.
- > Thermal efficiency: approximately 35 %
 - ❖ The amount of fuel efficiency and saving may not be sufficient to justify the capital cost of the heat exchanger, rendering the process unattractive.

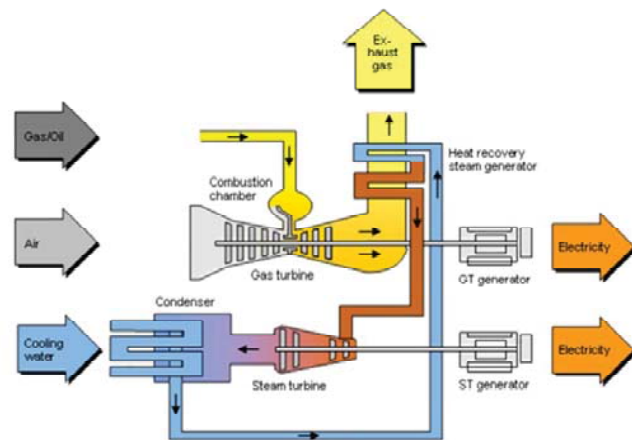
Combustion Turbine Power Plants Quick Facts - Cogeneration Cycle

- > Definition: consists of a simple cycle gas turbine with a heat recovery steam generator (HRSG).
- > Thermal efficiency: can be as high as 84 %.
- > Steam generated by the HRSG can be delivered at a variety of pressures and temperatures to other thermal processes at the site.
- > For situations where additional steam is required, a supplementary burner, or duct burner, can be placed in the exhaust duct stream of the HRSG to meet the site's steam requirements.

Combustion Turbine Power Plants Quick Facts - Combined Cycle

- > Definition: is a gas turbine with a HRSG applied at electric utility sites.
 - ❖ The gas turbine drives an electric generator, and the steam from the HRSG drives a steam turbine which also drives an electric generator. A supplementary-fired boiler can be used to increase the steam production.
- > Thermal efficiency: between 38 % and 60 %.

Combustion Turbine Power Plants Process Description



Combustion Turbine Power Plants Regulations to Consider

- > NSPS:
 - ❖ Subparts GG (after 10/3/77), KKKK (after 2/18/05)
 - ❖ Subparts K, Ka, Kb (Oil Storage)
- > NESHAPs:
 - ❖ None
- > MACT:
 - ❖ Subpart YYY
- > Other:
 - ❖ Clean Air Interstate Rule (CAIR)
 - ❖ Acid Rain Rule (federal allowance trading program for NO_x and SO₂)
 - ❖ Rule 62-296.405 and 62-296.406, F.A.C. (fossil fuel steam generators)
 - ❖ Rule 62-296.702, F.A.C. (PM RACT in non-attainment /maintenance areas - fossil fuel generators)
 - ❖ Rule 62-296.508, F.A.C. (VOC and NO_x RACT - petroleum liquid storage)

NSPS Subpart GG - Standards of Performance for Stationary Gas Turbines.

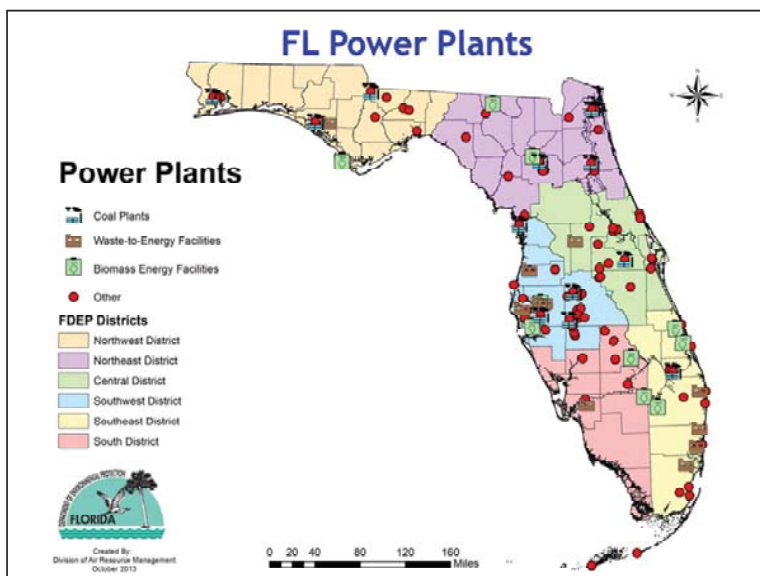
- Per §60.330(b) this subpart is applicable to stationary gas turbines with a heat input at peak load equal to or greater than 10.7 gigajoules (10 million Btu) per hour, based on the higher heating value of the fuel, which commences construction, modification, or reconstruction after October 3, 1977.

NSPS Subpart KKKK—Standards of Performance for Stationary Combustion Turbines.

- Per §60.4305(a) this subpart is applicable to stationary gas turbines with a heat input at peak load equal to or greater than 10.7 gigajoules (10 MMBtu) per hour, based on the higher heating value of the fuel, which commenced construction, modification, or reconstruction after February 18, 2005.

NSPS Subpart K—Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978.

- NSPS Subpart Ka—Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984. *(Continued on subsequent slide.)*



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NSPS Subpart Kb—Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984.

MACT Subpart YYYY—National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines.

CAIR = Ozone and Particulates for Florida.

Acid Rain – 40 CFR Part 75.

Municipal Waste Combustors Quick Facts

> Source of Emissions:

- ❖ Products of Combustion (PM_{10} , $PM_{2.5}$, VOC, NO_x , SO_2 , Pb, CO, CO_2)
 - PM including metal HAPs
 - VOCs including organic HAPs
 - Acid HAPs are also emitted

> Types of Controls:

- ❖ PM - Baghouse, ESP
- ❖ SO_2 & Acid HAPs - Spray Drying, Sorbent Injection, Scrubber
- ❖ NO_x - SCR, SNCR

> Source Category:

- ❖ Title V - Major
- ❖ PSD - Major and Minor

<http://www.epa.gov/ttn/chief/ap42/ch02/final/c02s01.pdf>

Municipal Waste Combustors Quick Facts - Technologies

- > There are 3 main classes of technologies used to combust MSW:
 - ❖ Mass burn
 - ❖ Refuse-derived fuel (RDF)
 - ❖ Modular combustors

Municipal Waste Combustors Quick Facts - Mass Burn Units

- > MSW is combusted without any preprocessing.
- > They are usually erected at the site (as opposed to being prefabricated at another location) and range in size from 46 to 900 Mg/day (50 to 1,000 tpd) of MSW throughput per unit.
- > Three designs:
 - ❖ Mass burn waterwall (MB/WW)
 - ❖ Mass burn rotary waterwall combustor (MB/RC)
 - ❖ Mass burn refractory wall (MB/REF)

MSW is combusted without any preprocessing other than removal of items too large to go through the feed system.

In a typical mass burn combustor, refuse is placed on a grate that moves through the combustor. Combustion air in excess of stoichiometric amounts is supplied both below (underfire air) and above (overfire air) the grate.

Mass burn waterwall designs have water-filled tubes in the furnace walls that are used to recover heat for production of steam and/or electricity.

Mass burn rotary waterwall combustors use a rotary combustion chamber constructed of water-filled tubes followed by a waterwall furnace.

Mass burn refractory designs are older and typically do not include any heat recovery.

Municipal Waste Combustors Process Description^(1/2)

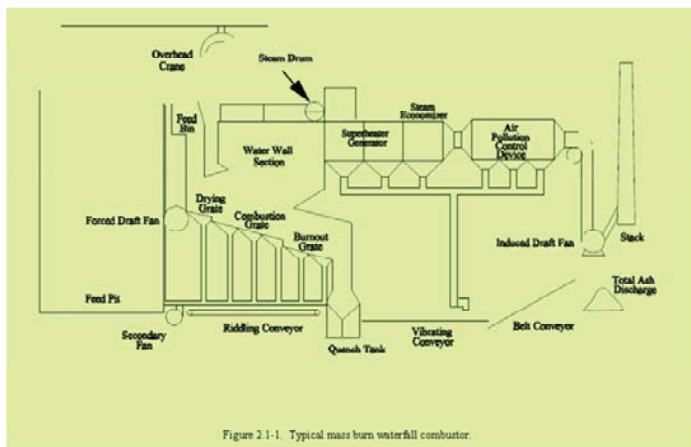


Figure 2.1-1. Typical mass burn waterfall combustor.

Municipal Waste Combustors Process Description^(2/2)

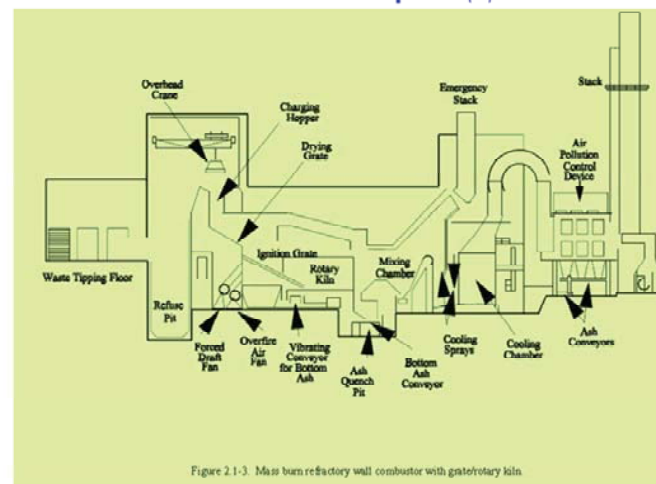


Figure 2.1-3. Mass burn refractory wall combustor with gate/rotary kiln.

Municipal Waste Combustors Quick Facts - Refuse-derived fuel (RDF)

- > Burn processed waste that varies from shredded waste to finely divided fuel suitable for co-firing with pulverized coal
- > Sizes range: from 290 to 1,300 Mg/day (320 to 1,400 tpd)
- > The type of RDF used depends on the boiler design
- > A subset of the RDF technology is fluidized bed combustors (FBC)

Waste processing usually consists of removing non-combustibles and shredding, which generally raises the heating value and provides a more uniform fuel. The type of RDF used depends on the boiler design. Most boilers designed to burn RDF use spreader stokers and fire fluff RDF in a semi-suspension mode.

Municipal Waste Combustors Quick Facts - Modular

- > Similar to mass burn combustors - they burn waste that has not been pre-processed
- > Typically shop fabricated
- > Range in size from 4 to 130 Mg/day (5 to 140 tpd) of MSW throughput
- > Most common types of modular combustors:
 - ❖ Starved air or controlled air type
 - ❖ Modular excess air (MOD/EA) combustor

One of the most common types of modular combustors is the starved air or controlled air type, which incorporates two combustion chambers. Air is supplied to the primary chamber at sub-stoichiometric levels.

The incomplete combustion products (CO and organic compounds) pass into the secondary combustion chamber where additional air is added and combustion is completed.

Another type of modular combustor design is the modular excess air (MOD/EA) combustor which consists of 2 chambers as with MOD/SA units, but is functionally similar to mass burn units in that it uses excess air in the primary chamber.

Municipal Waste Combustors Regulations to Consider

- > NSPS:
 - ❖ Subparts E, Ea, Eb
- > NESHAPs:
 - ❖ None
- > MACT:
 - ❖ Subpart EEE
- > Other:
 - ❖ Rule 62-296.401, F.A.C. (Incinerators)
 - ❖ Rule 62-296.416, F.A.C. (Waste to Energy)
 - ❖ NSPS Subparts Cb and Cc (Emissions Guidelines enforceable under state rule)

NSPS Subpart E—Standards of Performance for Incinerators.

NSPS Subpart Ea—Standards of Performance for Municipal Waste Combustors for Which Construction is Commenced After December 20, 1989 and on or before September 20, 1994.

NSPS Subpart Eb—Standards of Performance for Large Municipal Waste Combustors for Which Construction is Commenced After September 20, 1994 or for Which Modification or Reconstruction is Commenced After June 19, 1996.

MACT Subpart EEE—National Emission Standards for Hazardous Air Pollutants from Hazardous Waste Combustors.

NSPS Emission Guidelines enforceable under the state rule:

- NSPS Subpart Cb—Emissions Guidelines and Compliance Times for Large Municipal Waste Combustors That are Constructed on or Before September 20, 1994.
- NSPS Subpart Cc—Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills.

FL Municipal Waste Combustors

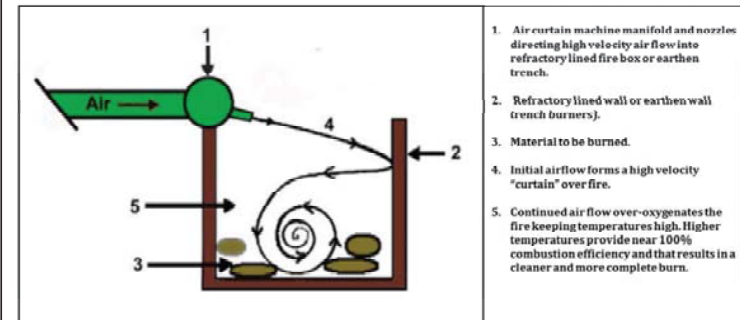


Air Curtain Incinerators Quick Facts

- > Source of Emissions:
 - ❖ Products of Combustion (PM_{10} , $PM_{2.5}$, VOC, NO_x , SO_2 , Pb, CO, CO_2)
- > Types of Controls:
 - ❖ None
- > Source Category:
 - ❖ Title V - Major
 - ❖ PSD - Major, Synthetic Minor and Minor

Air curtain incinerators are typically used to dispose of woody-vegetative material, such as land-clearing debris.

Air Curtain Incinerators Process Description



Air curtain incinerators may be used to control emissions from open burning.

An air curtain incinerator consists of a burn pit and a device that blows air across and into the pit.

In an air curtain incinerator, a rotating mass ("curtain") of high velocity, high temperature air is circulated across an open chamber or pit in which burning occurs.

The continued air flow over-oxygenates the fire and increases turbulence, resulting in more complete combustion.

Air Curtain Incinerators Regulations to Consider

- > NSPS:
 - ❖ Subparts E, CCCC, DDDD, EEEE, FFFF
- > NESHAPs:
 - ❖ None
- > MACT:
 - ❖ None

NSPS Subpart E—Standards of Performance for Incinerators.

NSPS Subpart CCCC—Standards of Performance for Commercial and Industrial Solid Waste Incineration Units.

NSPS Subpart DDDD—Emissions Guidelines and Compliance Times for Commercial and Industrial Solid Waste Incineration Units.

NSPS Subpart EEEE—Standards of Performance for Other Solid Waste Incineration Units for Which Construction is Commenced After December 9, 2004, or for Which Modification or Reconstruction is Commenced on or After June 16, 2006.

Subpart FFFF—Emission Guidelines and Compliance Times for Other Solid Waste Incineration Units That Commenced Construction On or Before December 9, 2004.

Fiberglass Products Manufacturing Quick Facts

- > Source of Emissions:
 - ❖ Any Combustion (PM_{10} , $PM_{2.5}$, VOC, NO_x , SO_2 , Pb, CO, CO_2)
 - ❖ Raw Material Handling, Cutting, and Grinding (PM_{10} , $PM_{2.5}$)
 - ❖ Fiberglass Products Manufacturing (VOC, styrene, methyl methacrylate and other organic HAPs)
- > Types of Controls:
 - ❖ PM Control - ESP, Baghouse
 - ❖ VOC and organic HAPs - RTO, Carbon adsorption, absorption, and condensation
 - ❖ Vapor suppression agents added to the resin
 - ❖ Use of low solvent products (MSDS, material usage)
- > Source Category:
 - ❖ Title V - Major and Synthetic Minor
 - ❖ PSD - Major and Minor

Florida fiberglass products manufacturing includes processes such as manufacturing fiberglass boats, fiberglass tanks, and fiberglass hot tubs.

Fiberglass Products Manufacturing

- > Definition: Manufacturing of products made from fiberglass reinforced plastic.
- > Reinforced polyester resin operations entails laying reinforcements such as glass fiber in a mold and saturating it with a polyester plastic resin.

The resin hardens to form a rigid plastic part, reinforced with the fiberglass. The resin is mixed with a catalyst as it is applied that causes a cross-linking reaction between the resin molecules. The cross-linking reaction causes the resin to harden from a liquid to a solid. Fiberglass boats and fiberglass boat parts, bathtubs, pools and hot tubs are built using this process. The polyester resin used in fiberglass boat manufacturing contains styrene as a solvent and cross-linking agent.

http://www2.unitar.org/cwm/publications/cbl/prtr/pdf/cat5/Australia_ffibgls.pdf

<http://www.epa.gov/ttn/chief/ap42/ch04/final/c04s04.pdf>

Fiberglass Products Manufacturing Process Description

- > Many small facilities (such as boat repair and small contract firms) and relatively few large firms
- > Resin usage ranges from less than 5,000 kilograms per year (11,000 pounds) to over 3 million kilograms (6.6 million pounds) per year
- > Several fabrication processes, depending on their size, shape, and other desired physical characteristics
 - ❖ hand layup
 - ❖ spray layup (sprayup)
 - ❖ continuous lamination
 - ❖ pultrusion
 - ❖ filament winding
 - ❖ various closed molding operations

Florida fiberglass products include fiber glass boats, tanks, hot tubs, etc.

Fiberglass Products Manufacturing Process - Hand layup

- > Uses primarily manual techniques combined with open molds
- > Simplest of the fabrication processes
- > Typical products are:
 - ❖ boat hulls and decks
 - ❖ swimming pools
 - ❖ bathtubs and showers
 - ❖ electrical consoles
 - ❖ automobile components

Reinforcement is manually fitted to a mold wetted with catalyzed resin mix, after which it is saturated with more resin

The reinforcement is in the form of either a chopped strand mat, a woven fabric, or often both. Layers of reinforcement and resin are added to build the desired laminate thickness. Squeegees, brushes, and rollers are used to smooth and compact each layer as it is applied.

A release agent is usually first applied to the mold to facilitate removal of the composite. This is often a wax, which can be treated with a water soluble barrier coat such as polyvinyl alcohol to promote paint adhesion on parts that are to be painted.

In many operations, the mold is first sprayed with gel coat, a clear or pigmented resin mix that forms the smooth outer surface of many products. Gel coat spray systems consist of separate sources of resin and catalyst, with an airless hand spray gun that mixes them together into an atomized resin/catalyst stream.

Fiberglass Products Manufacturing Process - Spray layup ("sprayup")

- > Open mold process uses mechanical spraying and chopping equipment for depositing the resin and glass reinforcement.
- > Allows a greater production rate and more uniform parts, often using more complex molds.
- > Common to combine hand layup and sprayup operations
- > More uniform and complex parts can generally be produced more efficiently.
- > However, more resin generally is used to produce similar parts by spray layup because of the inevitable overspray of resin during application.

As in hand layup, gel coat is frequently applied to the mold before fabrication to produce the desired surface qualities.

For the reinforced layers, a device is attached to the sprayer system to chop glass fiber "roving" (uncut fiber) into predetermined lengths and project it to merge with the resin mix stream. The stream precoats the chop, and both are deposited simultaneously to the desired layer thickness on the mold surface (or on the gel coat that was applied to the mold). Layers are built up and rolled out on the mold as necessary to form the part.

Fiberglass Products Manufacturing Process - Continuous Lamination

- > Continuous lamination of reinforced plastics materials, involves impregnating various reinforcements with resins on an in-line conveyor
- > The resulting laminate is cured and trimmed as it passes through the various conveyor zones
- > Methyl methacrylate sometimes used as the cross-linking agent, alone or in combination with styrene
- > Principal products include:
 - ❖ translucent industrial skylights and greenhouse panels
 - ❖ wall and ceiling liners for food areas
 - ❖ garage doors
 - ❖ cooling tower louvers

In this process, the resin mix is metered onto a bottom carrier film, using a blade to control thickness. This film, which defines the panel's surface, is generally polyester, cellophane, or nylon and may have a smooth, embossed, or matte surface.

Methyl methacrylate is sometimes used as the cross-linking agent, either alone or in combination with styrene, to increase strength and weather resistance.

Chopped glass fibers free-fall into the resin mix and are allowed to saturate with resin, or "wet out".

A second carrier film is applied on top of the panel before subsequent forming and curing.

The cured panel is then stripped of its films, trimmed, and cut to the desired length.

Fiberglass Products Manufacturing Process - Pultrusion

- > Pultrusion = extrusion by pulling
- > Used to produce continuous cross-sectional lineals similar to those made by extruding metals such as aluminum
- > Example products include:
 - ❖ electrical insulation materials
 - ❖ ladders
 - ❖ walkway gratings
 - ❖ structural supports
 - ❖ rods and antennas

Reinforcing fibers are pulled through a liquid resin mix bath and into a long machined steel die, where heat initiates an exothermic reaction to polymerize the thermosetting resin matrix.

The composite profile emerges from the die as a hot, constant cross-sectional that cools sufficiently to be fed into a clamping and pulling mechanism.

The product can then be cut to desired lengths.

Fiberglass Products Manufacturing Process - Filament Winding

- > Process of laying a band of resin impregnated fibers onto a rotating mandrel surface in a precise geometric pattern, and curing them to form the product
- > Efficient method of producing cylindrical parts with optimum strength characteristics suited to the specific design and application
- > Example products are:
 - ❖ storage tanks
 - ❖ fuselages
 - ❖ wind turbine and helicopter blades
 - ❖ tubing and pipe

Glass fiber is most often used for the filament, but aramid, graphite, and sometimes boron and various metal wires may be used. The filament can be wetted during fabrication, or previously impregnated filament ("prepreg") can be used. There are 3 common winding patterns used in the filament winding process. The various winding patterns can be used alone or in combination to achieve the desired strength and shape characteristics. Mandrels are made of a wide variety of materials and, in some applications, remain inside the finished product as a liner or core.

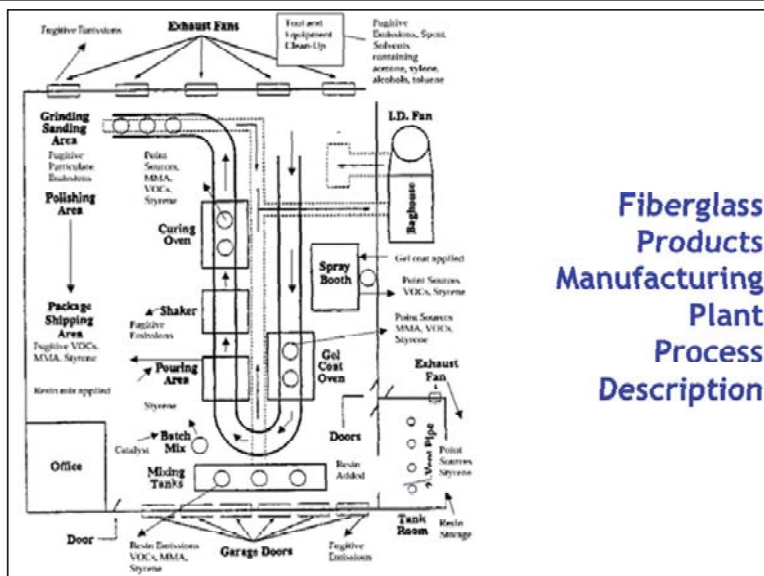
Fiberglass Products Manufacturing Process - Closed Molding Operations

- > Closed molding operations (such as compression or injection) involve the use of 2 matched dies to define the entire outer surface of the part.
- > For the most durable production configuration, hardened metal dies are used (matched metal molding).
- > Vacuum or pressure bag molding (another closed molding process).
- > The range of closed molded parts includes:
 - ❖ tool and appliance housings
 - ❖ cookware
 - ❖ brackets and other small parts
 - ❖ automobile body and electrical components

When closed and filled with a resin mix, the matched die mold is subjected to heat and pressure to cure the plastic.

In bag molding, a hand layup or sprayup is covered with a plastic film, and vacuum or pressure is applied to rigidly define the part and improve surface quality.

Synthetic marble casting, a large segment of the resin products industry, involves production of bathroom sinks, vanity tops, bathtubs, and accessories using filled resins that have the look of natural marble. No reinforcing fibers are used in these products. Pigmented or clear gel coat can either be applied to the mold itself or sprayed onto the product after casting to simulate the look of natural polished marble. Marble casting can be an open mold process, or it may be considered a semiclosed process if cast parts are removed from a closed mold for subsequent gel coat spraying.



Fiberglass Products Manufacturing Plants - Regulations to Consider

- > NSPS:
 - ❖ None
- > NESHAPs:
 - ❖ None
- > MACT:
 - ❖ Subpart VVVV (Boat manufacturing)
 - ❖ Subpart WWWW (Reinforced plastic composites)

Florida Fiberglass Manufacturing Plants

Fiberglass Manufacturing Plants

- Major TV Facilities
- SNTV and Minor Facilities
- General Permit Facilities

FDEP Districts

- Northwest District
- Northeast District
- Central District
- Southwest District
- Southeast District
- South District

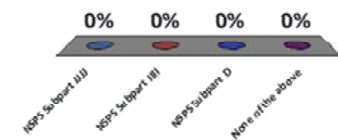


Created By:
Division of Air Resource Management
October 2013

0 20 40 60 120 160 Miles

Which NSPS is applicable to fiberglass products manufacturing plants?

- A. NSPS Subpart JJJJ
- B. NSPS Subpart IIII
- C. NSPS Subpart D
- ✓ D. None of the above



Surface Coating Operations Quick Facts

- > Source of Emissions:
 - ❖ Coating and Clean-up Evaporation/Drying - VOCs and exempt solvents
 - ❖ Heating and Drying Equipment Products of Combustion (PM₁₀, PM_{2.5}, VOC, NO_x, SO₂, CO, CO₂)
 - ❖ Coating storage and mixing - VOCs and exempt solvents
 - ❖ Coating overspray - PM₁₀, PM_{2.5}
- > Types of Controls:
 - ❖ VOCs and Exempt Solvents - Incineration, Carbon Adsorption
 - ❖ PM - Mechanical Filters, Scrubbers, Water Curtains, HVLP Guns
- > Source Category:
 - ❖ Title V - Major, Synthetic Minor, and True Minor
 - ❖ PSD - Major and Minor

http://www.epa.gov/ttn/chief/ap42/ch04/final/c4s02_2a.pdf

Surface Coating Operations Process Description

- > Definition: application of decorative or protective materials in liquid or powder form to substrates
- > Application methods: brushing, rolling, spraying, dipping and flow coating
- > Substrate surface is air and/or heat dried to remove volatile solvents from the coated surface

Coatings normally include general solvent type paints, varnishes, lacquers, and water thinned paints.

Powder type coatings can be applied to a hot surface or can be melted after application and caused to flow together. Other coatings can be polymerized after application by thermal curing with infrared or electron beam systems.

Surface Coating Operations

- > Toll Operations - fill orders to various manufacturer specifications, and thus change coating and solvent conditions more frequently than do captive companies
- > Captive Operations - fabricate and coat products within a single facility and which may operate continuously with the same solvents
- > Both differ in emission control systems
 - ❖ not all controls are technically feasible in toll situations

Surface Coating Operations - Coating Formulations

- > Conventional coatings contain at least 30 volume % solvents to permit easy handling and application
- > Coatings typically contain 70 to 85 % solvents by volume
- > Coatings with 30 volume % of solvent or less are called low solvent or "high solids" coatings
- > Waterborne coatings types: water emulsion, water soluble and colloidal dispersion, and electrocoat
 - ❖ Common ratios of water to solvent organics in emulsion and dispersion coatings are 80:20 and 70:30.
- > Two-part catalyzed coatings to be dried, powder coatings, hot melts, and radiation cured (ultraviolet and electron beam) coatings contain essentially no volatile organic compounds (VOC)

Solvents may be of 1 component or of a mixture of volatile ethers, acetates, aromatics, cellosolves, aliphatic hydrocarbons, and/or water.

Common ratios of water to solvent organics in emulsion and dispersion coatings are 80:20 and 70:30.

In two-part catalyzed coatings to be dried, some monomers and other lower molecular weight organics may volatilize.

Depending on the product requirements and the material being coated, a surface may have 1 or more layers of coating applied. The first coat may be applied to cover surface imperfections or to assure adhesion of the coating. The intermediate coats usually provide the required color, texture or print, and a clear protective topcoat is often added. General coating types do not differ from those described, although the intended use and the material to be coated determine the composition and resins used in the coatings.

Surface Coating Operations Application Procedures

- > Conventional spray: air atomized and usually hand operated
 - ❖ One of the most versatile coating methods
 - ❖ Disadvantages: low efficiency from overspray and high energy requirements for the air compressor
- > Hot airless spray: paint is forced through an atomizing nozzle
 - ❖ Since volumetric flow is less, overspray is reduced
 - ❖ Less solvent is also required, thus reducing VOC emissions
- > Electrostatic spray: charged paint particles are attracted to an oppositely charged surface
 - ❖ Most efficient for low viscosity paints.
 - ❖ Spray guns, spinning discs, or bell shaped atomizers can be used to atomize the paint.
 - ❖ Application efficiencies of 90 to 95 % are possible

Coating Application Procedures - Colors can be changed easily, and a variety of sizes and shapes can be painted under many operating conditions. Conventional, catalyzed, or waterborne coatings can be applied with little modification.

Hot airless spray - Care must be taken for proper flow of the coating, to avoid plugging and abrading of the nozzle orifice.

Electrostatic spray - Spray guns, spinning discs, or bell shaped atomizers can be used to atomize the paint. Application efficiencies of 90 to 95 % are possible, with good "wraparound" and edge coating. Interiors and recessed surfaces are difficult to coat, however.

Surface Coating Operations - Application Procedures

- > Roller coating: used to apply coatings and inks to flat surfaces
 - ❖ Direct roll coater - cylindrical rollers move in the same direction as the surface to be coated
 - ❖ Reverse roll coater - rollers rotate in the opposite direction of the surface to be coated
 - ❖ Coatings can be applied to any flat surface efficiently and uniformly and at high speeds
- > Knife coating
 - ❖ Relatively inexpensive
 - ❖ Not appropriate for coating unstable materials, such as some knit goods, or when a high degree of accuracy in the coating thickness is required

Printing and decorative graining are applied with direct rollers.

Reverse rollers are used to apply fillers to porous or imperfect substrates, including papers and fabrics, to give a smooth uniform surface.

Surface Coating Operations - Application Procedures

- > Rotogravure Printing
- > Dip Coating
- > Flow Coating

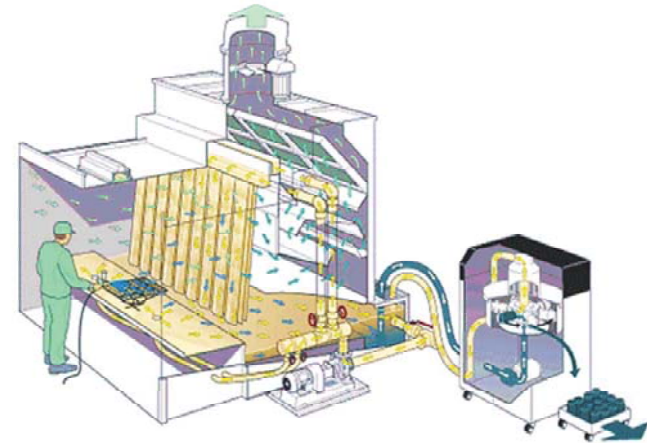
Rotogravure printing is widely used in coating vinyl imitation leathers and wallpaper, and in the application of a transparent protective layer over the printed pattern. In rotogravure printing, the image area is recessed, or "intaglio", relative to the copper plated cylinder on which the image is engraved. The ink is picked up on the engraved area, and excess ink is scraped off the non-image area with a "doctor blade". The image is transferred directly to the paper or other substrate, which is web fed, and the product is then dried.

Dip coating requires that the surface of the subject be immersed in a bath of paint. Dipping is effective for coating irregularly shaped or bulky items and for priming. All surfaces are covered, but coating thickness varies, edge blistering can occur, and a good appearance is not always achieved.

In flow coating, materials to be coated are conveyed through a flow of paint.

Paint flow is directed, without atomization, toward the surface through multiple nozzles, then is caught in a trough and recycled. For flat surfaces, close control of film thickness can be maintained by passing the surface through a constantly flowing curtain of paint at a controlled rate.

Surface Coating Operations Process Description



Surface Coating Regulations to Consider

> NSPS:

- ❖ Subpart EE
- ❖ Subpart MM
- ❖ Subpart RR
- ❖ Subpart SS
- ❖ Subpart TT
- ❖ Subpart WW
- ❖ Subpart TTT

> NESHAPs:

- ❖ None

NSPS Subpart EE—Standards of Performance for Surface Coating of Metal Furniture.

NSPS Subpart MM—Standards of Performance for Automobile and Light Duty Truck Surface Coating Operations.

NSPS Subpart RR—Standards of Performance for Pressure Sensitive Tape and Label Surface Coating Operations.

NSPS Subpart SS—Standards of Performance for Industrial Surface Coating: Large Appliances.

NSPS Subpart TT—Standards of Performance for Metal Coil Surface Coating.

NSPS Subpart WW—Standards of Performance for the Beverage Can Surface Coating Industry.

NSPS Subpart TTT—Standards of Performance for Industrial Surface Coating: Surface Coating of Plastic Parts for Business Machines.

Surface Coating Regulations to Consider

> MACT:

- ❖ Subparts II, III, JJJJ, KKKK, MMMM, NNNN, OOOO, PPPP, QQQQ, RRRR, SSSS, HHHHHH
- ❖ Note that many of the 4-letter MACT regulations reference each other, allowing subject units to follow one regulation to comply with all applicable subparts.

> Other:

- ❖ Rules 62-296.501-507, 62-296.513, 62-296.514 (Various Types of Coating)

MACT Subpart II—Shipbuilding and Ship Repair (Surface Coating).

MACT Subpart III—Surface Coating of Automobiles and Light-Duty Trucks.

MACT Subpart JJJJ—Paper and Other Web Coating.

MACT Subpart KKKK—Surface Coating of Metal Cans.

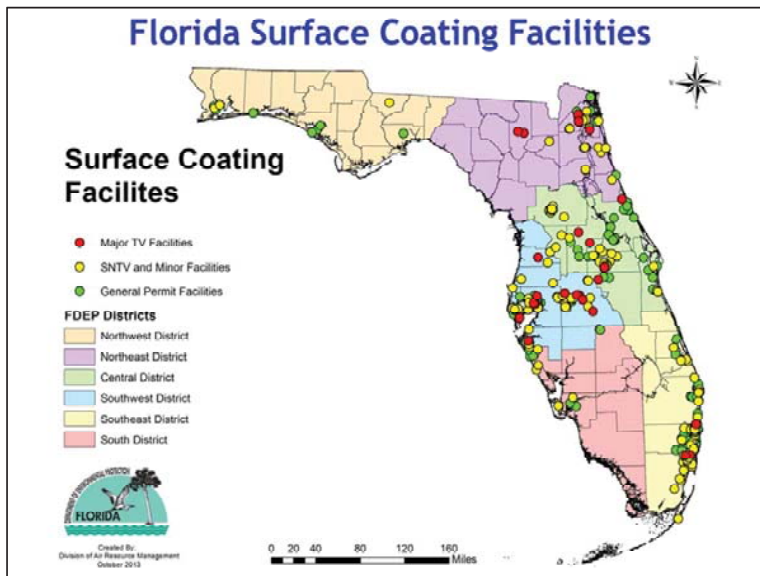
MACT Subpart MMMM—Surface Coating of Miscellaneous Metal Parts and Products.

MACT Subpart NNNN—Surface Coating of Large Appliances.

MACT Subpart OOOO—Printing, Coating, and Dyeing of Fabrics and Other Textiles.

MACT Subpart PPPP—Surface Coating of Plastic Parts and Products.

- MACT Subpart QQQQ—Surface Coating of Wood Building Products.
- MACT Subpart RRRR—Surface Coating of Metal Furniture.
- MACT Subpart SSSS—Surface Coating of Metal Coil.
- MACT Subpart 6H—Paint Stripping and Misc. Surface Coating (Area sources) - Not adopted by FL SIP



MACT Subpart QQQQ—National Emission Standards for Hazardous Air Pollutants:
Surface Coating of Wood Building Products.

MACT Subpart RRRR—National Emission Standards for Hazardous Air Pollutants:
Surface Coating of Metal Furniture.

MACT Subpart SSSS—National Emission Standards for Hazardous Air Pollutants:
Surface Coating of Metal Coil.

MACT Subpart HHHHHH—National Emission Standards for Hazardous Air Pollutants:
Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources.

**NO_x emissions are the most prevalent pollutant
from surface coating operations.**

- A. True
✓ B. False



Class Exercise - Calculating Emissions from Surface Coating

- See attachment – Calculating Emissions from Surface Coating

Municipal Waste Landfills-Quick Facts

- > Source of Emissions:
 - ❖ Non-Methane Organic Compounds (NMOCs), methane, VOC's and organic HAPs from material breakdown
 - ❖ Flares or other combustion sources generate CO, NO_x, SO₂, and PM emissions
- > Types of Controls:
 - ❖ NMOCs and other organics- Incineration, Combustion
- > Source Category:
 - ❖ Title V - Major, Synthetic Minor, and True Minor
 - ❖ PSD - Major and Minor

<http://www.epa.gov/ttn/chief/ap42/ch02/draft/d02s04.pdf>

Landfill gas consists of about 50% methane and 50% CO₂ with other volatile organic compounds.

Municipal Waste Landfills - Quick Facts

- > Definition: discrete area of land or an excavation that receives household waste, and that is not a land application unit, surface impoundment, injection well, or waste pile
 - ❖ An MSW unit may also receive other types of wastes such as commercial solid waste, nonhazardous sludge, and industrial solid waste

The municipal solid waste types potentially accepted by MSW landfills include (most landfills accept only a few of the following categories):

- MSW
- Household hazardous waste
- Municipal sludge
- Municipal waste combustion ash
- Infectious waste
- Waste tires
- Industrial non-hazardous waste
- Conditionally exempt small quantity generator (CESQG) hazardous waste
- Construction and demolition waste
- Agricultural wastes
- Oil and gas wastes
- Mining wastes

In 2011 approximately 53.6 % of solid waste was landfilled, 11.7% was incinerated, and 34.7 % was recycled or composted. Landfills were estimated to receive 134 million megagrams (Mg) (134 million tons) of waste and there were 1,908 municipal solid waste landfills reported in the US.

Municipal Waste Landfills - Design & Waste Processing

- > Major designs:
 - ❖ Area
 - ❖ Trench
 - ❖ Ramp methods
- > Waste processing steps:
 - ❖ Spreading the waste
 - ❖ Compacting the waste
 - ❖ Covering the waste with soil
- > Liners: often incorporated in modern landfill design to provide an impermeable barrier to leachate and gas migration from the landfill

The trench and ramp methods are not commonly used, and are not the preferred methods when liners and leachate collection systems are utilized or required by law.

The area fill method involves placing waste on the ground surface or landfill liner, spreading it in layers, and compacting with heavy equipment. A daily soil cover is spread over the compacted waste.

The trench method entails excavating trenches designed to receive a day's worth of waste. The soil from the excavation is often used for cover material and wind breaks.

The ramp method is typically employed on sloping land, where waste is spread and compacted similar to the area method, however, the cover material obtained is generally from the front of the working face of the filling operation.

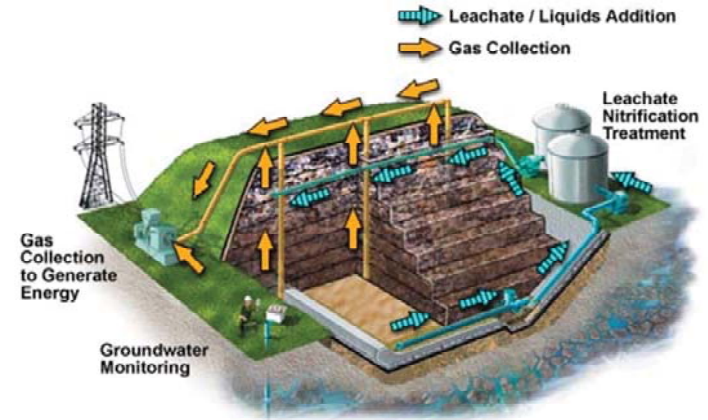
Liners - constructed of soil (i.e., recompacted clay), or synthetics (i.e., high density polyethylene).

Municipal Waste Landfills - Landfill Gas Collection Systems (LFG)

- > Active collection systems: provide a pressure gradient in order to extract LFG by use of mechanical blowers or compressors
- > Passive systems: allow the natural pressure gradient created by the increase in pressure created by LFG generation within the landfill to mobilize the gas for collection
- > LFG control and treatment options include
 - ❖ Combustion of the LFG
 - ❖ Purification of the LFG

Combustion techniques include techniques that do not recover energy (i.e., flares and thermal incinerators), and techniques that recover energy (i.e., gas turbines and internal combustion engines) and generate electricity from the combustion of the LFG. Boilers can also be employed to recover energy from LFG in the form of steam. Flares involve an open combustion process that requires oxygen for combustion, and can be open or enclosed. Thermal incinerators heat an organic chemical to a high enough temperature in the presence of sufficient oxygen to oxidize the chemical to carbon dioxide (CO₂) and water. Purification techniques can also be used to process raw landfill gas to pipeline quality natural gas by using adsorption, absorption, and membranes.

Municipal Waste Landfills Process Description



Municipal Waste Combustors Regulations to Consider

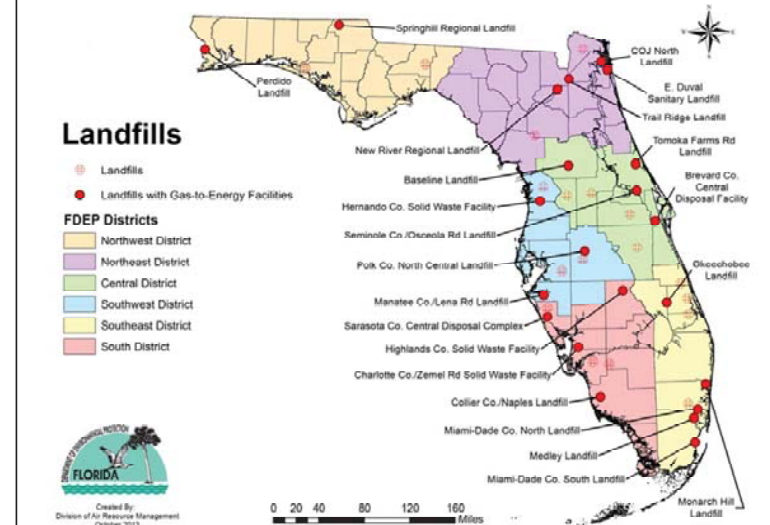
- > NSPS:
 - ❖ Subparts Cc, WWW
- > NESHAPs:
 - ❖ Subpart M (Asbestos)
- > MACT:
 - ❖ Subpart AAAAA

NSPS Subpart Cc—Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills.

NSPS Subpart WWW—Standards of Performance for Municipal Solid Waste Landfills.

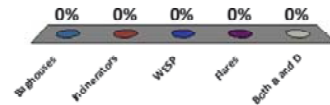
MACT Subpart AAAAA—National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills.

Florida Landfills



Which is a common control at municipal waste landfills?

- A. Baghouses
- B. Incinerators
- C. WESP
- D. Flares
- ✓ E. Both B and D



Non-Title V Minor Sources

For the approximately 1000 non-Title V minor sources, there are currently 37 different industrial source types including one for "other".

The following five categories represent the industries with the largest number of sources that are not discussed in the Title V or air general permits sections.

Asphalt Plants - Quick Facts

- > Source of Emissions:
 - ❖ Products of Combustion (PM₁₀, PM_{2.5}, VOC, NO_x, SO₂, Pb, CO, CO₂)
 - ❖ Raw Material Handling (PM₁₀, PM_{2.5})
- > Types of Controls:
 - ❖ Dryer PM Controls - Venturi or Wet Scrubber, Fabric Filter, dust collector
- > Source Category:
 - ❖ Title V * - Major, Synthetic Minor, and True Minor
 - ❖ PSD * - Major and Minor

* Although asphalt plants could be Title V and PSD sources, there are none in Florida at this time

<http://www.epa.gov/ttn/chief/ap42/ch11/final/c11s01.pdf>

Asphalt Plants - Quick Facts

- > Hot mix asphalt (HMA) paving materials are a mixture of size-graded, high quality aggregate and liquid asphalt cement, which is heated and mixed in measured quantities to produce HMA.
- > Manufacturing processes:
 - ❖ Batch mix plants
 - ❖ Continuous mix (mix outside dryer drum) plants
 - ❖ Parallel flow drum mix plants
 - ❖ Counterflow drum mix plants
- > Plant Construction:
 - ❖ Permanent plant
 - ❖ Skid-mounted (easily relocated) plant
 - ❖ Portable plant
- > Most plants have the capability to use either gaseous fuels (natural gas) or fuel oil.

Aggregate and RAP (if used) constitute over 92 % by weight of the total mixture. Aside from the amount and grade of asphalt cement used, mix characteristics are determined by the relative amounts and types of aggregate and RAP used. A certain percentage of fine aggregate (less than 74 micrometers [μm] in physical diameter) is required for the production of good quality HMA.

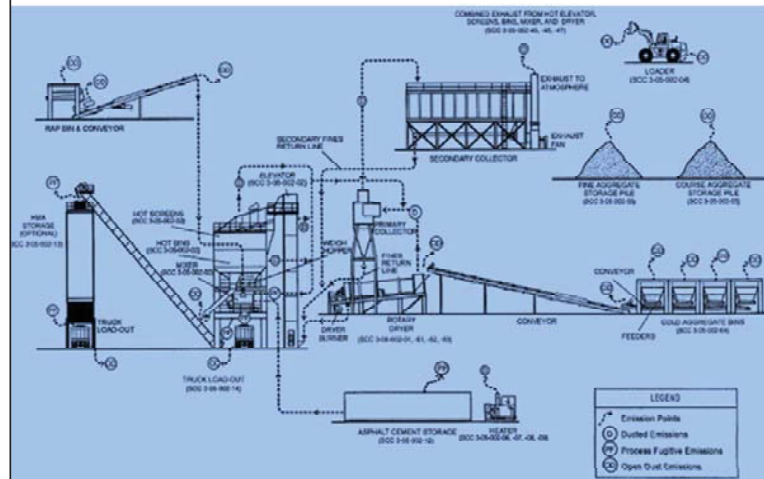
Manufacturing plants - this order of listing generally reflects the chronological order of development and use within the HMA industry.

In 1996, approximately 500 million tons of HMA were produced at the 3,600 (estimated) active asphalt plants in the United States. Of these 3,600 plants, approximately 2,300 are batch plants, 1,000 are parallel flow drum mix plants, and 300 are counterflow drum mix plants. The total 1996 HMA production from batch and drum mix plants is estimated at about 240 million tons and 260 million tons, respectively. About 85 % of plants being run today are of the counterflow drum mix design, while batch plants and parallel flow drum mix plants account for 10 % and 5 % respectively. Continuous mix plants represent a very small fraction of the plants in use (<0.5 %) and, therefore, are not discussed further.

All plants can have RAP processing capabilities. Virtually all plants being manufactured today have RAP processing capability.

Based upon Department of Energy and limited State inventory information, between 70 and 90 % of the HMA is produced using natural gas as the fuel to dry and heat the aggregate.

Batch Mix Asphalt Plant



Batch Mix Asphalt Plants

- > Raw aggregate normally is stockpiled near the production unit.
- > Moisture content typically between 3 to 5 % by weight.
- > Process:
 - ❖ Aggregate is hauled from the storage piles and is placed in the appropriate hoppers of the cold feed unit.
 - ❖ Material is metered from the hoppers onto a conveyor belt and is transported into a rotary dryer (typically gas- or oil-fired).
 - ❖ Hot aggregate is transferred to a set of vibrating screens, where it is classified into as many as four different grades (sizes) and is dropped into individual "hot" bins according to size.

Dryers are equipped with flights designed to shower the aggregate inside the drum to promote drying efficiency.

At newer facilities, RAP also may be transferred to a separate heated storage bin. To control aggregate size distribution in the final batch mix, the operator opens various hot bins over a weigh hopper until the desired mix and weight are obtained.

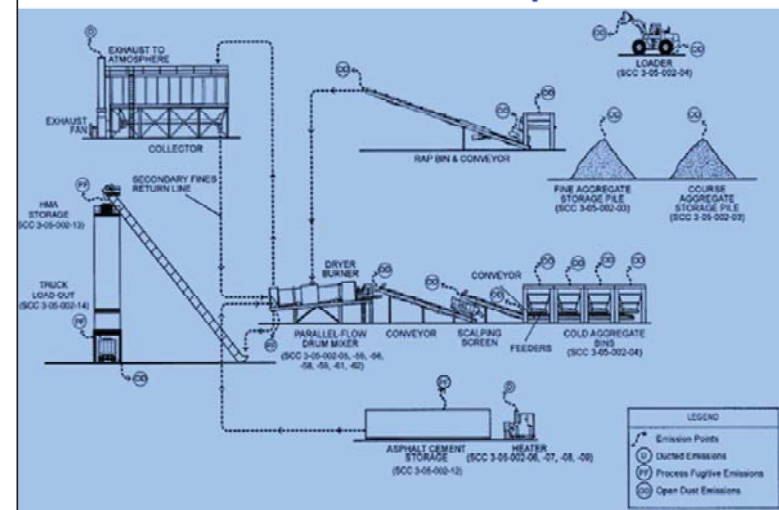
Batch Mix Asphalt Plants

- ❖ Concurrent with the aggregate being weighed, liquid asphalt cement is pumped from a heated storage tank to an asphalt bucket.
- ❖ Aggregate from the weigh hopper is dropped into the mixer (pug mill) and dry-mixed for 6 to 10 seconds.
- ❖ The liquid asphalt is then dropped into the pug mill where it is mixed for an additional period of time.
- ❖ Total mixing time usually is less than 60 seconds.
- ❖ Hot mix is conveyed to a hot storage silo or is dropped directly into a truck and hauled to the job site.

Liquid asphalt cement is weighed to achieve the desired aggregate-to-asphalt cement ratio in the final mix.

At older plants, RAP typically is conveyed directly to the pug mill from storage hoppers and combined with the hot aggregate.

Parallel Flow Drum Mix Asphalt Plant



Parallel Flow Drum Mix Asphalt Plant

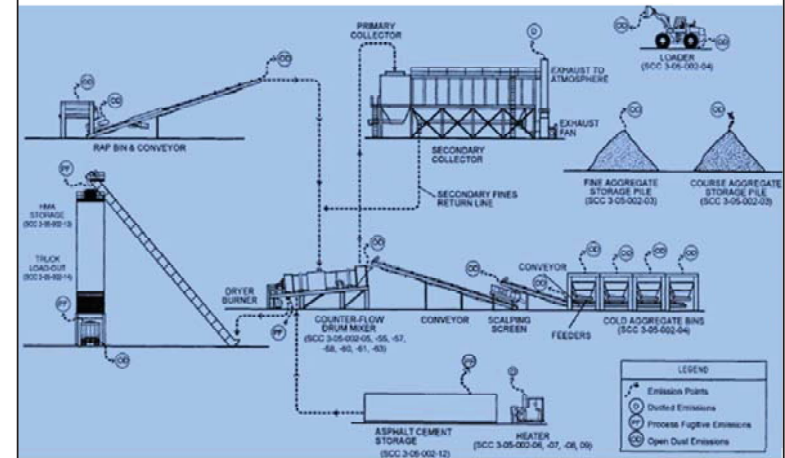
- > Continuous mixing type process
- > Advantage - mixing in the discharge end of the drum captures a substantial portion of the aggregate dust, therefore lowering the load on the downstream PM collection equipment
 - ❖ For this reason, most parallel flow drum mixers are followed only by primary collection equipment (usually a baghouse or venturi scrubber).
- > Mixing occurs in the hot combustion product flow, therefore organic emissions (gaseous and liquid aerosol) may be greater than in other asphalt mixing processes.
- > There's no data available to distinguish significant emissions differences between parallel and batch process designs.

Parallel Flow Drum Mix Plants - uses proportioning cold feed controls for the process materials.

The major difference between this process and the batch process is that the dryer is used not only to dry the material but also to mix the heated and dried aggregates with the liquid asphalt cement. Aggregate, which has been proportioned by size gradations, is introduced to the drum at the burner end. As the drum rotates, the aggregates, as well as the combustion products, move toward the other end of the drum in parallel. Liquid asphalt cement flow is controlled by a variable flow pump electronically linked to the new (virgin) aggregate and RAP weigh scales. The asphalt cement is introduced in the mixing zone midway down the drum in a lower temperature zone, along with any RAP and particulate matter (PM) from collectors.

The mixture is discharged at the end of the drum and is conveyed to either a surge bin or HMA storage silos, where it is loaded into transport trucks. The exhaust gases also exit the end of the drum and pass on to the collection system.

Counterflow Drum Mix Asphalt Plant



Counterflow Drum Mix Asphalt Plant

- > Material flow in the drum is opposite or counterflow to the direction of exhaust gases
- > Likely have organic emissions (gaseous and liquid aerosol) that are lower than parallel flow drum mix plants
- > Can normally process RAP at ratios up to 50 % with little or no observed effect upon emissions

Counterflow Drum Mix Plants - In this type of plant, the liquid asphalt cement mixing zone is located behind the burner flame zone so as to remove the materials from direct contact with hot exhaust gases.

Liquid asphalt cement flow is controlled by a variable flow pump which is electronically linked to the virgin aggregate and RAP weigh scales. It is injected into the mixing zone along with any RAP and particulate matter from primary and secondary collectors.

Because liquid asphalt cement, virgin aggregate, and RAP are mixed in a zone removed from the exhaust gas stream, counterflow drum mix plants will likely have organic emissions (gaseous and liquid aerosol) that are lower than parallel flow drum mix plants.

However, the available data are insufficient to discern any differences in emissions that result from differences in the two processes. A counterflow drum mix plant can normally process RAP at ratios up to 50 % with little or no observed effect upon emissions.

Recycle Processes - In recent years, the use of RAP has been initiated in the HMA industry. Reclaimed asphalt pavement significantly reduces the amount of virgin rock and asphalt cement needed to produce HMA. In the reclamation process, old asphalt pavement is removed from the road base. This material is then transported to the plant, and is crushed and screened to the appropriate size for further processing. The paving material is then heated and mixed with new aggregate (if applicable), and the proper amount of new asphalt cement is added to produce HMA that meets the required quality specifications.

Asphalt Plants Regulations to Consider

- > NSPS:
 - ❖ Subpart I
- > NESHAPs:
 - ❖ None
- > Other:
 - ❖ Rule 62-296.704, F.A.C. (PM RACT - asphalt concrete plants in PM non-attainment/maintenance areas)
 - ❖ Note: If subject to the NSPS, NSPS requirements are more stringent than RACT

NSPS Subpart I—Standards of Performance for Hot Mix Asphalt Facilities.

Bulk Solid Material Shipping/ Receiving Quick Facts

- > Source of Emissions:
 - ❖ Material Handling, Fugitives (PM_{10} , $PM_{2.5}$)
- > Types of Controls:
 - ❖ Storage Pile Controls - wetting, chemical wetting agents
 - ❖ Paved roadways for fugitives due to transfer
- > Source Category:
 - ❖ Title V - Major, Synthetic Minor, and True Minor
 - ❖ PSD - Major and Minor

<http://www.epa.gov/ttn/chief/ap42/ch13/final/c13s0204.pdf>

Bulk Solid Material Shipping/ Receiving Quick Facts

- > Dust emissions occur at several points in the storage cycle:
 - ❖ Material loading onto the pile
 - ❖ Disturbances by strong wind currents
 - ❖ Loadout from the pile
 - ❖ Movement of trucks and loading equipment in the storage pile area
- > Emissions - vary with the volume of aggregate passing through the storage cycle
- > Correction Parameters - Emissions also depend on 3 parameters of the condition of a particular storage pile:
 - ❖ age of the pile
 - ❖ moisture content
 - ❖ proportion of aggregate fines

Inherent in operations that use minerals in aggregate form is the maintenance of outdoor storage piles. Storage piles are usually left uncovered, partially because of the need for frequent material transfer into or out of storage.

Bulk Solid Material Shipping/ Receiving Process Description

Table 13.2.4-1. TYPICAL SILT AND MOISTURE CONTENTS OF MATERIALS AT VARIOUS INDUSTRIES*

Industry	No. Of Facilities	Material	Silt Content (%)			Moisture Content (%)		
			No. Of Samples	Range	Mean	No. Of Samples	Range	Mean
Iron and steel production	9	Pellet ore	13	1.3 - 13	4.3	11	0.64 - 4.0	2.2
		Lump ore	9	2.8 - 19	9.5	6	1.6 - 8.0	5.4
		Coal	12	2.0 - 7.7	4.6	11	2.8 - 11	4.8
		Slag	3	3.0 - 7.3	5.3	3	0.25 - 2.0	0.92
		Fine dust	3	2.7 - 23	13	1	—	7
		Coarse breeze	2	4.4 - 3.4	4.9	2	6.4 - 9.2	7.8
		Blended ore	1	—	15	1	—	6.6
		Sinter	1	—	0.7	0	—	—
		Limestone	3	0.4 - 2.3	1.0	2	ND	0.2
		Crushed limestone	2	1.3 - 1.9	1.6	2	0.3 - 1.1	0.7
Stone quarrying and processing	2	Various limestone products	8	0.8 - 14	3.9	8	0.46 - 5.0	2.1
		Pellets	9	2.2 - 5.4	3.4	7	0.05 - 2.0	0.9
Taconite mining and processing	1	Tailings	2	ND	11	1	—	0.4
		Coal	15	3.4 - 16	6.2	7	2.8 - 20	6.9
Western surface coal mining	4	Overburden	15	3.8 - 15	7.5	0	—	—
		Exposed ground	3	5.1 - 21	15	3	0.8 - 6.4	3.4
Coal-fired power plant	1	Coal (as received)	60	0.6 - 4.8	2.2	59	2.7 - 7.4	4.5
		Sand	1	—	2.6	1	—	7.4
Municipal solid waste landfills	4	Slag	2	3.0 - 4.7	3.8	2	2.3 - 4.9	3.6
		Cover	5	5.0 - 16	9.0	5	8.9 - 16	12
		Clay/dirt mix	1	—	9.2	1	—	14
		Clay	2	4.5 - 7.4	6.0	2	8.9 - 11	10
		Fly ash	4	78 - 81	80	4	26 - 29	27
		Misc. fill materials	1	—	12	1	—	11

* References 1-10. ND = no data.

When freshly processed aggregate is loaded onto a storage pile, the potential for dust emissions is at a maximum. Fines are easily disaggregated and released to the atmosphere upon exposure to air currents, either from aggregate transfer itself or from high winds. As the aggregate pile weathers, however, potential for dust emissions is greatly reduced. Moisture causes aggregation and cementation of fines to the surfaces of larger particles. Any significant rainfall soaks the interior of the pile, and then the drying process is very slow.

Silt (particles equal to or less than 75 micrometers in diameter) content is determined by measuring the portion of dry aggregate material that passes through a 200-mesh screen, using ASTM-C-136 method.

Bulk Solid Material Shipping/ Receiving Regulations to Consider

- > NSPS:
 - ❖ None
- > NESHAPs:
 - ❖ None
- > MACT:
 - ❖ None
- > Other:
 - ❖ 62-296.711 Materials Handling, Sizing, Screening, Crushing and Grinding Operations” for PM non-attainment/maintenance areas

Medical Waste Incinerators Quick Facts

- > **Source of Emissions:**
 - ❖ Products of Combustion (PM₁₀, PM_{2.5}, VOC, NO_x, SO₂, Pb, CO, CO₂)
 - ❖ Other Materials present in waste (pathogens, cytotoxins, radioactive diagnostic materials)
- > **Types of Controls:**
 - ❖ PM Controls - Venturi or Wet Scrubber, Fabric Filters
 - ❖ Acid Gas Controls - dry sorbent injection (DSI) and spray dryer (SD) absorbers
- > **Source Category:**
 - ❖ Title V - Major, Synthetic Minor, and True Minor
 - ❖ PSD - Major and Minor

<http://www.epa.gov/ttn/chief/ap42/ch02/final/c02s03.pdf>

Medical Waste Incinerators - Types

- > **Controlled air** - majority in the industry (>95 %)
- > **Excess air** - less than two percent (<2 %) in the industry
- > **Rotary kiln** - less than one percent (<1 %)
 - ❖ The rotary kiln units tend to be larger, and typically are equipped with air pollution control devices.
 - ❖ Approximately 2 % of the total population identified in this study were found to be equipped with air pollution control devices.

Medical waste incineration involves the burning of wastes produced by hospitals, veterinary facilities, and medical research facilities. These wastes include both infectious ("red bag") medical wastes as well as non-infectious, general housekeeping wastes. The emission factors present in AP-42 represent emissions when both types of these wastes are combusted rather than just infectious wastes.

Medical Waste Incinerators - Controlled Air Incinerators

- > Most widely used MWI technology
- > Also known as starved-air incineration, two-stage incineration, or modular combustion
- > Combustion occurs in two stages:
 - ❖ First stage, waste is fed into the primary, or lower, combustion chamber, which is operated with less than the stoichiometric amount of air required for combustion
 - ❖ Second stage, excess air is added to the volatile gases formed in the primary chamber to complete combustion
- > Waste feed capacities for controlled air incinerators range from about 0.6 to 50 kg/min (75 to 6,500 lb/hr)
- > Waste feed and ash removal can be manual or automatic
- > Amount of solids entrained in the gases leaving the primary chamber is low. Therefore, majority do not have add-on gas cleaning devices.

Controlled-Air Incinerators - dominates the market for new systems at hospitals and similar medical facilities.

Combustion air enters the primary chamber from beneath the incinerator hearth (below the burning bed of waste). This air is called primary or underfire air. In the primary (starved-air) chamber, the low air-to-fuel ratio dries and facilitates volatilization of the waste, and most of the residual carbon in the ash burns. At these conditions, combustion gas temperatures are relatively low (760 to 980°C [1,400 to 1,800°F]).

In Secondary chamber temperatures are higher than primary chamber temperatures--typically 980 to 1,095°C (1,800 to 2,000°F). Depending on the heating value and moisture content of the waste, additional heat may be needed. This can be provided by auxiliary burners located at the entrance to the secondary (upper) chamber to maintain desired temperatures.

Waste feed capacities at an assumed fuel heating value of 19,700 kJ/kg [8,500 Btu/lb]. Waste feed and ash removal can be manual or automatic, depending on the unit size and options purchased. Throughput capacities for lower heating value wastes may be higher, since feed capacities are limited by primary chamber heat release rates. Heat release rates for controlled air incinerators typically range from about 430,000 to 710,000 kJ/hr-m³ (15,000 to 25,000 Btu/hr-ft³).

Because of the low air addition rates in the primary chamber, and corresponding low flue gas velocities (and turbulence), the amount of solids entrained in the gases leaving the primary chamber is low.

Medical Waste Incinerators - Excess Air Incinerators

- > Typically small modular units
- > Also referred to as: batch incinerators, multiple chamber incinerators, or "retort" incinerators
- > Although they can be operated continuously, are usually operated in a batch mode
- > Moisture and volatile components in the waste are vaporized, and pass (along with combustion gases) out of the primary chamber and through a flame port which connects to the secondary or mixing chamber
- > Gases exiting the secondary chamber are directed to the incinerator stack or to an air pollution control device

Excess Air Incinerators - typically a compact cube with a series of internal chambers and baffles.

Typically, waste is manually fed into the combustion chamber. The charging door is then closed, and an afterburner is ignited to bring the secondary chamber to a target temperature (typically 870 to 980°C [1600 to 1800°F]). When the target temperature is reached, the primary chamber burner ignites. The waste is dried, ignited, and combusted by heat provided by the primary chamber burner, as well as by radiant heat from the chamber walls. Secondary air is added through the flame port and is mixed with the volatile components in the secondary chamber. Burners are also installed in the secondary chamber to maintain adequate temperatures for combustion of volatile gases. When the waste is consumed, the primary burner shuts off. Typically, the afterburner shuts off after a set time. Once the chamber cools, ash is manually removed from the primary chamber floor and a new charge of waste can be added.

Incinerators designed to burn general hospital waste operate at excess air levels of up to 300 %. If only pathological wastes are combusted, excess air levels near 100 % are more common. The lower excess air helps maintain higher chamber temperature when burning high-moisture waste. Waste feed capacities for excess air incinerators are usually 3.8 kg/min (500 lb/hr) or less.

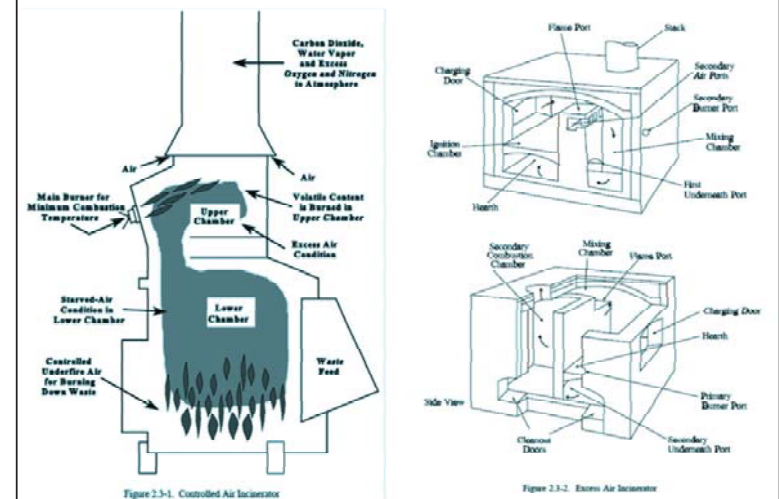
Medical Waste Incinerators - Rotary Kiln Incinerators

- > Designed with:
 - ❖ A primary chamber (slightly inclined, rotating kiln), where the waste is heated and volatilized
 - ❖ A secondary chamber, where combustion of the volatile fraction is completed
- > Due to the turbulent motion of the waste in the primary chamber, solids burnout rates and particulate entrainment in the flue gas are higher for rotary kiln incinerators than for other incinerator designs
- > As a result, rotary kiln incinerators generally have add-on gas cleaning devices

Primary chamber - waste materials migrate from the feed end to the ash discharge end. The waste throughput rate is controlled by adjusting the rate of kiln rotation and the angle of inclination. Combustion air enters the primary chamber through a port. An auxiliary burner is generally used to start combustion and maintain desired combustion temperatures. Both the primary and secondary chambers are usually lined with acid-resistant refractory brick.

Volatiles and combustion gases pass from the primary chamber to the secondary chamber. The secondary chamber operates at excess air. Combustion of the volatiles is completed in the secondary chamber.

Medical Waste Incinerator Description



Medical Waste Incinerators Regulations to Consider

- > NSPS:
 - ❖ Subpart Ec (new sources)
- > Emissions Guidelines:
 - ❖ Subpart Ce (existing sources), Rule 62-204.800(9), F.A.C.
- > NESHAPs:
 - ❖ None
- > MACT:
 - ❖ None
- > Other:
 - ❖ Rule 62-296.401, F.A.C. (Incinerators)
- > Section 129 of the CAA requires waste incineration to be regulated in NSPS (for both criteria pollutant and HAP) for new units and under a state's 111D plan for existing units.

NSPS Subpart Ce—Emission Guidelines and Compliance Times for Hospital/Medical/Infectious Waste Incinerators.

NSPS Subpart Ec—Standards of Performance for New Stationary Sources: Hospital/Medical/Infectious Waste Incinerators.

Section 129 of the CAA requires waste incineration to be regulated in NSPS (for both criteria pollutant and HAP) for new units and under a state's 111D plan for existing units. EPA promulgates emissions guidelines for existing waste incineration units, which states use to develop state standards in their 11D plans. It is the state standards that are directly enforceable.

Petroleum Storage & Transfer Quick Facts

- > Source of Emissions:
 - ❖ Evaporative Losses during storage and filling and emptying operations (VOC)
- > Types of Controls:
 - ❖ Vapor Balancing - Vapor Recovery Units, Vapor Combustion Units
- > Source Category:
 - ❖ Title V - Major, Synthetic Minor, and True Minor
 - ❖ PSD - Major and Minor

<http://www.epa.gov/ttn/chief/ap42/ch07/final/c07s01.pdf>

Petroleum Storage & Transfer Quick Facts - Tank Designs

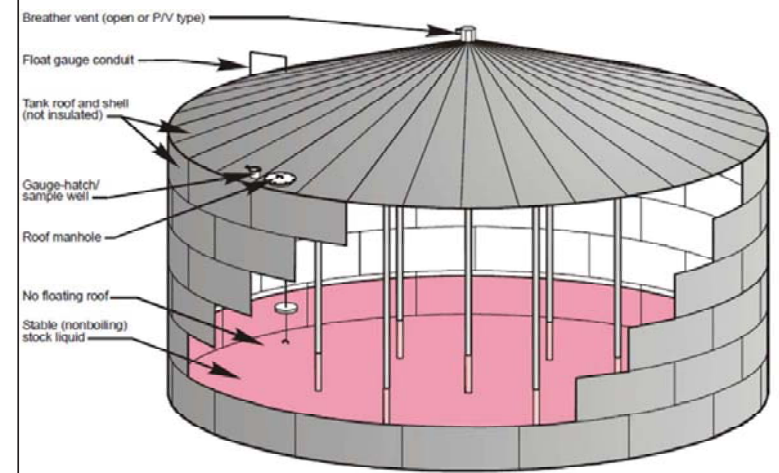
> 6 basic tank designs for organic liquid storage vessels:

- ❖ Fixed roof (vertical and horizontal)
- ❖ External floating roof
- ❖ Internal floating roof
- ❖ Domed external (or covered) floating roof
- ❖ Variable vapor space
- ❖ Pressure (low and high)

Storage vessels containing organic liquids can be found in many industries, including:

- petroleum producing and refining
 - petrochemical and chemical manufacturing
 - bulk storage and transfer operations
 - other industries consuming or producing organic liquids
- (Organic liquids in the petroleum industry, usually called petroleum liquids, generally are mixtures of hydrocarbons having dissimilar true vapor pressures (for example, gasoline and crude oil).)

Fixed-Roof Tank



Fixed Roof Tanks

- > Consist of a cylindrical steel shell with a permanently affixed roof, which may vary in design from cone- or dome-shaped to flat.
- > Losses are caused by changes in temperature, pressure, and liquid level.
- > Either freely vented or equipped with a pressure/vacuum vent.
- > Constructed for both above-ground and underground service.
- > The potential emission sources for above-ground horizontal tanks are the same as those for vertical fixed roof tanks. Emissions from underground storage tanks are associated mainly with changes in the liquid level in the tank.

Pressure/Vacuum Vent - allows the tanks to operate at a slight internal pressure or vacuum to prevent the release of vapors during very small changes in temperature, pressure, or liquid level. Of current tank designs, the fixed roof tank is the least expensive to construct and is generally considered the minimum acceptable equipment for storing organic liquids.

Horizontal fixed roof tanks are usually constructed of steel, steel with a fiberglass overlay, or fiberglass-reinforced polyester. Horizontal tanks are generally small storage tanks with capacities of less than 40,000 gallons. Horizontal tanks are constructed such that the length of the tank is not greater than six times the diameter to ensure structural integrity. Horizontal tanks are usually equipped with pressure-vacuum vents, gauge hatches and sample wells, and manholes to provide access to these tanks. In addition, underground tanks may be cathodically protected to prevent corrosion of the tank shell. Cathodic protection is accomplished by placing sacrificial anodes in the tank that are connected to an impressed current system or by using galvanic anodes in the tank. However, internal cathodic protection against corrosion is no longer widely used in the petroleum industry, due to corrosion inhibitors that are now found in most refined petroleum products.

Losses due to changes in temperature or barometric pressure are minimal for underground tanks because the surrounding earth limits the diurnal temperature change, and changes in the barometric pressure result in only small losses.

External Floating Roof Tanks

- > Roof floats on the surface of the stored liquid.
- > Roof rises and falls with the liquid level in the tank.
- > Floating roof and rim seal system: reduce evaporative loss of the stored liquid.
- > Design is such that evaporative losses from the stored liquid are limited to losses from the rim seal system and deck fittings (standing storage loss) and any exposed liquid on the tank walls (withdrawal loss).

A typical external floating roof tank (EFRT) consists of an open-topped cylindrical steel shell equipped with a roof that floats on the surface of the stored liquid. The floating roof consists of a deck, fittings, and rim seal system. Floating decks that are currently in use are constructed of welded steel plate and are of two general types: pontoon or double-deck. With all types of external floating roof tanks, the roof rises and falls with the liquid level in the tank. External floating decks are equipped with a rim seal system, which is attached to the deck perimeter and contacts the tank wall. The purpose of the floating roof and rim seal system is to reduce evaporative loss of the stored liquid. Some annular space remains between the seal system and the tank wall. The seal system slides against the tank wall as the roof is raised and lowered. The floating deck is also equipped with fittings that penetrate the deck and serve operational functions. The external floating roof design is such that evaporative losses from the stored liquid are limited to losses from the rim seal system and deck fittings (standing storage loss) and any exposed liquid on the tank walls (withdrawal loss).

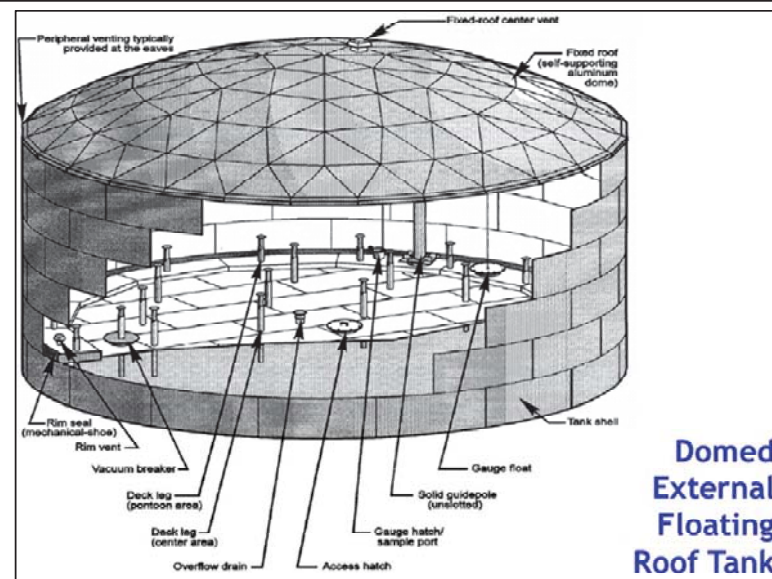
Internal Floating Roof Tanks (IFRT)

- > Has both a permanent fixed roof and a floating roof inside
- > 2 basic types:
 - ❖ fixed roof is supported by vertical columns within the tank
 - ❖ tanks with a self-supporting fixed roof and no internal support columns
- > A floating roof minimizes evaporative losses of the stored liquid.
- > Evaporative losses may come from deck fittings, non-welded deck seams, and the annular space between the deck and tank wall.
- > Freely vented by circulation vents at the top of the fixed roof.
 - ❖ vents minimize the possibility of organic vapor accumulation in concentrations approaching the flammable range

FRT that have been retrofitted to use a floating roof are typically of the first type. External floating roof tanks that have been converted to internal floating roof tanks typically have a self-supporting roof. Newly constructed internal floating roof tanks may be of either type. The deck in internal floating roof tanks rises and falls with the liquid level and either floats directly on the liquid surface (contact deck) or rests on pontoons several inches above the liquid surface (noncontact deck). The majority of aluminum internal floating roofs currently in service have noncontact decks.

Contact decks can be: (1) aluminum sandwich panels that are bolted together, with a honeycomb aluminum core floating in contact with the liquid; (2) pan steel decks floating in contact with the liquid, with or without pontoons; and (3) resin-coated, fiberglass reinforced polyester (FRP), buoyant panels floating in contact with the liquid. The majority of internal contact floating decks currently in service are aluminum sandwich panel-type or pan steel-type. The FRP decks are less common. The panels of pan steel decks are usually welded together.

Noncontact decks are the most common type currently in use. Typical noncontact decks are constructed of an aluminum deck and an aluminum grid framework supported above the liquid surface by tubular aluminum pontoons or some other buoyant structure. The noncontact decks usually have bolted deck seams. Both contact and noncontact decks incorporate rim seals and deck fittings for the same purposes previously described for external floating roof tanks. An internal floating roof tank not freely vented is considered a pressure tank. Emission estimation methods for such tanks are not provided in AP-42.



**Domed
External
Floating
Roof Tank**

Domed External Floating Roof Tanks

- > Have the heavier type of deck used in external floating roof tanks as well as a fixed roof at the top of the shell like internal floating roof tanks.
- > Very similar to an internal floating roof tank with a welded deck and a self-supporting fixed roof.
- > The function of the fixed roof is not to act as a vapor barrier, but to block the wind.
- > Freely vented by circulation vents at the top of the fixed roof.

Domed external floating roof tanks usually result from retrofitting an external floating roof tank with a fixed roof. This type of tank is very similar to an internal floating roof tank with a welded deck and a self-supporting fixed roof.

The type of fixed roof most commonly used is a self-supporting aluminum dome roof, which is of bolted construction.

The deck fittings and rim seals, however, are identical to those on external floating roof tanks.

In the event that the floating deck is replaced with the lighter IFRT-type deck, the tank would then be considered an internal floating roof tank.

Variable Vapor Space Tanks

- > Equipped with expandable vapor reservoirs to accommodate vapor volume fluctuations attributable to temperature and barometric pressure changes
- > Normally connected to the vapor spaces of one or more fixed roof tanks
- > The two most common types are:
 - ❖ Lifter roof tanks
 - ❖ Flexible diaphragm tanks
- > Variable vapor space tank losses occur during tank filling when vapor is displaced by liquid
- > Loss of vapor occurs only when the tank's vapor storage capacity is exceeded

Although variable vapor space tanks are sometimes used independently, they are normally connected to the vapor spaces of one or more fixed roof tanks.

Lifter roof tanks have a telescoping roof that fits loosely around the outside of the main tank wall. The space between the roof and the wall is closed by either a wet seal, which is a trough filled with liquid, or a dry seal, which uses a flexible coated fabric.

Flexible diaphragm tanks use flexible membranes to provide expandable volume. They may be either separate gasholder units or integral units mounted atop fixed roof tanks.

Pressure Tanks

- > Two classes of pressure tanks in general use:
 - ❖ Low pressure (2.5 to 15 psig)
 - ❖ High pressure (higher than 15 psig)
- > Equipped with a pressure/vacuum vent that is set to prevent venting loss from boiling and breathing loss from daily temperature or barometric pressure changes
- > No appropriate correlations are available to estimate vapor losses from pressure tanks

Generally are used for storing organic liquids and gases with high vapor pressures and are found in many sizes and shapes, depending on the operating pressure of the tank.

High-pressure storage tanks can be operated so that virtually no evaporative or working losses occur

Low-pressure tanks, working losses can occur with atmospheric venting of the tank during filling operations.

Petroleum Storage & Transfer Regulations to Consider

- > NSPS:
 - ❖ Subparts K, Ka, Kb
- > NESHAPs:
 - ❖ None
- > MACT:
 - ❖ Subpart CC
- > MACT:
 - ❖ Rules 62-296.508 and 62.296.516, F.A.C. (petroleum liquid storage)

NSPS Subpart K—Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978.

NSPS Subpart Ka—Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984.

NSPS Subpart Kb—Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984. (NSPS Subpart Kb *does not apply* to storage vessels with a capacity greater than or equal to 151 m³ storing a liquid with a maximum true vapor pressure *less than* 3.5 kilopascals (0.51 psia) or with a capacity greater than or equal to 75 m³ but less than 151 m³ storing a liquid with a maximum true vapor pressure *less than* 15.0 kPa (2.17 psia). Vapor pressure is the pressure of a confined vapor in equilibrium with a stored liquid at a given temperature and a measure of the volatility of the stored liquid. In general, Subpart Kb is intended to regulate liquids much more volatile than fuel oil, such as gasoline. Distillate oil has a vapor pressure of approximately 0.009 psia at 70°F, which is well below either of the specified vapor pressures specified above and is not considered to be very volatile. Therefore, Subpart Kb does not apply to distillate oil tanks.)

MACT Subpart CC—NESHAP for Petroleum Refineries.

Evaporative losses from external floating-roof tanks are greater than from fixed-roof tanks.

A. True

✓ B. False



Minor Sources With Air General Permit Registrations

Inspection checklists for air general permits are now incorporated in AirCom's field inspection tool.

Can register for Air General Permits on line via the AGPERS system accessible at <http://www.dep.state.fl.us/air/emission/agpers.htm> or mail in registration forms available for download at http://www.dep.state.fl.us/air/emission/air_gp.htm.

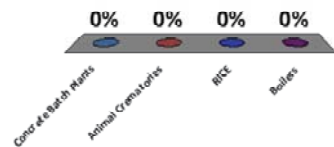
Frequently asked questions are available at:
http://www.dep.state.fl.us/air/emission/sbeaplib/agp_faq.pdf.

The Small Business Environmental Assistance Program (SBEAP) (implemented under Sections 403.8051-.8052, F.S., and Rule 62-210.220, F.A.C.) assistance is primarily geared towards air general permit facilities.

SBEAP Toll Free Hotline: 1-800-722-7457.

Which of the following is not a category represented by a general permit?

- A. Concrete Batch Plants
- B. Animal Crematories
- C. RICE
- ✓ D. Boilers



FL Air General Permits

- > FL has 17 air general permits, also called “permits by rule” - See Rule 62-210.310, F.A.C. for Air General Permits
- > These are actually registrations notifying the Department that a facility is eligible to use an air general permit
- > Six categories represent about 85% of all registered air general permits: human and animal cremation units, concrete batch plants, reinforced polyester resin operations, non-metallic mineral processors (crushers), and perchloroethylene dry cleaners

The 17 AGP's are:

1. Asbestos Manufacturing and Fabrication Facilities
2. Animal Crematory
3. Bulk Gasoline Plants
4. Cast Polymer Operations
5. Chromium Electroplaters
6. Concrete Batching Plants
7. Ethylene Oxide Sterilizers
8. Halogenated Solvent Degreaser
9. Human Crematory
10. Mercury Recovery and Reclamation
11. Nonmetallic Mineral Processing Plants
12. Perchloroethylene Dry Cleaners
13. Printing Operations
14. Reciprocating Internal Combustion Engines (RICE)
15. Reinforced Polyester Resin Operations
16. Secondary Aluminum Sweat Furnace
17. Surface Coating Operations

General permit facilities are federally required to be inspected once every five (5) years.

A. True

✓ B. False



FL Air General Permits - Animal Crematories

- > Contains one or more combustion units, known as cremators, used solely for the cremation of dead animals within appropriate containers
- > General Permit: Rule 62-210.310(5)(d), F.A.C. for minor sources
- > Rule 62-296.401(6), F.A.C. specifies that:
 - ❖ Animal crematories be designed and operated for optimum combustion
 - ❖ Continuous temperature monitors and automatic control combustion system based on continuous in stack opacity measurements are required

Florida Rule 62-210.310(5)(d) F.A.C. Requirements:

1. A facility comprising one or more animal crematories shall be eligible to use this air general permit provided it meets the general eligibility criteria of paragraph 62-210.310(2)(a), F.A.C., and no animal crematory unit at the facility exceeds a design capacity of 500 lb/hr cremated.
2. A facility using this air general permit shall comply with the general conditions given at subsection 62-210.310(3), F.A.C., and the following specific conditions.
 - a. The facility shall comply with all applicable provisions of subsection 62-296.401(6), F.A.C.
 - b. The owner or operator may use an animal crematory air general permit and a human crematory air general permit at the same facility, provided all animal crematory units operate under a single animal crematory air general permit and all human crematory units operate under a single human crematory air general permit.
3. Registration for this air general permit shall include:
 - a. For an initial registration for a proposed new animal crematory unit, design calculations to confirm a sufficient volume in the secondary chamber combustion zone to provide for at least a 1.0 second gas residence time at 1800 degrees F.
 - b. For each crematory unit, the manufacturer, model number, serial number, and rated capacity.

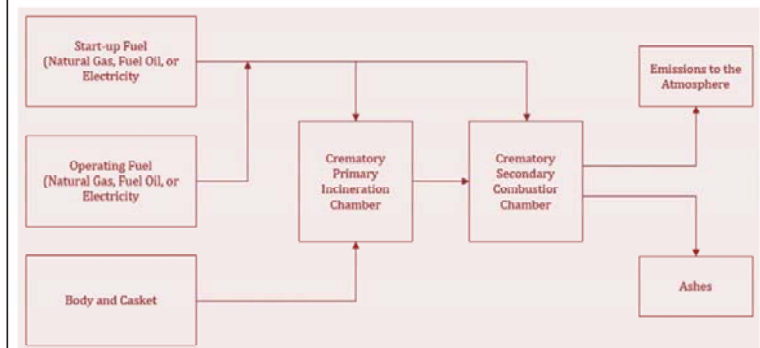
FL Air General Permits - Human Crematories

- > Contains one or more combustion units
- > Used solely for the cremation of human bodies within appropriate containers
- > Have a variety of automatic controls and use gas for heating the cremator
- > Florida Statutes (470.025, F.S.) prohibit the use of chlorinated plastics in the containers used for cremations
- > General Permit: Rule 62-210.310(5)(c), F.A.C. for minor sources
- > **Rule 62-296.401(5), F.A.C.** specifies that:
 - ❖ Crematories be designed and operated for optimum combustion
 - ❖ Continuous temperature monitors/recorders are also required

Florida Rule 62-210.310(5)(c) F.A.C. Requirements:

1. A facility comprising one or more human crematories shall be eligible to use this air general permit provided it meets the general eligibility criteria of paragraph 62-210.310(2)(a), F.A.C.
2. A facility using this air general permit shall comply with the general conditions given at subsection 62-210.310(3), F.A.C., and the following specific conditions.
 - a. The facility shall comply with all applicable provisions of subsection 62-296.401(5), F.A.C.
 - b. The owner or operator may use a human crematory air general permit and an animal crematory air general permit at the same facility, provided all human crematory units operate under a single human crematory air general permit and all animal crematory units operate under a single animal crematory air general permit.
3. The registration for this air general permit shall include:
 - a. For an initial registration, design calculations to confirm a sufficient volume in the secondary chamber combustion zone to provide for at least a 1.0 sec gas residence time at 1800 deg F.
 - b. For each crematory unit, the manufacturer, model number, serial number, and rated capacity.

Crematories Process Description



A human body usually contains a negative caloric value, meaning that energy is required to combust it. This is a result of the high water content; all water must be vaporized which requires a very large amount of thermal energy.

A 68 kg (150 lbs) body which contains 65% water will require 100 MJ of thermal energy before any combustion will take place. 100 MJ is approximately equivalent to 3 m³ (105 ft³) of natural gas, or 3 liters of fuel oil (0.8 US gallons). Additional energy is necessary to make up for the heat capacity ("preheating") of the furnace, fuel burned for emissions control, and heat losses through the insulation and in the flue gases.

Cremators are usually made of high-grade steel plate and lined inside with heavy refractory tile or brick.

Most cremators have a variety of automatic controls and use gas for heating the cremator.

Crematories - Quick Facts

- > Source of Emissions:
 - ❖ Products of Combustion (PM₁₀, PM_{2.5}, VOC, NO_x, SO₂, Pb, CO, CO₂)
- > Types of controls:
 - ❖ Multi-chamber cremation units
- > Source Category:
 - ❖ Title V - True Minor
 - ❖ PSD - Minor
 - ❖ Minor Sources are subject to conditions of the Air General Permit:
 - ♦ Florida Human Crematory General Air Permits
 - ♦ Florida Animal Crematory General Air Permits

Crematories - Quick Facts

- > Most often heated by burners fueled by natural gas
- > Burners can range in power from 150 kW (0.5 MMBTU/h) to over 800 kW (1.5 MMBTU/h)
- > A typical unit contains:
 - ❖ Primary combustion chamber - contains the body
 - ♦ Temperature: between 760 to 1150 ° C (1400 to 2100 ° F)
 - ♦ Higher temperatures generate more NO_x, and accelerate spalling of the furnace's refractory lining
 - ❖ Secondary combustion chamber -
 - ♦ Temperature: greater than 900 ° C (1650 ° F)
 - ♦ A secondary burner(s) fires into this chamber, oxidizing any organic material which passes from the primary chamber (acts as a pollution control method - eliminates odors and smoke emissions).

LPG (propane/butane) or fuel oil may be used where natural gas is not available.

These chambers are lined with a refractory ceramic brick designed to withstand the high temperatures.

The primary chamber- one at a time usually contained in some type of combustible casket or container. This chamber has at least one burner to provide the heat which vaporizes the water content of the body and aids in combustion of the organic portion. A large door exists to load the body container. Higher temperatures speed cremation but consume more energy.

The secondary chamber may be at the rear or above the primary chamber.

Crematories Regulations to Consider

- > NSPS:
 - ❖ None
- > NESHAPs:
 - ❖ None
- > MACT:
 - ❖ None
- > State
 - ❖ [Rule 62-296.401\(5\) and 62-296.401\(6\), F.A.C.](#)

NOTE: There are no Federal regulations regarding crematories, only state regulations

FL Air General Permits - Concrete Batching Plants

- > Concrete batching plants use equipment to produce concrete and concrete products by batching or mixing cements and other materials.
- > Equipment used at a concrete batching plant includes silos, weigh hoppers (batchers), conveyors, mixer engines, and auxiliary generators.
- > Concrete batching plants are eligible to operate in Florida under the terms of an air general permit pursuant to the requirements of the applicable Florida Rule 62-210.310(5)(b) F.A.C.

62-210.310(5)(b)(1)-(3) F.A.C. Air General Permit Requirements:

1. For purposes of this air general permit, the term "concrete batching plant" shall have the meaning given at Rule 62-296.414, F.A.C., and the term "site" shall mean one or more contiguous or adjacent properties under control of the same person (or persons under common control).
2. A facility comprising one or more stationary or relocatable concrete batching plants shall be eligible to use this air general permit provided it meets the general eligibility criteria of paragraph 62-210.310(2)(a), F.A.C.
3. A facility using this air general permit shall comply with the general conditions given at subsection 62-210.310(3), F.A.C., and the following specific conditions.
 - a. Comply with applicable provisions of Rule 62-296.414, F.A.C.
 - b. Owner/operator of any equipment used to mix cement and soil for onsite soil augmentation or stabilization shall notify the Dept. at least 1 business day prior to changing location and transmit a Facility Relocation Notification Form to the Dept. no later than 5 business days following relocation. Owner/operator of any other plant proposing to change location shall transmit Facility Relocation Notification Form to the Dept. at least 5 business days prior to relocation.

Concrete Batching Plants Quick Facts

- > **Source of Emissions:**
 - ❖ Raw Material Handling, Fugitive Emissions (PM₁₀, PM_{2.5})
 - ❖ Material Transfer to Silos (PM₁₀, PM_{2.5})
- > **Types of Controls:**
 - ❖ Fugitive Controls - water sprays, enclosures, hoods, curtains, shrouds, movable and telescoping chutes
 - ❖ Silo Controls - Fabric Filter, dust collector
- > **Source Category:**
 - ❖ General permit, minor or synthetic minor
- > **Note:** Concrete batch plants are typically covered by General Permit registrations. If a plant is collocated with other sources then traditional permits may be required.

Rule 62-210.310(5)(b)(4), F.A.C.: A facility using this air general permit may collocate with other facilities that separately registered for, and are also using, the concrete batching plant air general permit, and with facilities using the nonmetallic mineral processing plant air general permit, even if under the control of different persons, provided the following conditions are met.

- a. The collocation site does not contain any emissions units and pollutant-emitting activities other than concrete batching plants using air general permits, nonmetallic mineral processing plants using air general permits, and nonmetallic mineral processing plants or other emissions units and pollutant-emitting activities exempted from permitting pursuant to subsection 62-210.300(3), F.A.C., or Rule 62-4.040, F.A.C.
- b. The total fuel consumption by all emissions units at the collocation site shall not exceed 275,000 gal/yr of diesel fuel, 23,000 gal/yr of gasoline, 44 MMSCF/yr of natural gas, or 1.3 MMgal/yr of propane, or an equivalent prorated amount if multiple fuels are used.
- c. If multiple fuels are used, the equivalent prorated amount of each fuel burned shall not exceed the total amount of such fuel allowed to be burned, as given in sub-subparagraph b., multiplied by a fuel percentage. (further detailed in rule)
- d. Owners/operators all collocated concrete batching plants and nonmetallic mineral processing plants shall maintain records of site-wide fuel consumption each calendar month and each consecutive 12 months.

Concrete Batching Plants

- > Concrete - composed essentially of water, cement, sand (fine aggregate) and coarse aggregate
- > Approximately 75 % of the U.S. concrete manufactured is produced at plants that store, convey, measure and discharge these constituents into trucks for transport to a job site.
- > At most of these plants, sand, aggregate, cement and water are all gravity fed from the weight hopper into the mixer trucks.
- > Cement is transferred to elevated storage silos pneumatically or by bucket elevator.

Coarse aggregate may consist of gravel, crushed stone or iron blast furnace slag. Some specialty aggregate products could be either heavyweight aggregate (of barite, magnetite, limonite, ilmenite, iron or steel) or lightweight aggregate (with sintered clay, shale, slate, diatomaceous shale, perlite, vermiculite, slag pumice, cinders, or sintered fly ash).

Supplementary cementitious materials, also called mineral admixtures or pozzolan minerals may be added to make the concrete mixtures more economical, reduce permeability, increase strength, or influence other concrete properties. Typical examples are natural pozzolans, fly ash, ground granulated blast-furnace slag, and silica fume, which can be used individually with portland or blended cement or in different combinations. Chemical admixtures are usually liquid ingredients that are added to concrete to entrain air, reduce the water required to reach a required slump, retard or accelerate the setting rate, to make the concrete more flowable or other more specialized functions.

Concrete Batching Plants

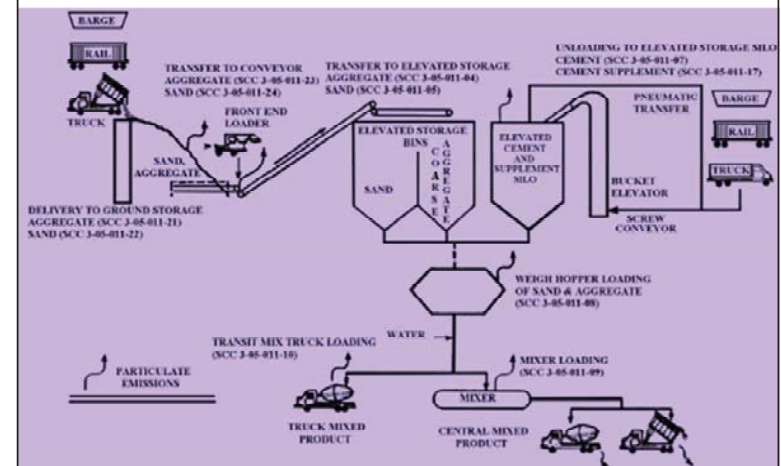
- > Raw materials can be delivered to a plant by rail, truck or barge.
- > The sand and coarse aggregate are transferred to elevated bins by front end loader, clam shell crane, belt conveyor, or bucket elevator.
- > From these elevated bins, the constituents are fed by gravity or screw conveyor to weigh hoppers, which combine the proper amounts of each material.

The concrete is mixed on the way to the site where the concrete is to be poured. At some of these plants, the concrete may also be manufactured in a central mix drum and transferred to a transport truck. Most of the remaining concrete manufactured are products cast in a factory setting.

Precast products range from concrete bricks and paving stones to bridge girders, structural components, and panels for cladding.

Concrete masonry, another type of manufactured concrete, may be best known for its conventional 8 x 8 x 16-inch block. In a few cases concrete is dry batched or prepared at a building construction site.

Concrete Batching Plant Process Description



Concrete Batching Plants Regulations to Consider

- > NSPS:
 - ❖ None
- > NESHAPs:
 - ❖ None
- > MACT:
 - ❖ None
- > State:
 - ❖ Rule 62-296.414, F.A.C. (Concrete batching)

NOTE: There are no Federal regulations regarding concrete batching, only state regulations

FL Air General Permits - Fiberglass Products

- > Reinforced polyester resin operations entails laying reinforcements such as glass fiber in a mold and saturating it with a polyester plastic resin. The resin hardens to form a rigid plastic part, reinforced with the fiberglass.
- > Eligible to operate in Florida under the terms of an air general permit pursuant to the requirements of the applicable Florida Rule 62-210.310(4)(d) F.A.C.

<http://www.epa.gov/ttn/chief/ap42/ch04/final/c04s04.pdf>.

Florida Rule 62-210.310(4)(d)(1) – (2) F.A.C. Requirements:

1. A facility comprising one or more reinforced polyester resin operations shall be eligible to use this air general permit provided it meets the general eligibility criteria of paragraph 62-210.310(2)(a), F.A.C., and the following specific criteria.
 - a. The facility shall use no other air general permit.
 - b. The facility shall not be subject to any unit-specific limitation or requirement other than any such limitation or requirement set forth in this air general permit.
2. A facility using this air general permit shall comply with the general conditions given at subsection 62-210.310(3), F.A.C., and the following specific conditions.
 - a. The combined quantity of styrene-containing resin and gelcoat used shall not exceed 76,000 pounds in any consecutive 12 months.
 - b. The facility shall comply with the objectionable odor prohibition of subsection 62-296.320(2), F.A.C.
 - c. Owner/operator shall maintain records to document the quantity of resin and gelcoat used on a monthly basis.

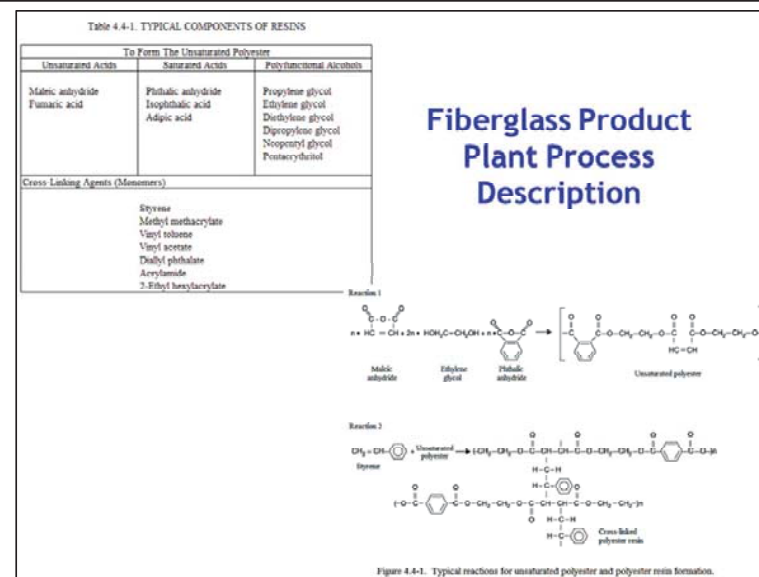
Fiberglass Product Plants Quick Facts

- > Source of Emissions:
 - ❖ Fabrication Process (VOC)
- > Types of Controls:
 - ❖ Vapor suppression agents added to the resin
 - ❖ VOC Controls - Carbon adsorption, absorption, and condensation
- > Source Category:
 - ❖ Title V - Major, Synthetic Minor, and True Minor
 - ❖ PSD - Major and Minor
 - ❖ General Permit
 - Reinforced Polyester Resin Operations General Air Permits

Fiber-reinforced plastics products have a wide range of application in industry, transportation, home, and recreation. Industrial uses include storage tanks, skylights, electrical equipment, ducting, pipes, machine components, and corrosion resistant structural and process equipment. In transportation, automobile and aircraft applications are increasing rapidly. Home and recreational items include bathroom tubs and showers, boats (building and repair), surfboards and skis, helmets, swimming pools and hot tubs, and a variety of sporting goods.

Florida Rule 62-210.310(4)(d)(3) F.A.C. Air General Permit Registration Includes the following information:

- a. For initial registrations, an estimate of the total quantity, in pounds, of styrene-containing materials (resin and gelcoat) expected to be used over a 12-month period.
- b. For re-registrations, the highest 12-month total quantity, in pounds, of styrene-containing materials (resin and gelcoat) used in the last five years, and the 12-month period over which this usage occurred.



The thermosetting polyester resins considered here are complex polymers resulting from the cross-linking reaction of a liquid unsaturated polyester with a vinyl type monomer, list often styrene. The unsaturated polyester is formed from the condensation reaction of an unsaturated dibasic acid or anhydride, a saturated dibasic acid or anhydride, and a polyfunctional alcohol. The emission factors used for calculations apply to fabrication processes that use the finished liquid resins (as received by fabricators from chemical manufacturers), and not to the chemical processes used to produce these resins. (See AP-42 Chapter 6, Organic Chemical Process Industry.)

In order to be used in the fabrication of products, the liquid resin must be mixed with a catalyst to initiate polymerization into a solid thermoset. Catalyst concentrations generally range from 1 to 2 % by original weight of resin; within certain limits, the higher the catalyst concentration, the faster the cross-linking reaction proceeds. Common catalysts are organic peroxides, typically methyl ethyl ketone peroxide or benzoyl peroxide. Resins may contain inhibitors, to avoid self-curing during resin storage, and promoters, to allow polymerization to occur at lower temperatures.

Fiberglass Product Plant Process Description

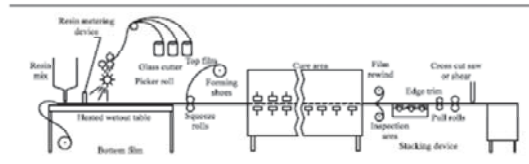


Figure 4.4-2. Typical continuous lamination production process.²

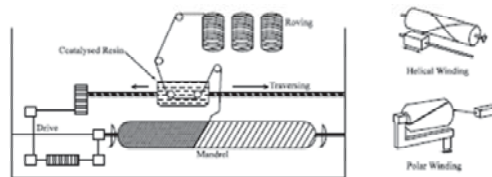


Figure 4.4-3. Typical filament winding process.³

Fiberglass Product Plant Process Description

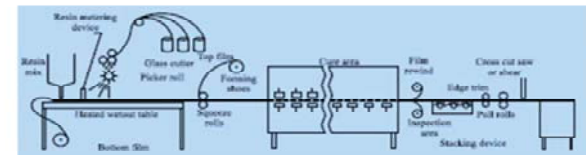


Figure 4.4-2. Typical continuous lamination production process.²

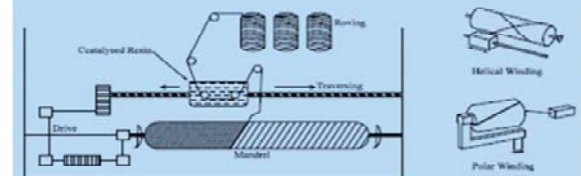


Figure 4.4-3. Typical filament winding process.³

Fiberglass Product Plants Regulations to Consider

- > NSPS:
 - ❖ Subpart PPP (Wool fiberglass insulation)
 - > NESHAPs:
 - ❖ None
 - > MACT:
 - ❖ Subpart NNN (Wool fiberglass manufacturing)
 - ❖ Subpart HHHH (Wet formed fiberglass mat production)
 - ❖ Subpart VVVV (Boat manufacturing)
 - ❖ Subpart WWWW (Reinforced plastic composites)
- Note: If subject to any federal requirements, can not apply for General Permit.

NSPS Subpart PPP—Standard of Performance for Wool Fiberglass Insulation Manufacturing Plants.

FL Air General Permits - Nonmetallic Mineral Processing Plants (Crushers)

- > Nonmetallic mineral processing plants are commonly referred to as rock crushers
- > Use equipment to crush or grind any nonmetallic mineral wherever located including lime plants, power plants, steel mills, asphalt concrete plants
- > Equipment: crushers, grinding mills, belt conveyors, bucket elevators, screening operations, bagging operations, storage bins, enclosed truck or railcar loading stations, crusher engines, and auxiliary generators
- > Eligible to operate in Florida under the terms of an air general permit pursuant to the requirements of the applicable [Florida Rule 62-210.310\(5\)\(e\) F.A.C.](#)

Applicable Florida Rule 62-210.310(5)(e) F.A.C.:

1. For purposes of this air general permit, the definitions at 40 CFR Part 60, Subpart OOO, shall apply, and the term "site" shall mean one or more contiguous or adjacent properties under control of the same person or common control. A facility need not be subject to 40 CFR Part 60, Subpart OOO, to be eligible for use of this air general permit. If a facility using this air general permit later becomes subject to 40 CFR Part 60, Subpart OOO, the owner or operator shall re-register with Dept.
2. A stationary or relocatable facility comprising 1 or more nonmetallic mineral processing plants shall be eligible to use this air general permit provided it meets the general eligibility criteria of paragraph 62-210.310(2)(a), F.A.C.
3. A facility using this air general permit shall comply with the general conditions given at subsection 62-210.310(3), F.A.C., and the following:
 - a. Total fuel consumption by the facility shall not exceed 23,000 gal/yr of gasoline, 275,000 gal/yr of diesel fuel, 1.3 Mmgal/yr of propane, 44 MMSCF/yr of natural gas, or an equivalent prorated amount.
 - b. If multiple fuels are used, the equivalent prorated amount of each fuel burned shall not exceed the total amount of such fuel allowed to be burned, as given in sub-subparagraph b., multiplied by a fuel percentage. (further detailed in rule)

Nonmetallic Mineral Processing Plants (Crushers) Quick Facts

- > Source of Emissions:
 - ❖ Raw Material Handling, Fugitive Emissions (PM₁₀, PM_{2.5})
- > Types of Controls:
 - ❖ Fugitive Controls - wet suppression systems (spray nozzles)
 - ❖ Process Controls - Fabric Filter, dust collector
- > Source Category:
 - ❖ Title V - Major, Synthetic Minor, and True Minor
 - ❖ PSD - Major and Minor
 - ❖ General Permit
 - Nonmetallic Mineral Processing Plants General Air Permits

Florida Rule 62-210.310(5)(e)(3)(e) F.A.C.: Nonmetallic mineral processing plants subject to 40 CFR Part 60, Subpart OOO, shall comply with all applicable standards, limitations, and requirements of Subpart OOO and Subpart A including initial performance tests. Thereafter, such facilities shall conduct performance tests for visible emissions annually in accordance with Subpart OOO. All notifications of upcoming visible emissions tests and all test results shall be submitted to the Department in accordance with the provisions of Rule 62-297.310, F.A.C.

Florida Rule 62-210.310(5)(e)(6) F.A.C. Air General Permit Registration info:

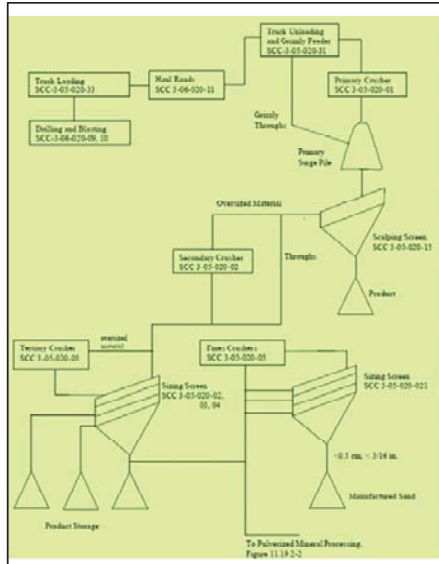
- a. The type of facility (stationary or relocatable).
- b. The precautions to be used to prevent unconfined emissions of particulate matter from roads, parking areas, stock piles, and yards (one or more of the following: pave roads; pave parking areas; pave yards; maintain roads/parking/yards; use water application; use dust suppressant; remove particulate matter; reduce stock pile height; or install wind breaks).
- c. The location of spray bars (one or more of the following: feeders; entrance to crushing operation; exit of crushing operation; classifier screens; or conveyor drop points).
- d. For each emission unit, component description (primary crusher, secondary crusher, screener, conveyor, reciprocating internal combustion engine, or other fuel burning equipment), manufacturer, date of manufacture, model number, serial number, and rated capacity.

Nonmetallic Mineral Processing Plants (Crushers) Quick Facts

- > Techniques used for extraction vary with the nature and location of the deposit
- > Processing operations may include:
 - ❖ crushing
 - ❖ screening
 - ❖ size classification
 - ❖ material handling
 - ❖ storage operations
- > All of these processes can be significant sources of PM and PM₁₀ emissions if uncontrolled

The stone from the surge pile is conveyed to a vibrating inclined screen called the scalping screen. This unit separates oversized rock from the smaller stone. The undersized material from the scalping screen is considered to be a product stream and is transported to a storage pile and sold as base material. The stone that is too large to pass through the top deck of the scalping screen is processed in the secondary crusher. Cone crushers are commonly used for secondary crushing (although impact crushers are sometimes used), which typically reduces material to about 2.5 to 10 centimeters (1 to 4 inches). The material (throughs) from the second level of the screen bypasses the secondary crusher because it is sufficiently small for the last crushing step. The output from the secondary crusher and the throughs from the secondary screen are transported by conveyor to the tertiary circuit, which includes a sizing screen and a tertiary crusher.

Tertiary crushing is usually performed using cone crushers or other types of impactor crushers. Oversize material from the top deck of the sizing screen is fed to the tertiary crusher. The tertiary crusher output, which is typically about 0.50 to 2.5 centimeters (3/16th to 1 inch), is returned to the sizing screen. Various product streams with different size gradations are separated in the screening operation. The products are conveyed or trucked directly to finished product bins, to open area stock piles, or to other processing systems such as washing, air separators, and screens and classifiers (for the production of manufactured sand).



Stone Processing Plant Flowchart

Major rock types processed by the crushed stone industry include limestone, granite, dolomite, traprock, sandstone, quartz, and quartzite.

Rock and crushed stone products generally are loosened by drilling and blasting and then are loaded by power shovel or front-end loader into large haul trucks that transport the material to the processing operations.

Quarried stone normally is delivered to the processing plant by truck and is dumped into a bin. A feeder is used. The feeder or screens separate large boulders from finer rocks that do not require primary crushing, thus reducing the load to the primary crusher. Jaw, impactor, or gyratory crushers are usually used for initial reduction. The crusher product, normally 7.5 to 30 cm in diameter, and the grizzly throughs (undersize material) are discharged onto a belt conveyor and usually are conveyed to a surge pile for temporary storage or are sold as coarse aggregates.

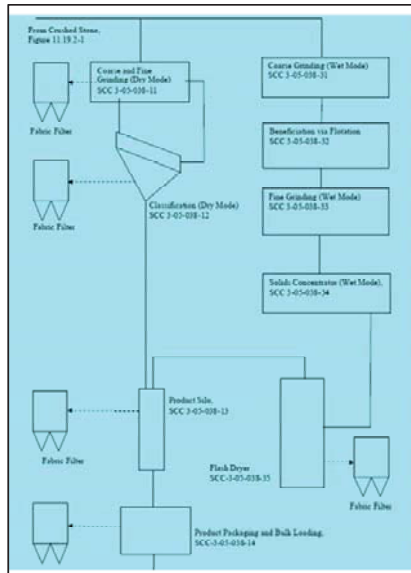
Some stone crushing plants produce manufactured sand. This is a small-sized rock product with a maximum size of 0.50 cm. Crushed stone from the tertiary sizing screen is sized in a vibrating inclined screen (fines screen) with relatively small mesh sizes. Oversized material is processed in a cone crusher or a hammermill (fines crusher) adjusted to produce small diameter material. The output is returned to the fines screen for resizing.

In certain cases, stone washing is required to meet particulate end product specifications or demands.

Nonmetallic Mineral Processing - Pulverized Mineral Processing

- > Pulverized minerals are produced at specialized processing plants
- > Dry Processing Systems -
 - ❖ Mineral aggregate material from conventional crushing and screening operations is subject to coarse and fine grinding primarily in roller mills and/or ball mills to reduce the material to the necessary product size range
 - ❖ Fabric filters control particulate matter emissions
- > Wet Processing Systems
 - ❖ Mineral aggregate material is processed in wet mode coarse and fine grinding operations

These plants supply mineral products ranging from sizes of approximately 1 micrometer to more than 75 micrometers aerodynamic diameter. Pharmaceutical, paint, plastics, pigment, rubber, and chemical industries use these products. Due to the specialized characteristics of the mineral products and the markets for these products, pulverized mineral processing plants have production rates that are less than 5% of the production capacities of conventional crushed stone plants.



Pulverized Mineral Processing Flowchart

In dry processing systems, the mineral aggregate material from conventional crushing and screening operations is subject to coarse and fine grinding primarily in roller mills and/or ball mills to reduce the material to the necessary product size range. A classifier is used to size the ground material and return oversized material that can be pulverized using either wet or dry processes. The classifier can either be associated with the grinding operation, or it can be a standalone process unit. Fabric filters control particulate matter emissions from the grinding operation and the classifier. The products are stored in silos and are shipped by truck or in bags.

In wet processing systems, beneficiation processes use flotation to separate mineral impurities. Finely ground material is concentrated and flash dried. Fabric filters are used to control particulate matter emissions from the flash dryer. The product is then stored in silos, bagged, and shipped.

Nonmetallic Mineral Processing Plants (Crushers) Regulations to Consider

- > NSPS:
 - ❖ Subpart 000 - Standards of Performance for Nonmetallic Mineral Processing Plants
- > NESHAPs:
 - ❖ None
- > MACT:
 - ❖ None
- > State:
 - ❖ Rule 62-296.711, F.A.C. (PM RACT - material handling, sizing, screening, crushing and grinding operations)

If general permit specifically captures federal requirement can still be permitted under general permit.

FL Air General Permits - Perchloroethylene Dry Cleaners

- > Facilities engaged in the cleaning of fabrics in a nonaqueous solvent, by means of one or more washes in a solvent, extraction of excess solvent by spinning, and drying by tumbling in an airstream
- > Perchloroethylene - considered an air toxic or hazardous pollutant
- > Perchloroethylene dry cleaners are eligible to operate Florida under the terms of an air general permit pursuant to the requirements of the applicable Florida Rule 62-210.310(5)(f) F.A.C.

Florida Rule 62-210.310(5)(f)(1)-(3) F.A.C. Requirements:

1. For the purposes of this air general permit, the definitions at 40 C.F.R. Part 63, Subparts A and M, adopted and incorporated, shall apply.
2. A facility comprising one or more perchloroethylene dry cleaning systems shall be eligible to use this air general permit provided it meets the general eligibility criteria of paragraph 62-210.310(2)(a), F.A.C.
3. A facility using this air general permit shall comply with the general conditions given at subsection 62-210.310(3), F.A.C., and with all requirements of 40 C.F.R. Part 63, Subparts A and M, except as follows.
 - a. In lieu of the provisions of 40 C.F.R. § 63.6(e)(3) and 40 C.F.R. § 63.10(d)(5), the owner or operator shall maintain onsite a SSMP for the facility that describes, in detail, procedures for operating and maintaining the equipment during periods of SSM....
 - b. During periods of SSM, the owner or operator shall operate and maintain equipment in accordance with the procedures specified in the plan. Records of compliance with the plan shall be kept onsite for a minimum of five years and shall contain a certification statement.
 - c. If any action is taken which is inconsistent with the plan, the owner or operator shall record and report the actions taken to the Department during facility inspections. The record shall explain the circumstances of the event, the reason for not following the SSMP and whether any excess emissions or parameter monitoring exceedances are believed to have occurred. Taking actions inconsistent with those in the plan constitutes a violation of a general permit condition.

Perchloroethylene Dry Cleaners Quick Facts

- > Source of Emissions:
 - ✦ Dry cleaning operation (VOC, perchloroethylene)
- > Types of Controls:
 - ✦ Solvent Recovery - carbon adsorption units
- > Source Category:
 - ✦ Title V - Major, Synthetic Minor, and True Minor
 - ✦ PSD - Major and Minor
 - ✦ General Permit
 - Perchloroethylene Dry Cleaners General Air Permits

Per Florida Rule 62-210.310(5)(f)(4) F.A.C. Air General Permit Registration Includes the following information:

- a. The number of dry-to-dry machines on-site, and for each on-site dry-to-dry machine, the date the machine was installed, whether the machine is new or existing as defined at 40 C.F.R. Part 63, Subpart M, whether the control device is refrigerated condenser or carbon adsorber, and the date the control device was installed.
- b. Whether the facility is a co-residential dry cleaning facility as defined at 40 C.F.R. Part 63, Subpart M.
- c. For each dry-to-dry machine at a co-residential dry cleaning facility, whether the machine is a perchloroethylene dry cleaning machine (yes or no), and whether the machine has a vapor barrier enclosure (yes or no).
- d. Gallons of perchloroethylene used within the most recent 12 months.
- e. The horsepower and fuel type (propane, no. 2 fuel oil, no. 4 fuel oil, no. 6 fuel oil, natural gas, electric, or other) for all steam and hot water generating units (boilers) on-site, or a statement that there are no boilers on-site.

Perchloroethylene Dry Cleaners Quick Facts

- > Dry cleaning - cleaning of fabrics with nonaqueous organic solvents
- > The dry cleaning process requires 3 steps:
 - ❖ Washing the fabric in solvent
 - ❖ Spinning to extract excess solvent
 - ❖ Drying by tumbling in a hot air stream
- > Two general types of cleaning fluids are used:
 - ❖ petroleum solvents (known as petroleum plants)
 - ❖ synthetic solvents (known as "perc" or fluorocarbon plants)

Petroleum solvents, such as Stoddard or 140-F, are inexpensive combustible hydrocarbon mixtures similar to kerosene.

Synthetic solvents are nonflammable but more expensive halogenated hydrocarbons. Perchloroethylene and trichlorotrifluoroethane are the 2 synthetic dry cleaning solvents presently in use.

There are 2 basic types of dry cleaning machines, transfer and dry-to-dry. Transfer machines accomplish washing and drying in separate machines. Usually, the washer extracts excess solvent from the clothes before they are transferred to the dryer, but some older petroleum plants have separate extractors for this purpose. Dry-to-dry machines are single units that perform all of the washing, extraction, and drying operations. All petroleum solvent machines are the transfer type, but synthetic solvent plants can be either type.

The dry cleaning industry can be divided into 3 sectors: coin-operated facilities, commercial operations, and industrial cleaners. Coin-operated facilities are usually part of a laundry supplying "self-service" dry cleaning for consumers. Only synthetic solvents are used in coin operated dry cleaning machines. Such machines are small, with a capacity of 3.6 to 11.5 kg (8 to 25 lb) of clothing.

Perchloroethylene Dry Cleaners Quick Facts

- > Generally, perchloroethylene and petroleum solvents are used in commercial operations
- > A typical "perc" plant operates a 14 to 27 kg (30 to 60 lb) capacity washer/extractor and an equivalent size reclaiming dryer
- > Perchloroethylene is used by approximately 50 % of the industrial dry cleaning establishments.
 - ❖ A typical large industrial cleaner has a 230 kg (500 lb) capacity washer/extractor and 3 to 6 38-kg (100-lb) capacity dryers
- > A typical perc plant uses 2 tanks for washing:
 - ❖ One tank contains pure solvent
 - ❖ The other contains "charged" solvent (used solvent to which small amounts of detergent have been added to aid in cleaning)

Commercial operations, such as small neighborhood or franchise dry cleaning shops, clean soiled apparel for the consumer

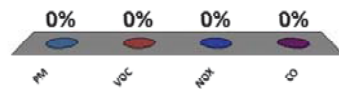
Industrial cleaners are larger dry cleaning plants which supply rental service of uniforms, mats, mops, etc., to businesses or industries

Generally, clothes are cleaned in charged solvent and rinsed in pure solvent. A water bath may also be used.

After the clothes have been washed, the used solvent is filtered, and part of the filtered solvent is returned to the charged solvent tank for washing the next load. The remaining solvent is then distilled to remove oils, fats, greases, etc., and is returned to the pure solvent tank. The collected solids (muck) are usually removed from the filter once a day. Before disposal, the muck may be "cooked" to recover additional solvent. Still and muck cooker vapors are vented to a condenser and separator, where more solvent is reclaimed. In many perc plants, the condenser offgases are vented to a carbon adsorption unit for additional solvent recovery.

Which criteria pollutant is emitted most from perchloroethylene dry cleaning facilities?

- A. PM
- ✓ B. VOC
- C. NO_x
- D. CO



1. Florida's Pollution Sources by Industry Type Table

STATE OF FLORIDA
NUMBER OF FACILITIES BY INDUSTRY TYPE, OFFICE AND REGULATORY SIZE

Industry by Facility Type Code	Category	Totals	CD	NED	NWD	SD	SED	SWD	CDOR	NEDV	SEBR	SEDA	SEPB	SWHI	SWPN	SWSA
01 - STEAM ELECTRIC PLANT	Title V	58	13	6	8	4	2	7	2	3	2	3	4	2	2	0
	Minor	5	3	1	0	0	0	1	0	0	0	0	0	0	0	0
	General	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02 - OTHER ELECTRIC PRODUCTION	Title V	28	1	3	2	2	2	15	0	2	0	0	0	0	1	0
	Minor	2	0	1	0	0	1	0	0	0	0	0	0	0	0	0
	General	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03 - MUNICIPAL INCINERATION OR RRF	Title V	15	2	1	2	1	5	3	0	0	0	0	0	1	0	0
	Minor	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
	General	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04 - PATHOLOGICAL INCINERATOR	Title V	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	Minor	4	0	3	0	0	0	0	0	0	0	1	0	0	0	0
	General	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05 - OTHER INCINERATION	Title V	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
	Minor	55	7	17	4	6	2	14	0	1	0	1	1	2	0	0
	General	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06 - PHOSPHATE FERTILIZER PLANT	Title V	6	0	1	0	0	0	3	0	0	0	0	0	2	0	0
	Minor	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0
	General	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07 - SULFURIC ACID PLANT	Title V	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Minor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	General	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08 - NITRIC ACID PLANT	Title V	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Minor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	General	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09 - SYNTHETIC FIBER PLANT	Title V	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Minor	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
	General	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10 - OTHER CHEMICAL PLANT	Title V	8	1	0	4	0	0	1	0	2	0	0	0	0	0	0
	Minor	34	3	4	5	0	0	10	2	1	2	2	0	4	1	0
	General	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - CITRUS PROCESSING PLANT	Title V	10	1	0	0	1	2	6	0	0	0	0	0	0	0	0
	Minor	5	3	0	0	1	0	1	0	0	0	0	0	0	0	0
	General	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12 - SUGAR PROCESSING PLANT	Title V	5	0	0	0	1	0	0	0	0	0	0	4	0	0	0
	Minor	0														
	General	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13 - OTHER FOOD PRODUCTION	Title V	9	0	1	0	0	0	3	1	3	0	1	0	0	0	0
	Minor	22	2	2	0	0	1	5	4	2	0	0	2	3	1	0
	General	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STATE OF FLORIDA
NUMBER OF FACILITIES BY INDUSTRY TYPE, OFFICE AND REGULATORY SIZE

Industry by Facility Type Code	Category	Totals	CD	NED	NWD	SD	SED	SWD	CDOR	NEDV	SEBR	SEDA	SEPB	SWHI	SWPN	SWSA
14 - GLASS CONTAINER PLANT	Title V	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
14 - GLASS CONTAINER PLANT	Minor	0														
14 - GLASS CONTAINER PLANT	General	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15 - PULP & PAPER PLANT	Title V	7	0	4	2	0	0	0	0	1	0	0	0	0	0	0
15 - PULP & PAPER PLANT	Minor	5	0	0	0	0	0	1	1	0	0	1	0	2	0	0
15 - PULP & PAPER PLANT	General	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16 - PLYWOOD/PARTICLEBOARD PLANT	Title V	2	0	1	1	0	0	0	0	0	0	0	0	0	0	0
16 - PLYWOOD/PARTICLEBOARD PLANT	Minor	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
16 - PLYWOOD/PARTICLEBOARD PLANT	General	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17 - SECONDARY METAL PRODUCTION	Title V	4	0	0	0	0	0	0	0	1	0	1	0	2	0	0
17 - SECONDARY METAL PRODUCTION	Minor	16	6	2	2	0	0	2	0	2	0	0	0	1	1	0
17 - SECONDARY METAL PRODUCTION	General	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18 - GALVANIZING OPERATION	Title V	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18 - GALVANIZING OPERATION	Minor	3	0	0	0	0	0	0	0	1	0	0	0	2	0	0
18 - GALVANIZING OPERATION	General	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19 - PHOSPHATE ROCK PROCESSING	Title V	2	0	0	0	0	0	0	0	0	0	0	0	2	0	0
19 - PHOSPHATE ROCK PROCESSING	Minor	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0
19 - PHOSPHATE ROCK PROCESSING	General	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20 - GYPSUM PRODUCTION	Title V	2	0	0	0	0	0	0	0	1	0	0	0	1	0	0
20 - GYPSUM PRODUCTION	Minor	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0
20 - GYPSUM PRODUCTION	General	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21 - PORTLAND CEMENT PLANT	Title V	9	0	2	0	0	0	4	0	0	0	2	0	1	0	0
21 - PORTLAND CEMENT PLANT	Minor	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0
21 - PORTLAND CEMENT PLANT	General	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22 - ASPHALT PLANT	Title V	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22 - ASPHALT PLANT	Minor	120	19	11	22	12	3	13	4	6	4	7	4	9	3	3
22 - ASPHALT PLANT	General	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23 - CONCRETE PLANT	Title V	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23 - CONCRETE PLANT	Minor	40	9	6	4	3	2	4	3	3	3	3	0	0	0	0
23 - CONCRETE PLANT	General	683	82	41	73	86	21	114	39	32	28	53	35	43	20	16
24 - FIBERGLASS PRODUCTS MFG.	Title V	48	7	6	4	1	3	9	2	1	2	6	0	2	5	0
24 - FIBERGLASS PRODUCTS MFG.	Minor	27	5	5	3	2	2	1	0	0	1	1	2	1	3	1
24 - FIBERGLASS PRODUCTS MFG.	General	104	15	13	3	10	4	2	6	2	6	18	4	2	14	5
25 - OTHER MINERAL PROCESSING	Title V	4	0	3	1	0	0	0	0	0	0	0	0	0	0	0
25 - OTHER MINERAL PROCESSING	Minor	29	4	2	1	1	0	10	1	2	2	1	1	4	0	0
25 - OTHER MINERAL PROCESSING	General	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26 - PETROLEUM REFINERY	Title V	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26 - PETROLEUM REFINERY	Minor	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0
26 - PETROLEUM REFINERY	General	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STATE OF FLORIDA
NUMBER OF FACILITIES BY INDUSTRY TYPE, OFFICE AND REGULATORY SIZE

Industry by Facility Type Code	Category	Totals	CD	NED	NWD	SD	SED	SWD	CDOR	NEDV	SEBR	SEDA	SEPB	SWHI	SWPN	SWSA
27 - SULFUR RECOVERY PLANT	Title V	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0
27 - SULFUR RECOVERY PLANT	Minor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27 - SULFUR RECOVERY PLANT	General	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28 - DRY CLEANER	Title V	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0
28 - DRY CLEANER	Minor	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0
28 - DRY CLEANER	General	780	96	34	23	40	13	37	56	44	107	153	77	54	35	11
29 - DEGREASER	Title V	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0
29 - DEGREASER	Minor	3	1	0	0	0	0	0	0	0	0	1	0	0	1	0
29 - DEGREASER	General	7	0	0	0	0	0	2	0	0	3	0	1	0	1	0
30 - SURFACE COATING OPERATION	Title V	27	3	3	1	0	0	6	2	4	1	2	0	3	2	0
30 - SURFACE COATING OPERATION	Minor	132	12	13	5	4	4	12	12	7	17	16	3	13	12	2
30 - SURFACE COATING OPERATION	General	163	25	3	8	4	2	6	2	5	76	0	16	5	6	5
31 - ABRASIVE BLAST CLEANING	Title V	4	0	0	0	0	0	0	0	3	0	0	0	1	0	0
31 - ABRASIVE BLAST CLEANING	Minor	5	0	0	0	0	0	3	0	0	1	0	0	1	0	0
31 - ABRASIVE BLAST CLEANING	General	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32 - PETROLEUM STORAGE/TRANSFER	Title V	19	2	0	0	1	0	0	1	3	6	0	0	6	0	0
32 - PETROLEUM STORAGE/TRANSFER	Minor	38	1	0	9	4	1	4	0	3	6	1	3	6	0	0
32 - PETROLEUM STORAGE/TRANSFER	General	24	0	2	0	4	2	2	0	0	0	6	6	0	1	1
33 - BULK SHIPPING/RECEIVING	Title V	2	0	0	0	0	0	0	0	0	0	0	0	2	0	0
33 - BULK SHIPPING/RECEIVING	Minor	50	3	0	4	1	0	9	2	7	5	1	3	15	0	0
33 - BULK SHIPPING/RECEIVING	General	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34 - FEED/GRAIN ELEVATOR	Title V	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34 - FEED/GRAIN ELEVATOR	Minor	3	0	2	0	0	0	0	0	0	0	0	0	1	0	0
34 - FEED/GRAIN ELEVATOR	General	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35 - LEAD ACID BATTERY PLANT	Title V	0														
35 - LEAD ACID BATTERY PLANT	Minor	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0
35 - LEAD ACID BATTERY PLANT	General	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36 - GRAPHICS ARTS/PRINTING	Title V	6	0	0	1	0	0	1	2	0	0	0	0	1	1	0
36 - GRAPHICS ARTS/PRINTING	Minor	25	0	0	1	0	0	1	2	4	2	4	0	6	5	0
36 - GRAPHICS ARTS/PRINTING	General	30	3	1	1	2	1	1	1	9	2	4	0	3	2	0
37 - HOSPITALS/HEALTH CARE	Title V	5	0	0	0	0	0	0	0	2	0	1	1	1	0	0
37 - HOSPITALS/HEALTH CARE	Minor	21	4	2	1	0	1	1	4	2	2	0	1	2	1	0
37 - HOSPITALS/HEALTH CARE	General	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
38 - MISC WOOD PRODUCTS MFG.	Title V	12	0	6	5	0	0	0	0	1	0	0	0	0	0	0
38 - MISC WOOD PRODUCTS MFG.	Minor	21	1	7	1	0	0	6	0	0	1	2	1	0	1	1
38 - MISC WOOD PRODUCTS MFG.	General	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39 - MUNICIPAL SOLID WASTE LANDFILL	Title V	36	8	5	4	4	6	7	0	0	1	1	0	0	0	0
39 - MUNICIPAL SOLID WASTE LANDFILL	Minor	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
39 - MUNICIPAL SOLID WASTE LANDFILL	General	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STATE OF FLORIDA
NUMBER OF FACILITIES BY INDUSTRY TYPE, OFFICE AND REGULATORY SIZE

Industry by Facility Type Code	Category	Totals	CD	NED	NWD	SD	SED	SWD	CDOR	NEDV	SEBR	SEDA	SEPB	SWHI	SWPN	SWSA
40 - SECONDARY ALUMINUM SWEAT FURNACE	Title V	0														
40 - SECONDARY ALUMINUM SWEAT FURNACE	Minor	0														
40 - SECONDARY ALUMINUM SWEAT FURNACE	General	7	0	0	0	0	0	1	0	0	0	3	0	2	0	1
41 - NONMETALLIC MINERAL PROCESSING	Title V	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
41 - NONMETALLIC MINERAL PROCESSING	Minor	3	1	1	0	0	0	1	0	0	0	0	0	0	0	0
41 - NONMETALLIC MINERAL PROCESSING	General	328	28	24	31	45	7	87	16	14	5	37	10	14	7	3
42 - ANIMAL CREMATORY	Title V	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42 - ANIMAL CREMATORY	Minor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42 - ANIMAL CREMATORY	General	69	11	4	9	7	6	14	3	3	4	2	2	0	2	2
43 - HUMAN CREMATORY	Title V	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43 - HUMAN CREMATORY	Minor	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0
43 - HUMAN CREMATORY	General	170	23	20	18	20	8	29	4	6	5	9	11	5	8	4
44 - COLLOCATED ANIMAL AND HUMAN CREMATORIES	Title V	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44 - COLLOCATED ANIMAL AND HUMAN CREMATORIES	Minor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44 - COLLOCATED ANIMAL AND HUMAN CREMATORIES	General	13	1	2	0	2	2	1	1	0	0	0	0	3	1	0
45 - FLOOD CONTROL PUMP STATIONS	Title V	10	0	0	0	0	1	0	0	0	1	0	8	0	0	0
45 - FLOOD CONTROL PUMP STATIONS	Minor	0														
45 - FLOOD CONTROL PUMP STATIONS	General	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46 - COLLOCATED CONCRETE BATCH PLANT AND CRUSHERS	Title V	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46 - COLLOCATED CONCRETE BATCH PLANT AND CRUSHERS	Minor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46 - COLLOCATED CONCRETE BATCH PLANT AND CRUSHERS	General	11	1	0	0	3	1	4	0	0	0	2	0	0	0	0
47 - RECIPROCATING INTERNAL COMBUSTION ENGINES	Title V	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47 - RECIPROCATING INTERNAL COMBUSTION ENGINES	Minor	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
47 - RECIPROCATING INTERNAL COMBUSTION ENGINES	General	110	2	1	0	9	10	8	1	1	1	18	7	49	3	0
48 - CAST POLYMER OPERATIONS	Title V	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
48 - CAST POLYMER OPERATIONS	Minor	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0
48 - CAST POLYMER OPERATIONS	General	27	7	0	3	4	0	2	2	0	1	3	1	3	0	1
49 - VOL. REDUCTION, HG RECOVERY, HG RECLAMATION	Title V	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49 - VOL. REDUCTION, HG RECOVERY, HG RECLAMATION	Minor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49 - VOL. REDUCTION, HG RECOVERY, HG RECLAMATION	General	2	1	0	1	0	0	0	0	0	0	0	0	0	0	0
50 - ETHYLENE OXIDE STERILIZERS	Title V	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50 - ETHYLENE OXIDE STERILIZERS	Minor	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
50 - ETHYLENE OXIDE STERILIZERS	General	5	0	0	0	1	0	1	0	1	0	1	0	1	0	0
51 - CHROMIUM ELECTROPLATER AND ANODIZER	Title V	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51 - CHROMIUM ELECTROPLATER AND ANODIZER	Minor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51 - CHROMIUM ELECTROPLATER AND ANODIZER	General	37	3	0	0	0	0	3	4	0	3	13	3	2	6	0
52 - ASBESTOS MANUFACTURER	Title V	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52 - ASBESTOS MANUFACTURER	Minor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52 - ASBESTOS MANUFACTURER	General	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STATE OF FLORIDA

NUMBER OF FACILITIES BY INDUSTRY TYPE, OFFICE AND REGULATORY SIZE

Industry by Facility Type Code	Category	Totals	CD	NED	NWD	SD	SED	SWD	CDOR	NEDV	SEBR	SEDA	SEPB	SWHI	SWPN	SWSA
99 - OTHER	Title V	40	10	4	6	5	5	1	2	2	0	1	1	3	0	0
99 - OTHER	Minor	167	26	9	16	4	9	17	11	8	9	6	2	22	23	5
99 - OTHER	General	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BLANK	Title V	11	0	1	1	1	0	4	1	2	0	0	0	1	0	0
BLANK	Minor	155	4	1	14	7	0	23	14	17	3	38	0	21	11	2
BLANK	General	11	0	1	1	1	0	4	1	2	0	0	0	1	0	0
TOTALS	Minor	3986	461	283	309	305	130	533	211	218	312	429	215	337	180	63

Title V: 398

Minor: 1007

General: 2581

2. Florida's Air Pollution Sources Maps

Power Plants

-  Coal Plants
-  Waste-to-Energy Facilities
-  Biomass Energy Facilities
-  Other

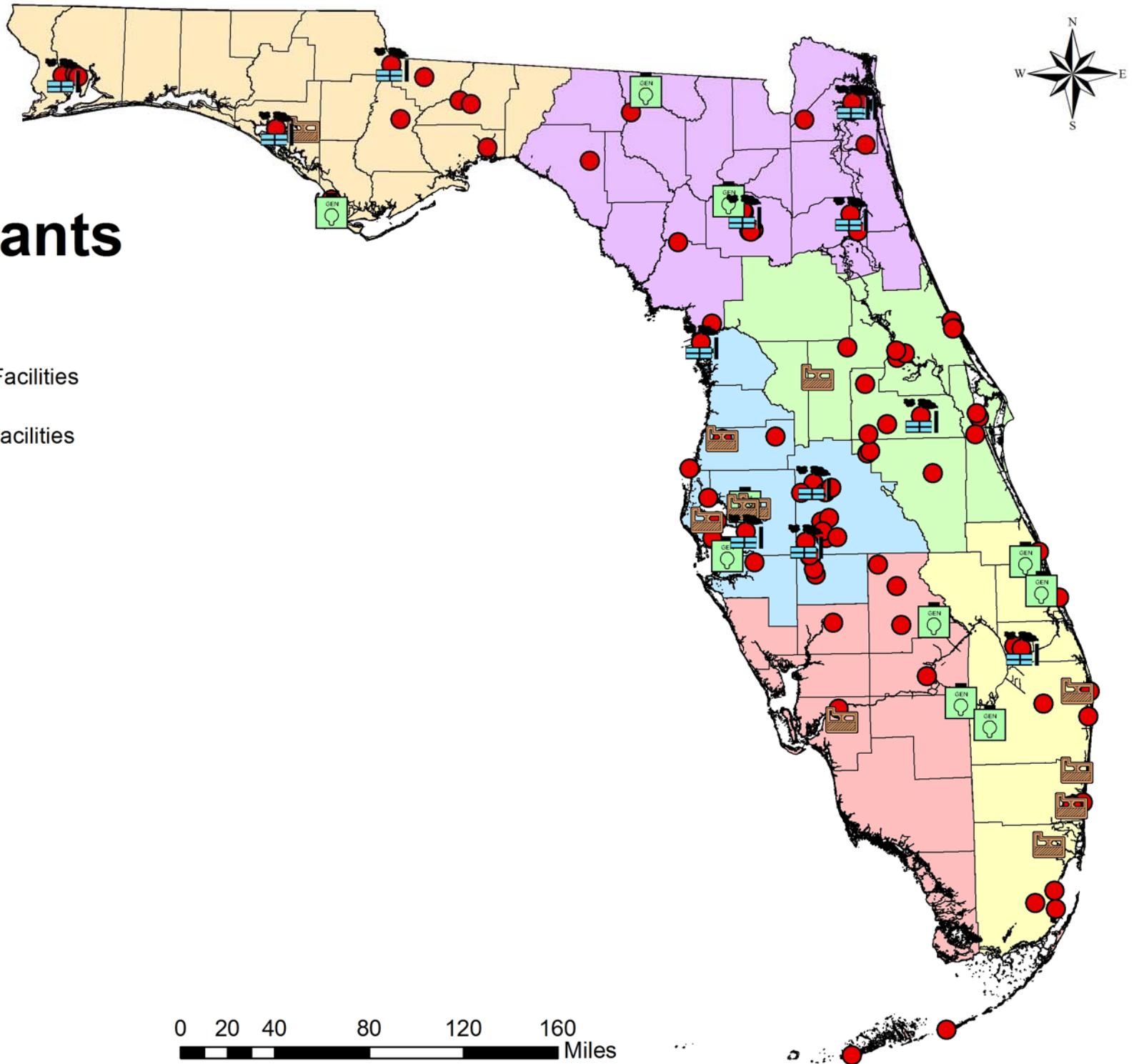
FDEP Districts

-  Northwest District
-  Northeast District
-  Central District
-  Southwest District
-  Southeast District
-  South District



Created By:
Division of Air Resource Management
October 2013

0 20 40 80 120 160 Miles



Coal Plants

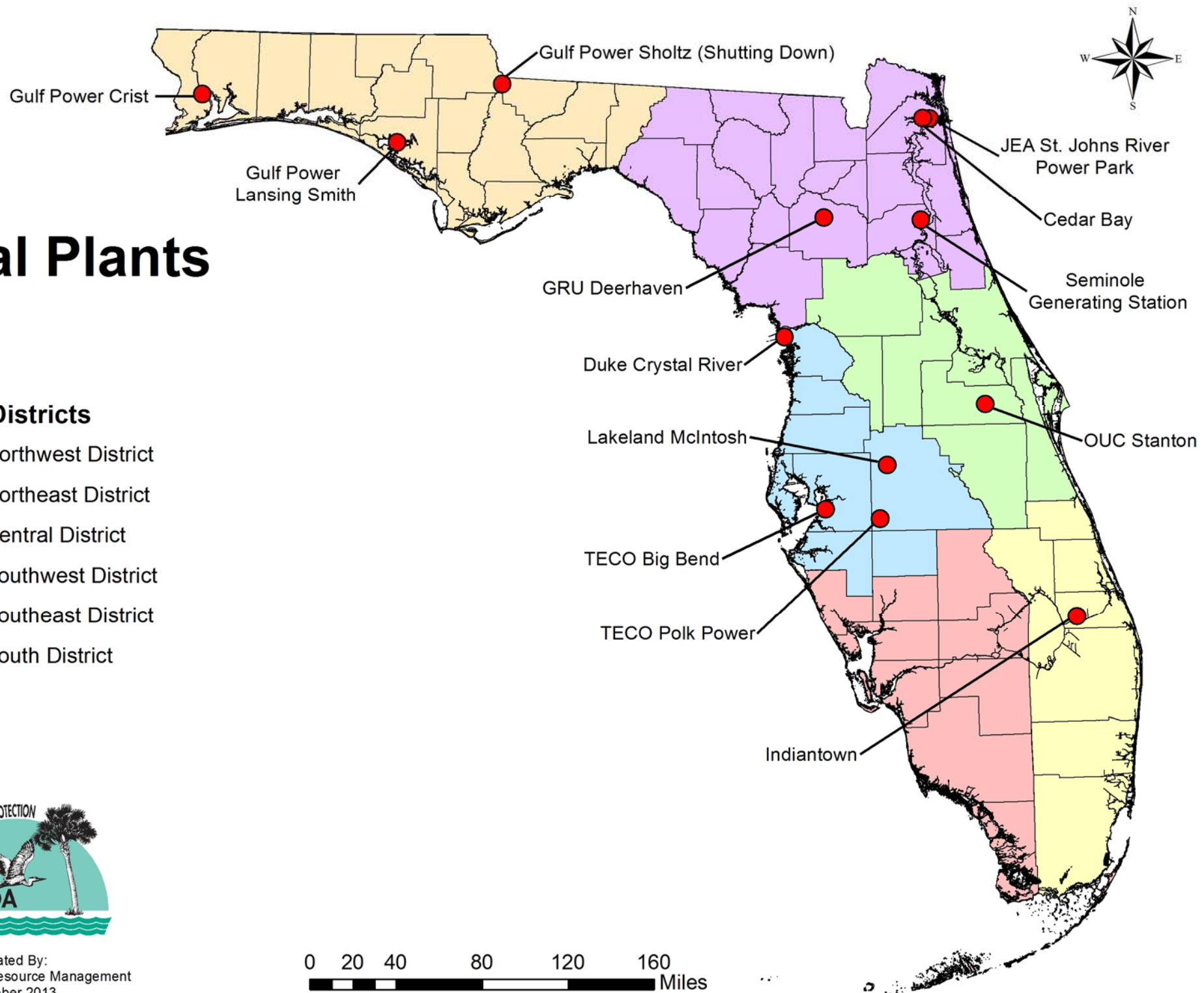
FDEP Districts

-  Northwest District
-  Northeast District
-  Central District
-  Southwest District
-  Southeast District
-  South District



Created By:
Division of Air Resource Management
October 2013

0 20 40 80 120 160 Miles



Municipal Waste Combustors

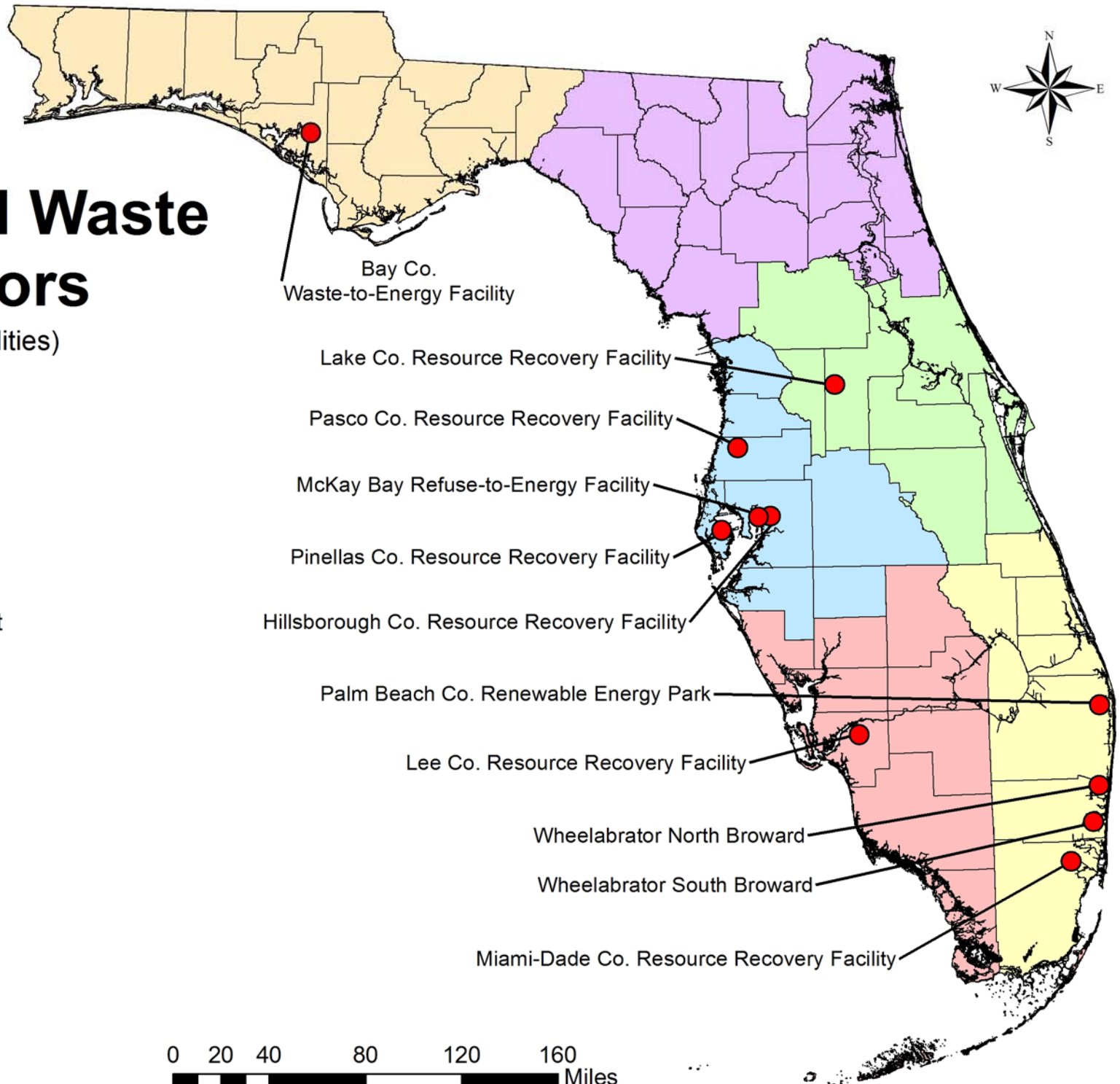
(Waste-to-Energy Facilities)

FDEP Districts

-  Northwest District
-  Northeast District
-  Central District
-  Southwest District
-  Southeast District
-  South District



Created By:
Division of Air Resource Management
October 2013



Fiberglass Manufacturing Plants

- Major TV Facilities
- SNTV and Minor Facilities
- General Permit Facilities

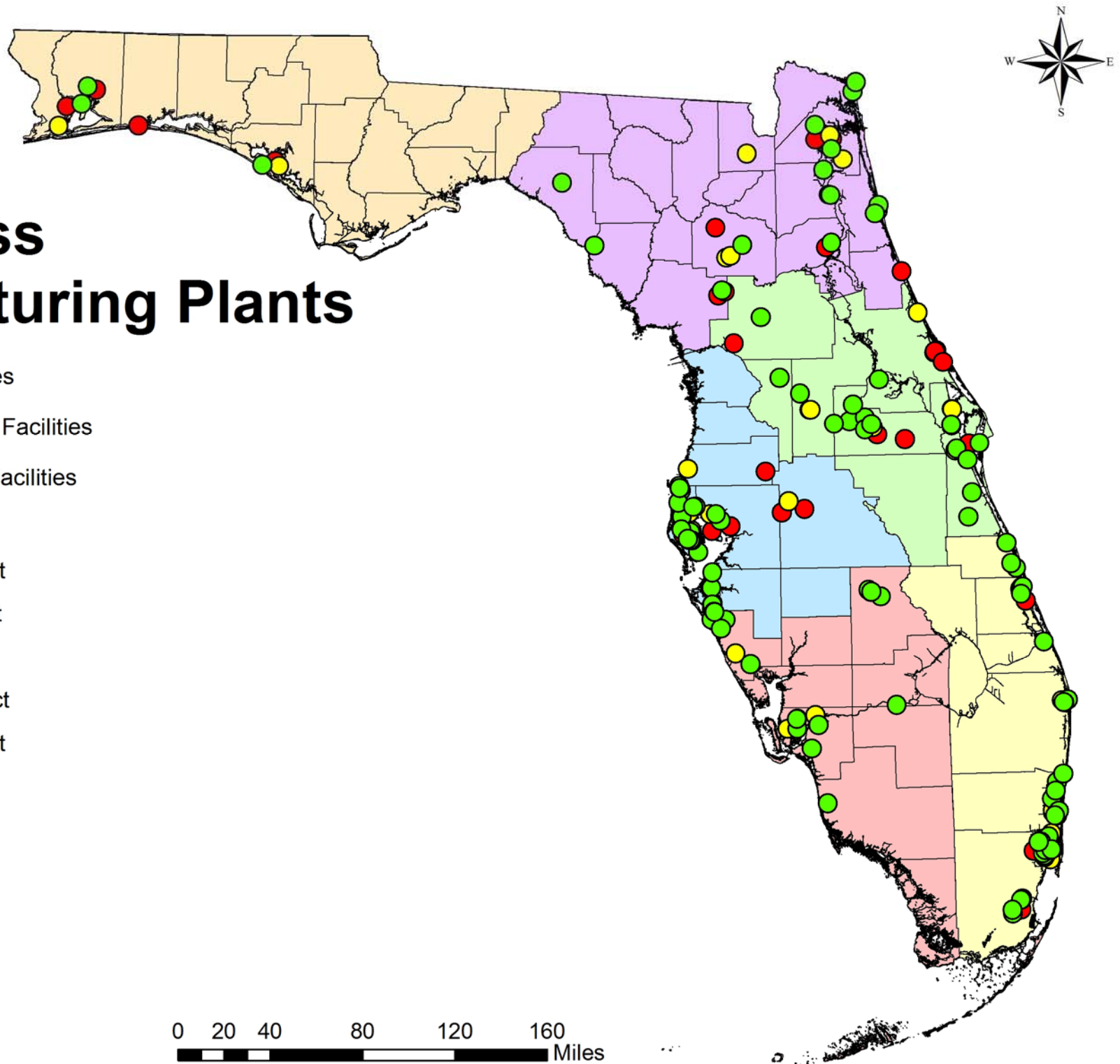
FDEP Districts

- Northwest District
- Northeast District
- Central District
- Southwest District
- Southeast District
- South District



Created By:
Division of Air Resource Management
October 2013

0 20 40 80 120 160
Miles



Surface Coating Facilities

- Major TV Facilities
- SNTV and Minor Facilities
- General Permit Facilities

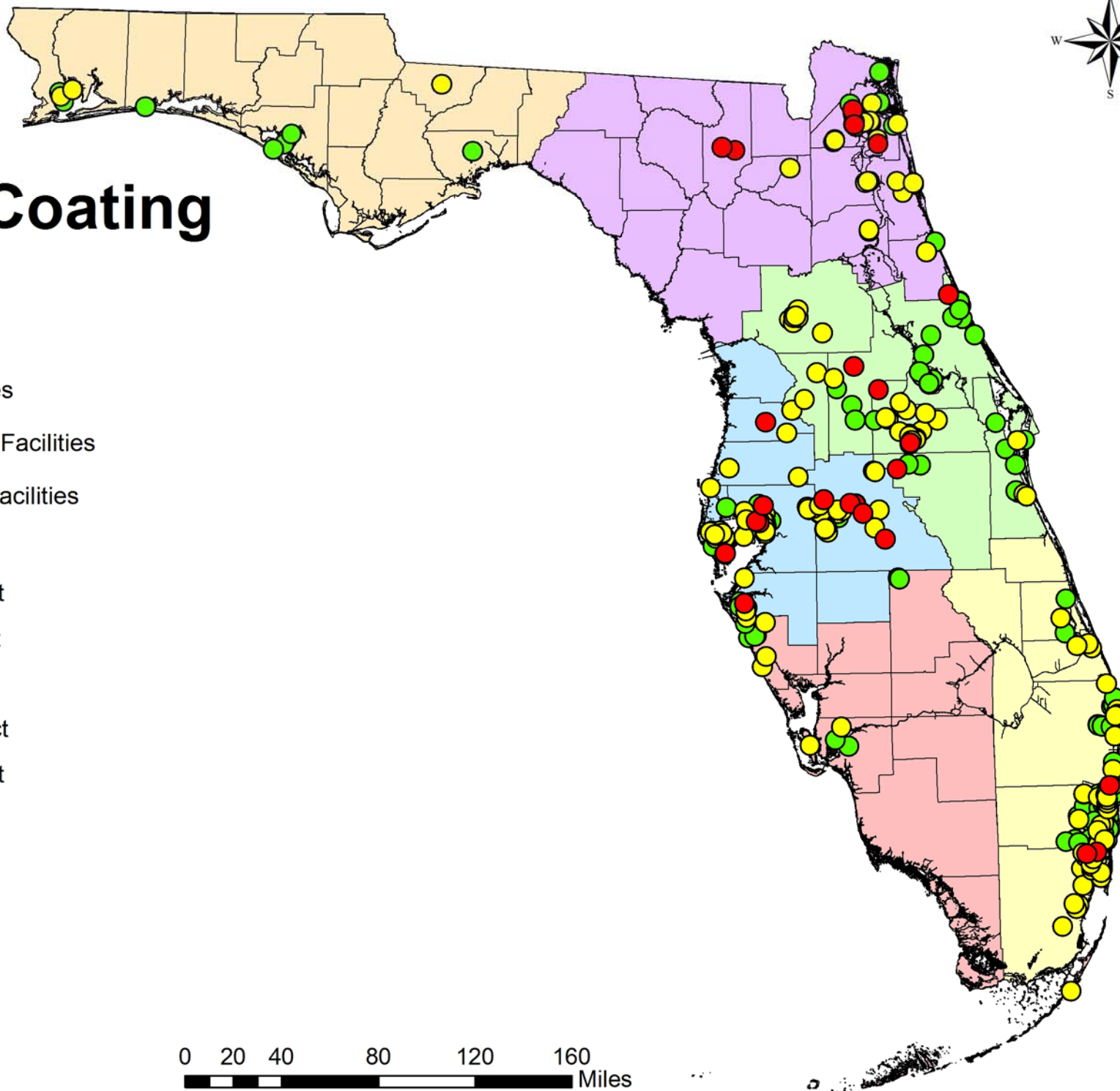
FDEP Districts

- Northwest District
- Northeast District
- Central District
- Southwest District
- Southeast District
- South District



Created By:
Division of Air Resource Management
October 2013

0 20 40 80 120 160 Miles



Landfills

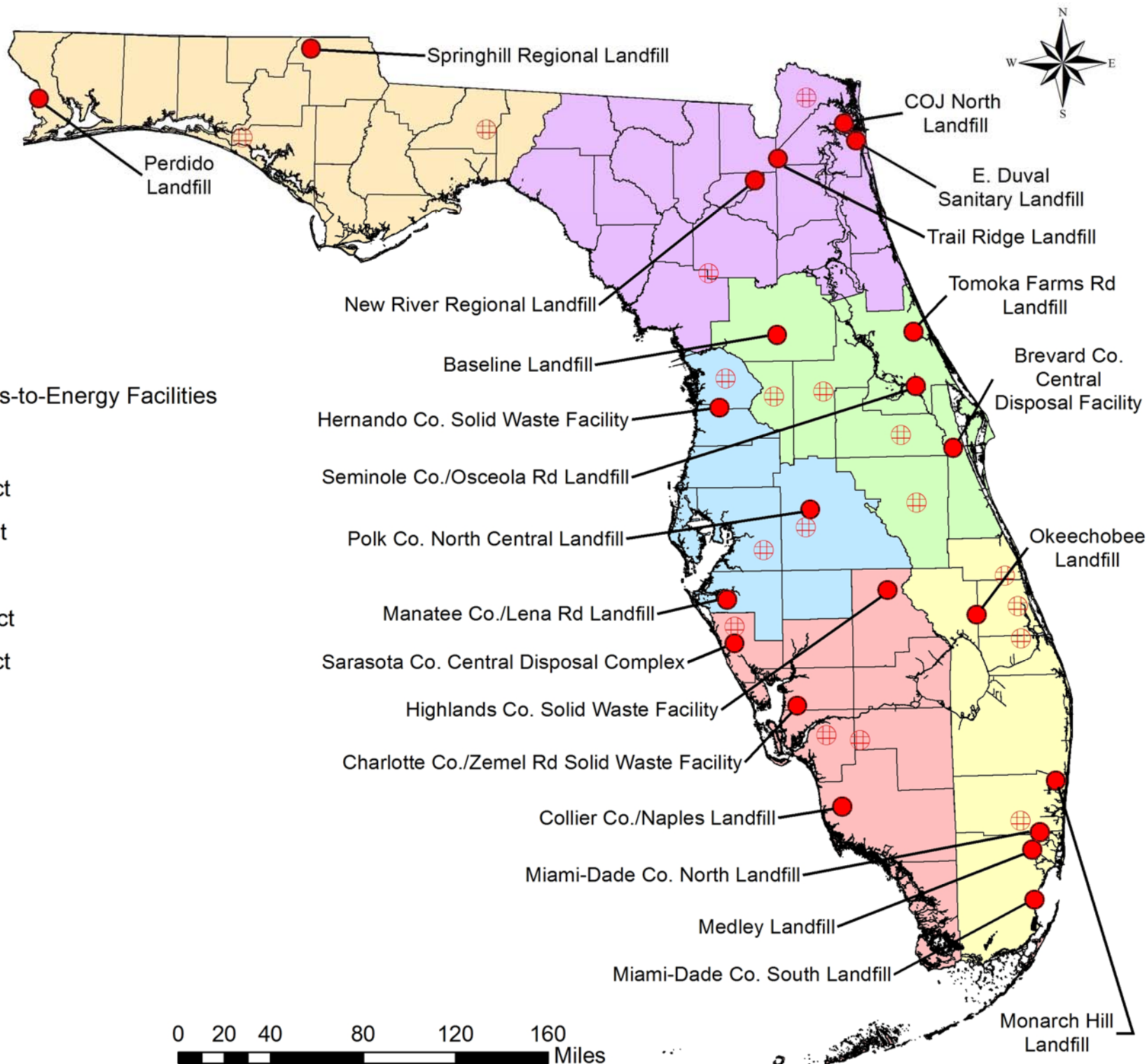
-  Landfills
-  Landfills with Gas-to-Energy Facilities

FDEP Districts

-  Northwest District
-  Northeast District
-  Central District
-  Southwest District
-  Southeast District
-  South District



Created By:
Division of Air Resource Management
October 2013



0 20 40 80 120 160 Miles

3. Inspection Checklists for Air General Permits

COMMENTS:

Inspector's Name

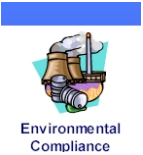
Date of Inspection

Inspector's Signature

Approximate Date of Next Inspection



BULK GASOLINE PLANT



COMPLIANCE INSPECTION CHECKLIST

INSPECTION TYPE: ANNUAL (INS1, INS2) ☐ COMPLAINT/DISCOVERY (CI) ☐
RE-INSPECTION (FUI) ☐ ARMS COMPLAINT NO. _____

AIRS ID#: _____ **DATE:** _____ **ARRIVE:** _____ **DEPART:** _____
FACILITY NAME: _____
FACILITY LOCATION: _____

AUTHORIZED REPRESENTATIVE: _____ **PHONE:** _____
CONTACT NAME: _____ **PHONE:** _____
LAST PAYMENT YEAR: _____ **ENTITLEMENT PERIOD:** _____ / _____
(Year) (To) (From)

PART I: INSPECTION COMPLIANCE STATUS (check ☒ only one box)

☐ IN COMPLIANCE ☐ MINOR Non-COMPLIANCE ☐ SIGNIFICANT Non-COMPLIANCE

PART II: CONTROL TECHNOLOGY/RECORDKEEPING REQUIREMENTS – Rule 62-210.300, F.A.C.

(check ☒ appropriate box(es))

1. Does the facility operate any emissions units other than the bulk gasoline plant and emissions units which are exempt from permitting pursuant to the criteria of paragraph 62-210.300(3)(a) or (b), F.A.C., or have been exempted from permitting under Rule 62-4.040, F.A.C.? (Rule 62-210.300(3)(c)2.a., F.A.C.)--- ☐ Yes ☐ No
2. Does the facility receive and distribute only petroleum-based lubricants, gasoline, diesel fuel, mineral spirits and kerosene?----- ☐ Yes ☐ No
3. Is the total storage capacity for gasoline at this facility 150,000 gallons or less? (Chapter 62-210.300(3)(c)2.c., F.A.C.)----- ☐ Yes ☐ No
4. Does the owner/operator of the facility maintain records to document the throughput rate of gasoline on a monthly basis?----- ☐ Yes ☐ No
5. Does the owner/operator retain, and make available for Department inspection, these records for a period of at least five years?----- ☐ Yes ☐ No
6. In any consecutive twelve month period does the throughput rate exceed 6 million gallons of gasoline? (Chapter 62-210.300(3)(c)2.d., F.A.C.)----- ☐ Yes ☐ No
7. Is this bulk gasoline facility subject to a Standard of Performance for New Stationary Sources (NSPS) requirement adopted by reference in subsection Chapter 62-204.800(7), F.A.C.? (Rule 62-210.300(4)(b)1.b., F.A.C.) (Code of Federal Regulations 40 CFR 59)----- ☐ Yes ☐ No
8. Is this bulk gasoline facility subject to a volatile organic compound (VOC) Reasonably Available Control Technology (RACT) emission limiting standard of Chapter 62-296.500, F.A.C.? (Rule 62-210.300(4)(b)1.c., F.A.C.)----- ☐ Yes ☐ No

PART III: MAINTENANCE REQUIREMENTS – Rule 62-210.300, F.A.C.

(check ☒ appropriate box(es))

1. Does the owner or operator make every reasonable effort to conduct the specific activity authorized by the general permit in a manner that minimizes adverse effects on adjacent property or on public use of the adjacent property, where applicable, and on the environment, including fish, wildlife, natural resources, water quality, or air quality?----- ☐ Yes ☐ No
2. Does the owner or operator maintain the permitted facility, emission unit, or activity in good condition?----- ☐ Yes ☐ No

PART IV: SPECIAL CONDITIONS AND PROCEDURES – Rule 62-210.300(4)(d)3., F.A.C.

(check ☒ appropriate box(es))

A. New or Modified Process Equipment

1. Since the last inspection has there been
- a) installation of any new process equipment?----- ☐ Yes ☐ No
- b) alterations to existing process equipment without replacement?----- ☐ Yes ☐ No
- c) replacement of existing equipment substantially different than that noted on the most recent registration form?----- ☐ Yes ☐ No
- d) If you answered **YES** to any of the above, did the owner submit a new and complete registration form and appropriate fee (Rule 62-4.050, F.A.C.) to the appropriate DEP or local program office?-- ☐ Yes ☐ No

COMMENTS:

Inspector's Name

Date of Inspection

Inspector's Signature

Approximate Date of Next Inspection



CAST POLYMER OPERATIONS



COMPLIANCE INSPECTION CHECKLIST

INSPECTION TYPE: ANNUAL (INS1, INS2) ☐ COMPLAINT/DISCOVERY (CI) ☐
RE-INSPECTION (FUI) ☐ ARMS COMPLAINT NO. _____

AIRS ID#: _____ DATE: _____ ARRIVE: _____ DEPART: _____
FACILITY NAME: _____
FACILITY LOCATION: _____

AUTHORIZED REPRESENTATIVE: _____ PHONE: _____
CONTACT NAME: _____ PHONE: _____
LAST PAYMENT YEAR: _____ ENTITLEMENT PERIOD: _____ / _____
(Year) (To) (From)

PART I: INSPECTION COMPLIANCE STATUS (check ☒ only one box)

☐ IN COMPLIANCE ☐ MINOR Non-COMPLIANCE ☐ SIGNIFICANT Non-COMPLIANCE

PART II: CONTROL TECHNOLOGY/RECORDKEEPING REQUIREMENTS – Rule 62-210.300, F.A.C.

(check ☒ appropriate box(es))

1. Does the facility operate any emissions units other than the cast polymer operations and emissions units which are exempt from permitting pursuant to the criteria of paragraph 62-210.300(3)(a) or (b), F.A.C., or have been exempted from permitting under Rule 62-4.040, F.A.C.? (Rule 62-210.300(3)(c)6.a., F.A.C.)-- ☐ Yes ☐ No
2. Does the facility comply with the objectionable odor prohibition of subsection 62-296.320(2), F.A.C. and not cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor?----- ☐ Yes ☐ No
3. Does the combined quantity of styrene containing resin and gel-coat used exceed 284,000 pounds (142 tons) in any consecutive twelve month period? (Chapter 62-210.300(3)(c)6.c., F.A.C.)----- ☐ Yes ☐ No
4. Does the owner/operator of the facility maintain records to document the quantity of resin and gel-coat used on a monthly basis? (Chapter 62-210.300(3)(c)6.d., F.A.C.)----- ☐ Yes ☐ No
5. Does the owner/operator retain, and make available for Department inspection, these records for a period of at least five years? (Chapter 62-210.300(3)(c)6.d., F.A.C.)----- ☐ Yes ☐ No
6. Is this cast polymer operation subject to a volatile organic compound (VOC) Reasonably Available Control Technology (RACT) emission limiting standard of Chapter 62-296.500, F.A.C.? (Rule 62-210.300(3)(c)6.b., F.A.C.)----- ☐ Yes ☐ No

PART III: CONTROL/OPERATING/MAINTENANCE REQUIREMENTS – Rule 62-210.300, F.A.C.

(check ☒ appropriate box(es))

1. Does the owner or operator voluntarily encourage pollution prevention through such measures as training employees involved in product fabrication on methods of reducing evaporative losses by:
 - a) lessening the exposure of fresh resin surfaces to the air?----- ☐ Yes ☐ No
 - b) maintaining spray lay-up equipment to ensure effective application with a minimum of overspray?-- ☐ Yes ☐ No
 - c) monitoring the coating thickness to avoid excessive resin/get coat application?----- ☐ Yes ☐ No
 - d) implementing inventory control practices to prevent spillage?----- ☐ Yes ☐ No
 - e) managing cleanup solvents?----- ☐ Yes ☐ No
2. Does the owner or operator make every reasonable effort to conduct the specific activity authorized by the general permit in a manner that minimizes adverse effects on adjacent property or on public use of the adjacent property, where applicable, and on the environment, including fish, wildlife, natural resources, water quality, or air quality?----- ☐ Yes ☐ No
3. Does the owner or operator maintain the permitted facility, emission unit, or activity in good condition?-- ☐ Yes ☐ No

PART IV: SPECIAL CONDITIONS AND PROCEDURES – Rule 62-210.300(4)(d)4., F.A.C.

(check ☒ appropriate box(es))

A. New or Modified Process Equipment

1. Since the last inspection has there been
- a) installation of any new process equipment?----- ☐ Yes ☐ No
- b) alterations to existing process equipment without replacement?----- ☐ Yes ☐ No
- c) replacement of existing equipment substantially different than that noted on the most recent registration form?----- ☐ Yes ☐ No
- d) If you answered **YES** to any of the above, did the owner submit a new and complete registration form and appropriate fee (Rule 62-4.050, F.A.C.) to the appropriate DEP or local program office?----- ☐ Yes ☐ No

COMMENTS:

Inspector's Name

Date of Inspection

Inspector's Signature

Approximate Date of Next Inspection



CHROMIUM ELECTROPLATING/ANODIZING



COMPLIANCE INSPECTION CHECKLIST

INSPECTION TYPE: ANNUAL (INS1, INS2) ☐ COMPLAINT/DISCOVERY (CI) ☐
RE-INSPECTION (FUI) ☐ ARMS COMPLAINT NO. _____

AIRS ID#: _____ DATE: _____ ARRIVE: _____ DEPART: _____

FACILITY NAME: _____

FACILITY LOCATION: _____

RESPONSIBLE OFFICIAL: _____ PHONE: _____

CONTACT NAME: _____ PHONE: _____

LAST PAYMENT RECEIVED: _____ ENTITLEMENT PERIOD: _____ / _____
(Year) (To) (From)

PART I: INSPECTION COMPLIANCE STATUS (check ☒ only one box)

☐ IN COMPLIANCE ☐ MINOR Non-COMPLIANCE ☐ SIGNIFICANT Non-COMPLIANCE

PART II: CLASSIFICATION – Rule 62-213.300 FAC

Facility type(s)/applicable standard as indicated on notification form:

1. Hard Chromium Plating

- a. Existing Large (0.015 mg/dscm) - ☐ b. Existing Small (0.03 mg/dscm) ----- ☐
c. New (0.015 mg/dscm) ----- ☐ d. Alternative Standard for existing facilities --- ☐
(0.03 mg/dscm) using a rolling average of
rectifier capacity (less than 60 million A-hr/year)

2. Decorative Chromium Plating/Anodizing

- a. Chromic Acid Bath 1) Emissions of ≤ 0.01 mg/dscm (4.4×10^{-6} gr/dscf) ----- ☐
2) Surface tension of ≤ 45 dynes/cm (3.1×10^{-3} lb-f/ft) ----- ☐
(May only be selected if a wetting agent is used.)
b. Trivalent Chromium Bath 1) With wetting agent ----- ☐
2) Without wetting agent ≤ 0.01 mg/dscm (4.4×10^{-6} gr/dscf) -- ☐
c. Chromium Anodizing 1) Emissions of ≤ 0.01 mg/dscm (4.4×10^{-6} gr/dscf) ----- ☐
2) Surface tension of 45 dynes/cm (3.1×10^{-3} lb-f/ft) ----- ☐
(May only be selected if a wetting agent is used.)

PART III: CONTROL TECHNOLOGY – Rule 62-213.300 FAC

(Select control
device)

DEVICE IN USE?

- | | | |
|--|------------------------------|-----------------------------|
| 1. ☐ Composite Mesh Pad ----- | ☐ Yes | ☐ No |
| 2. ☐ Fiber Bed Mist Eliminator ----- | ☐ Yes | ☐ No |
| 3. ☐ Packed Bed Scrubber ----- | ☐ Yes | ☐ No |
| 4. ☐ Packed Bed Scrubber/Composite Mesh Pad ----- | ☐ Yes | ☐ No |
| 5. ☐ Foam Blanket Fume Suppressant ----- | ☐ Yes | ☐ No |
| 6. ☐ Fume Suppressant w/ Wetting Agent ----- | ☐ Yes | ☐ No |

Has the facility conducted an initial performance test to establish monitoring parameters? - ☐ Yes ☐ No ☐ N/A
(Not required for sources using a wetting agent or 1-inch foam blanket thickness)

PART IV: RECORDKEEPING/REPORTING REQUIREMENTS – Rule 62-213.300(3)

Has the responsible official maintained the following records?

1. Quarterly inspection records for add-on air pollution control devices and monitoring equipment. (applicable only to a facility using a packed bed scrubber, fiber-bed mist eliminator, or composite mesh pad) ----- ☐ Yes ☐ No ☐ N/A
2. Operations and Maintenance Plan (OMP). (applicable only to a facility using a packed bed scrubber, fiber-bed mist eliminator, or composite mesh pad) ----- ☐ Yes ☐ No ☐ N/A
3. Maintenance records for the source, add-on pollution control devices, and monitoring equipment (equipment identified, date performed, description). ----- ☐ Yes ☐ No
4. Records of date of occurrence, duration, cause, and corrective action of each malfunction of process, add-on pollution control device, and monitoring equipment. ☐ Yes ☐ No
5. Results of all performance tests. ☐ Yes ☐ No ☐ N/A
6. Records of monitoring data. (not applicable to trivalent chromium baths using a wetting agent) ----- ☐ Yes ☐ No ☐ N/A

Composite Mesh Pad

Measure the pressure drop across the CMP daily. ----- ☐ Yes ☐ No

Packed Bed Scrubber

Measure the pressure drop across the PBS and the inlet velocity daily. ----- ☐ Yes ☐ No

Fiber-Bed Mist Eliminator

Measure the pressure drop across the FBME and the upstream device daily. ----- ☐ Yes ☐ No

Packed Bed Scrubber/Composite Mesh Pad

Measure the pressure drop across the CMP daily. ----- ☐ Yes ☐ No

Foam Blanket Fume Suppressant

Measure the foam blanket thickness at the appropriate interval. ----- ☐ Yes ☐ No

Fume Suppressant w/ Wetting Agent

Measure the surface tension at the appropriate interval. ----- ☐ Yes ☐ No

7. Purchase records of wetting agent components. ----- ☐ Yes ☐ No ☐ N/A
8. Records of the date and time that fume suppressants are added to the bath. ----- ☐ Yes ☐ No ☐ N/A
9. Records of rectifier capacity, if used to determine facility size. ----- ☐ Yes ☐ No ☐ N/A
10. Records of the total process operating time. ----- ☐ Yes ☐ No
11. Records identifying specific periods of excess emissions. ----- ☐ Yes ☐ No
12. Startup, Shutdown & Malfunction Plan. ----- ☐ Yes ☐ No

[illegible]

Inspector's Name

Date of Inspection

Inspector's Signature

Approximate Date of Next Inspection



CONCRETE BATCHING PLANTS

COMPLIANCE INSPECTION CHECKLIST



INSPECTION TYPE: ANNUAL (INS1, INS2, INS3) ☐

COMPLAINT/DISCOVERY (CI) ☐

RE-INSPECTION (FUI) ☐

ARMS COMPLAINT NO. _____

AIRS ID#: _____ DATE: _____ ARRIVE: _____ DEPART: _____

FACILITY NAME: _____

FACILITY LOCATION: _____

AUTHORIZED REPRESENTATIVE: _____ PHONE: _____

CONTACT NAME: _____ PHONE: _____

LAST PAYMENT YEAR: _____ ENTITLEMENT PERIOD: _____ / _____
(Year) (To) (From)

PART I: INSPECTION COMPLIANCE STATUS (check ☒ only one box)

☐ IN COMPLIANCE

☐ MINOR Non-COMPLIANCE

☐ SIGNIFICANT Non-COMPLIANCE

PART II: TESTING/RECORDKEEPING REQUIREMENTS – Rule 62-296.414, F.A.C.

(check ☒ appropriate box(es))

Stack Emissions

1. Were visible emissions tests conducted during this site visit according to EPA Method 9 (Ref.: Chapter 62-297, F.A.C.)?----- ☐ Yes ☐ No
2. Are emissions from silos, weigh hoppers (batchers), and other enclosed storage and conveying equipment controlled to the extent necessary to limit visible emissions to 5 percent opacity?----- ☐ Yes ☐ No
3. During visible emissions tests of the silo dust collector exhaust points was the loading of the silo conducted at a rate that is representative of the normal silo loading rate, or at least at the minimum 25 tons per hour rate, unless such rate is unachievable in practice?----- ☐ Yes ☐ No
4. Are emissions from the weigh hopper (batcher) operation controlled by the silo dust collector? (If answer to this question is “Yes”, then continue on to questions 4.a) and 4.b) below. If answer is “No” then skip 4.a) and 4.b) and continue on to question 5.)----- ☐ Yes ☐ No
 - a) Was the batching operation in operation during the visible emissions test?----- ☐ Yes ☐ No
 - b) During the visible emissions test, was the batching rate representative of the normal batching rate and duration?----- ☐ Yes ☐ No
5. If emissions from the weigh hopper (batcher) operation are controlled by a dust collector, which is separate from the silo dust collector, are the visible emissions tests of the weigh hopper (batcher) dust collector conducted while batching at a rate that is representative of the normal batching rate and duration?----- ☐ Yes ☐ No

PART II: TESTING/RECORDKEEPING REQUIREMENTS – Rule 62-296.414, F.A.C. – (continued)

(check ☒ appropriate box(es))

Compliance Demonstration - (Rule 62-296.401(5)(i), F.A.C.)

1. Is each dust collector exhaust point tested according to the visible emissions limiting standard as part of the annual compliance demonstration? (Rule 62-297.310(7)(a), F.A.C.)----- ☐ Yes ☐ No

New Facilities – (permitted pursuant to Rule 62-210.300(4), F.A.C., Air General Permits)

2. Did this facility demonstrate:
- a) initial compliance no later than 30 days after beginning operation?----- ☐ Yes ☐ No
- b) annual compliance within 60 days prior to each anniversary of the air general permit registration form submittal date?----- ☐ Yes ☐ No

Existing Facilities – (permitted pursuant to Rule 62-210.300(4), F.A.C., Air General Permits)

3. In order to demonstrate annual compliance, was an annual visible emissions test conducted 60 days prior to the AGP registration form submission, and within 60 days prior to each anniversary date?----- ☐ Yes ☐ No

Test Reports – (Rules 62-213.440, F.A.C. and 62-297.310(8)(b), F.A.C.)

4. Was the required test report filed with the department as soon as practical, but no later than 45 days after the test was completed?----- ☐ Yes ☐ No

PART III: OPERATING/RECORDKEEPING REQUIREMENTS – Rule 62-210.300(4)(c)2., F.A.C.

(check ☒ appropriate box(es))

1. Is this facility: 1) a stationary ☐; 2) a relocatable ☐; or does it have: 3) both, stationary and relocatable ☐ concrete batching and/or nonmetallic mineral processing plants? (*Please check ☒ only one box.*)
2. If this is a stationary concrete batching plant, is there one or more relocatable nonmetallic mineral processing plants using individual air general permits at the same location? (*If your answer to this question is YES, then proceed to questions 2.a), thru 2.d,) below.*)----- ☐ Yes ☐ No
- a) Are there any additional nonexempt units located at this facility?----- ☐ Yes ☐ No
- b) Is the total combined annual facility-wide fuel oil usage of all plants less than 240,000 gallons per calendar year?----- ☐ Yes ☐ No
- c) Is the quantity of material processed less than ten million tons per calendar year?----- ☐ Yes ☐ No
- d) Is the fuel oil sulfur content 0.5% by weight or less?----- ☐ Yes ☐ No
3. Does the owner/operator of the concrete batching plant maintain a log book or books to account for:
- a) fuel consumption on a monthly basis?----- ☐ Yes ☐ No
- b) material processed on a monthly basis?----- ☐ Yes ☐ No
- c) the sulfur content of the fuel being burned (Fuel supplier certifications)?----- ☐ Yes ☐ No

PART III: OPERATING/RECORDKEEPING REQUIREMENTS – Rule 62-296.414(2)(a) and (b), F.A.C. (continued)
(check ☒ appropriate box(es))

Unconfined Emissions – (Rule 62-296.320(4)(c), F.A.C.)

1. Does the owner /operator of the concrete batching plant take reasonable precautions to control unconfined emissions by:
- a) management of roads, parking areas, stock piles, and yards, which shall include one or more of the following:
 - 1) paving and maintenance of roads, parking areas, stock piles, and yards?----- ☐ Yes ☐ No
 - 2) application of water or environmentally safe dust-suppressant chemicals when necessary to control emissions?----- ☐ Yes ☐ No
 - 3) removal of particulate matter from roads and other paved areas under control of the owner/operator to re-entrainment, and from building or work areas to reduce airborne particulate matter?----- ☐ Yes ☐ No
 - 4) reduction of stock pile height, or installation of wind breaks to mitigate wind entrainment of particulate matter from stock piles?----- ☐ Yes ☐ No
 - b) use of spray bar, chute, or partial enclosure to mitigate emissions at the drop point to the truck?----- ☐ Yes ☐ No

PART IV: SPECIAL CONDITIONS AND PROCEDURES – Rule 62-210.300(4)(d)4., F.A.C.

A. New or Modified Process Equipment

1. Since the last inspection has there been
- a) installation of any new process equipment?----- ☐ Yes ☐ No
 - b) alterations to existing process equipment without replacement?----- ☐ Yes ☐ No
 - c) replacement of existing equipment substantially different than that noted on the most recent registration form?----- ☐ Yes ☐ No
 - d) If you answered **YES** to any of the above, did the owner submit a new and complete registration form and appropriate fee (Rule 62-4.050, FAC) to the appropriate DEP or local program office?----- ☐ Yes ☐ No

COMMENTS: _____

Inspector's Name

Date of Inspection

Inspector's Signature

Approximate Date of Next Inspection



ANIMAL CREMATORY

COMPLIANCE INSPECTION CHECKLIST



INSPECTION TYPE: ANNUAL (INS1, INS2, INS3) ☐ COMPLAINT/DISCOVERY (CI) ☐
RE-INSPECTION (FUI) ☐ ARMS COMPLAINT NO. _____

AIRS ID#: _____ DATE: _____ ARRIVE: _____ DEPART: _____
FACILITY NAME: _____
FACILITY LOCATION: _____

AUTHORIZED REPRESENTATIVE: _____ PHONE: _____
CONTACT NAME: _____ PHONE: _____
LAST PAYMENT YEAR: _____ ENTITLEMENT PERIOD: _____ / _____
(Year) (To) (From)

PART I: INSPECTION COMPLIANCE STATUS (check ☒ only one box)

☐ IN COMPLIANCE ☐ MINOR Non-COMPLIANCE ☐ SIGNIFICANT Non-COMPLIANCE

PART II: TESTING/RECORDKEEPING REQUIREMENTS – Rule 62-296.401, F.A.C.

(check ☒ appropriate box(es))

1. Were there any objectionable odor(s) detected?----- ☐ Yes ☐ No
2. Was a visible emissions test conducted during this site visit according to EPA Method 9 (Ref.: Chapter 62-297, F.A.C.)?----- ☐ Yes ☐ No
3. In order to demonstrate individual source compliance, was an annual visible emissions test conducted 60 days prior to the AGP registration form submission, and within 60 days prior to each anniversary date? (Rule 62-296.401(6)(j), F.A.C.)----- ☐ Yes ☐ No
4. In order to demonstrate individual source compliance were the remaining applicable standards testing completed within 60 days prior to the AGP registration form submission? (Rule 62-210.300(4), F.A.C.)-- ☐ Yes ☐ No
 - a) Carbon Monoxide (CO) emissions equal to or below the requirements of 100 parts per million by volume, dry basis, corrected to 7% O₂ on an hourly average basis and tested according to EPA Method 10 (Ref.: Chapter 62-297, F.A.C.)?----- ☐ Yes ☐ No
 - b) Oxygen test performed according to EPA Method 3 (Ref.: Chapter 62-297, F.A.C.)?----- ☐ Yes ☐ No
 - c) Particulate matter emissions test with results equal to or below the requirements of 0.080 grains per dry standard cubic foot (ft³) of flue gas, corrected to 7% O₂ and tested according to EPA Method 5 (Ref.: Chapter 62-297, F.A.C.)?----- ☐ Yes ☐ No
5. Was all emissions testing conducted with the source operating at the manufacturers recommended capacity?----- ☐ Yes ☐ No
6. Was CO & PM compliance demonstrated by submission of a test report for an identical crematory unit?-- ☐ Yes ☐ No
7. Was the Department notified at least 15 days prior to the date of the last formal compliance test?----- ☐ Yes ☐ No
8. Was the required test report filed with the Department as soon as practical, but no longer than 45 days after the test was completed?----- ☐ Yes ☐ No

PART III: OPERATING/RECORDKEEPING REQUIREMENTS – Rule 62-296.401, F.A.C.

(check ☒ appropriate box(es))

1. Is there **Continuous Emissions Monitoring System** (CEMS) equipment installed on each unit to record temperatures in the primary and secondary chambers where there is a 1.0 second gas residence time in the secondary chamber combustion zone in accordance with the manufacturer's instructions?-----☐ Yes ☐ No
 - a) Do temperature probes seem to be properly placed?-----☐ Yes ☐ No
 - b) Are the following records kept on file, available for inspection for at least two years following the recording of such measurements, maintenance, reports and records?
 - 1) All measurements (including CEMS)-----☐ Yes ☐ No
 - 2) Monitoring device-----☐ Yes ☐ No
 - 3) Performance Testing Measurements -----☐ Yes ☐ No
 - 4) CEMS Performance Evaluation-----☐ Yes ☐ No
 - 5) All CEMS or monitoring device calibration checks-----☐ Yes ☐ No
 - 6) Adjustments-----☐ Yes ☐ No
 - 7) Preventive maintenance performed on systems/devices-----☐ Yes ☐ No
 - 8) Corrective maintenance performed on systems/devices-----☐ Yes ☐ No
2. Was this crematory unit constructed: (check only one ☒ box)
 - a) ☐ **BEFORE** August 30, 1989? (If this box checked, continue on to #3 and skip #4)
 - b) ☐ **ON** or **AFTER** August 30, 1989? (If this box checked, skip #3 and continue on to #4)
3. If constructed **BEFORE** August 30, 1989 is the:
 - a) secondary chamber combustion zone providing at least a 1.0 second gas residence time @ **1600°F**?----☐ Yes ☐ No
 - b) actual operating temperature of the secondary chamber combustion zone no less than **1400°F** throughout the combustion process in the primary chamber?-----☐ Yes ☐ No
 - c) cremation in the primary chamber begun after the secondary chamber combustion zone temperature is equal to or greater than **1400°F**?-----☐ Yes ☐ No
 - d) required monitoring equipment installed and operational, and providing continuous monitoring to record the temperature at the point or beyond where 1.0 second gas residence time is obtained in the secondary chamber combustion zone according to the manufacturer's instructions?-----☐ Yes ☐ No
4. If constructed **ON** or **AFTER** August 30, 1989 is the:
 - a) volume in the secondary combustion zone sufficient to provide at least a 1.0 second gas residence time @ **1800° F**?-----☐ Yes ☐ No
 - b) the actual operating temperature of the secondary chamber combustion zone no less than **1600°F** throughout the combustion process in the primary chamber?-----☐ Yes ☐ No
 - c) secondary chamber combustion zone temperature equal to or greater than **1600°F** before the cremation process begins in the primary chamber?-----☐ Yes ☐ No
5. Are appropriate leak-proof containers containing no more than 0.5 % (percent) by weight chlorinated plastics used during the cremation of dead animals?-----☐ Yes ☐ No
 - a) If the answer to question 4 above is YES, is certifying documentation from the manufacturer that they are composed of 0.5% or less by weight chlorinated plastics kept on file at the site for the duration of their use and for at least two years after their use?-----☐ Yes ☐ No
 - b) If plastic bags are used for the cremation of animals are they non-chlorinated and no less than 3 mils thick?-----☐ Yes ☐ No
 - c) Are dead animals, which have been used for medical or commercial experimentation, or other materials, including biomedical wastes (Rule 62-210.200, F.A.C.), incinerated at this location?-----☐ Yes ☐ No
6. During this review period, was the largest batch load cremated 500 pounds per hour or less?-----☐ Yes ☐ No
7. Have all crematory operators been trained and certified by a Department-approved training program?----☐ Yes ☐ No
 - a) Are copies of the training certificates all crematory operators kept on file at the facility for the duration of the operator's employment & for an additional two years after termination of employment?-----☐ Yes ☐ No

A. New or Modified Process Equipment

- COMMENTS:

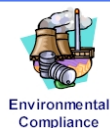
Date of Inspection

Approximate Date of Next Inspection



HUMAN CREMATORY

COMPLIANCE INSPECTION CHECKLIST



INSPECTION TYPE: ANNUAL (INS1, INS2, INS3) ☐

COMPLAINT/DISCOVERY (CI) ☐

RE-INSPECTION (FUI) ☐

ARMS COMPLAINT NO. _____

AIRS ID#: _____ **DATE:** _____ **ARRIVE:** _____ **DEPART:** _____

FACILITY NAME: _____

FACILITY LOCATION: _____

AUTHORIZED REPRESENTATIVE: _____ **PHONE:** _____

CONTACT NAME: _____ **PHONE:** _____

LAST PAYMENT YEAR: _____ **ENTITLEMENT PERIOD:** _____ / _____
(Year) (To) (From)

PART I: INSPECTION COMPLIANCE STATUS (check ☒ only one box)

☐ IN COMPLIANCE ☐ MINOR Non-COMPLIANCE ☐ SIGNIFICANT Non-COMPLIANCE

PART II: TESTING/RECORDKEEPING REQUIREMENTS – Rule 62-296.401, F.A.C.

(check ☒ appropriate box(es))

1. Were there any objectionable odor(s) detected?----- ☐ Yes ☐ No
2. Was a visible emissions test conducted during this site visit according to EPA Method 9 (Ref.: Chapter 62-297, F.A.C.)?----- ☐ Yes ☐ No
3. In order to demonstrate individual source compliance, was an annual visible emissions test conducted 60 days prior to the AGP registration form submission, and within 60 days prior to each anniversary date? (Rule 62-296.401(5)(i), F.A.C.)----- ☐ Yes ☐ No
4. In order to demonstrate individual source compliance were the remaining applicable standards testing completed within 60 days prior to the AGP registration form submission? (Rule 62-210.300(4), F.A.C.)-- ☐ Yes ☐ No
 - a) Carbon Monoxide (CO) emissions equal to or below the requirements of 100 parts per million by volume, dry basis, corrected to 7% O₂ on an hourly average basis and tested according to EPA Method 10 (Ref.: Chapter 62-297, F.A.C.)?----- ☐ Yes ☐ No
 - b) Oxygen test performed according to EPA Method 3 (Ref.: Chapter 62-297, F.A.C.)?----- ☐ Yes ☐ No
 - c) Particulate matter emissions test with results equal to or below the requirements of 0.080 grains per dry standard cubic foot (ft³) of flue gas, corrected to 7% O₂ and tested according to EPA Method 5 (Ref.: Chapter 62-297, F.A.C.)?----- ☐ Yes ☐ No
5. Was all emissions testing conducted with the source operating at the manufacturers recommended capacity?----- ☐ Yes ☐ No
6. Was CO & PM compliance demonstrated by submission of a test report for an identical crematory unit?---- ☐ Yes ☐ No
7. Was the Department notified at least 15 days prior to the date of the last formal compliance test?----- ☐ Yes ☐ No
8. Was the required test report filed with the Department as soon as practical, but no longer than 45 days after the test was completed?----- ☐ Yes ☐ No

PART III: OPERATING/RECORDKEEPING REQUIREMENTS – Rule 62-296.401, F.A.C.

(check ☒ appropriate box(es))

1. Is there **Continuous Emissions Monitoring System (CEMS)** equipment installed on each unit to record temperatures in the primary and secondary chambers where there is a 1.0 second gas residence time in the secondary chamber combustion zone in accordance with the manufacturer's instructions?-----☐ Yes ☐ No
 - a) Do temperature probes seem to be properly placed?-----☐ Yes ☐ No
 - b) Are the following records kept on file, available for inspection for at least two years following the recording of such measurements, maintenance, reports and records?
 - 1) All measurements (including CEMS)-----☐ Yes ☐ No
 - 2) Monitoring device-----☐ Yes ☐ No
 - 3) Performance Testing Measurements -----☐ Yes ☐ No
 - 4) CEMS Performance Evaluation-----☐ Yes ☐ No
 - 5) All CEMS or monitoring device calibration checks-----☐ Yes ☐ No
 - 6) Adjustments-----☐ Yes ☐ No
 - 7) Preventive maintenance performed on systems/devices-----☐ Yes ☐ No
 - 8) Corrective maintenance performed on systems/devices-----☐ Yes ☐ No
2. Was this crematory unit constructed: (check only one ☒ box)
 - a) ☐ **BEFORE** August 30, 1989? (If this box checked, continue on to #3 and skip #4)
 - b) ☐ **ON** or **AFTER** August 30, 1989? (If this box checked, skip #3 and continue on to #4)
3. If constructed **BEFORE** August 30, 1989 is the:
 - a) secondary chamber combustion zone providing at least a 1.0 second gas residence time @ **1600°F**?---- ☐ Yes ☐ No
 - b) actual operating temperature of the secondary chamber combustion zone no less than **1400°F** throughout the combustion process in the primary chamber?-----☐ Yes ☐ No
 - c) cremation in the primary chamber begun after the secondary chamber combustion zone temperature is equal to or greater than **1400°F**?-----☐ Yes ☐ No
 - d) required monitoring equipment installed and operational, and providing continuous monitoring to record the temperature at the point or beyond where 1.0 second gas residence time is obtained in the secondary chamber combustion zone according to the manufacturer's instructions?-----☐ Yes ☐ No
4. If constructed **ON** or **AFTER** August 30, 1989 is the:
 - a) volume in the secondary combustion zone sufficient to provide at least a 1.0 second gas residence time @ **1800° F**?-----☐ Yes ☐ No
 - b) the actual operating temperature of the secondary chamber combustion zone no less than **1600°F** throughout the combustion process in the primary chamber?-----☐ Yes ☐ No
 - c) secondary chamber combustion zone temperature equal to or greater than **1600°F** before the cremation process begins in the primary chamber?-----☐ Yes ☐ No
5. Are appropriate cremation containers containing no more than 0.5 % (percent) by weight chlorinated plastics used during the cremation of dead human bodies?-----☐ Yes ☐ No
 - a) If the answer to question 4 above is YES, is certifying documentation from the manufacturer that they are composed of 0.5% or less by weight chlorinated plastics kept on file at the site for the duration of their use and for at least two years after their use?-----☐ Yes ☐ No
 - b) Are there any other materials, including biomedical wastes (Rule 62-210.200, FAC) incinerated at this location?-----☐ Yes ☐ No
6. Have all crematory operators been trained and certified by a Department-approved training program?-----☐ Yes ☐ No
 - a) Are copies of the training certificates for all crematory operators kept on file at the facility for the duration of the operator's employment & for an additional two years after termination of employment?-----☐ Yes ☐ No

A. New or Modified Process Equipment

- COMMENTS:**

Approximate Date of Next Inspection



PERCHLOROETHYLENE DRY CLEANERS



COMPLIANCE INSPECTION CHECKLIST

INSPECTION TYPE: ANNUAL (INS1, INS2) ☐ COMPLAINT/DISCOVERY (CI) ☐
RE-INSPECTION (FUI) ☐ ARMS COMPLAINT NO. _____

AIRS ID#: _____ DATE: _____ ARRIVE: _____ DEPART: _____
FACILITY NAME: _____
FACILITY LOCATION: _____
RESPONSIBLE OFFICIAL: _____ PHONE: _____
CONTACT NAME: _____ PHONE: _____
LAST PAYMENT YEAR: _____ ENTITLEMENT PERIOD: _____ / _____
(Year) (To) (From)

PART I: INSPECTION COMPLIANCE STATUS (check ☒ only one box)

☐ IN COMPLIANCE ☐ MINOR Non-COMPLIANCE ☐ SIGNIFICANT Non-COMPLIANCE

PART II: FACILITY CLASSIFICATION - Rule 62-213.300 FAC

(check ☒ only one box in A)

A. 1. Existing small area source ☐

dry-to-dry only, $x < 140$ gal/yr
transfer only, $x < 200$ gal/yr
both types, $x < 140$ gal/yr
(constructed before 12/9/91)

2. New small area source ☐

dry-to-dry only, $x < 140$ gal/yr
transfer only, $x < 200$ gal/yr
both types, $x < 140$ gal/yr
(constructed on or after 12/9/91)

3. Existing large area source ☐

dry-to-dry only, $140 \leq x \leq 2,100$ gal/yr
transfer only, $200 \leq x \leq 1,800$ gal/yr
both types, $140 \leq x \leq 1,800$ gal/yr
(constructed before 12/9/91)

4. New large area source ☐

dry-to-dry only, $140 \leq x \leq 2,100$ gal/yr
transfer only, $200 \leq x \leq 1,800$ gal/yr
both types, $140 \leq x \leq 1,800$ gal/yr
(constructed on or after 12/9/91)

5. Ineligible for General Permit ☐

drop store/out of business/petroleum
facility exceeds above limits

B. The total quantity of perchloroethylene (perc) purchased within the preceding 12 months by this dry cleaning facility was _____ gallons.

PART III: GENERAL CONTROL REQUIREMENTS – Rule 62-213.300 FAC

(check ☒ only one box
for each question)

Does the responsible official of the dry cleaning facility:

1. Store perc, and wastes containing perc, in tightly sealed & impervious containers? ☐ Yes ☐ No ☐ N/A
2. Examine the containers for leakage? ----- ☐ Yes ☐ No ☐ N/A
3. Close and secure machine doors except during loading/unloading? ----- ☐ Yes ☐ No
4. Drain cartridge filters in their housing or in sealed containers for at least 24 hours prior to disposal? ----- ☐ Yes ☐ No ☐ N/A
5. Maintain solvent-to-carbon ratios and steam pressure for carbon adsorber beds according to the manufacturer's specifications? ----- ☐ Yes ☐ No ☐ N/A

PART IV: PROCESS VENT CONTROLS – Rule 62-213.300 FAC

(Refer to Part II-A.1.-4. Classification: page 1 of 4, this form)

1. If the facility classification is a **Existing small area source**, no controls are required. **Proceed to Part V.**
2. If the facility classification is a **New small area source**, the machine should be equipped with a refrigerated condenser. **Complete section A. below.**
3. If the facility classification is a **Existing large area source**, the machine should be equipped with either a refrigerated condenser or a carbon adsorber. **Complete both sections A and B below.** *Carbon adsorber must have been installed prior to September 22, 1993*
4. If the facility classification is a **New large area source**, the machine should be equipped with a refrigerated condenser. **Complete both sections A and B below.**

A. Has the responsible official of all existing large area & new sources:

(check ☒ only one box
for each question)

1. Equipped all machines with the appropriate vent controls? ----- ☐ Yes ☐ No
2. Equipped dry-to-dry machines with a closed-loop vapor venting system? ----- ☐ Yes ☐ No ☐ N/A
3. Equipped the condenser with a diverter valve so airflow will be directed away from the condenser upon opening the door? ----- ☐ Yes ☐ No ☐ N/A
4. Measured and recorded the temperature of the outlet exhaust stream of a refrigerated condenser on a weekly basis? ----- ☐ Yes ☐ No
5. Repaired or adjusted the equipment within 24 hours if the exhaust temperature of the condenser exceeded 45° F? ----- ☐ Yes ☐ No ☐ N/A
6. Conducted all temperature monitoring after an appropriate cool-down period and after verifying that the coolant had been completely charged? ----- ☐ Yes ☐ No

PART IV: PROCESS VENT CONTROLS – Rule 62-213.300 FAC (continued)

B. Does the responsible official of an existing large or new large area source also:

(check ☒ only one box for each question)

1. Measure and record the exhaust temperature on the outlet side of the condenser located on dry-to-dry, reclaimer, and dryer machines on a weekly basis? ----- ☐ Yes ☐ No
2. Measure and record the washer exhaust temperature at the condenser inlet and outlet weekly? ----- ☐ Yes ☐ No ☐ N/A
 - a) Is the temperature differential equal to, or greater than 20° F? ----- ☐ Yes ☐ No ☐ N/A
3. Measure and record the perc concentration in the exhaust stream weekly at the end of the final drying cycle while the machine is venting to the adsorber, if machines are equipped exclusively with a carbon adsorber? ----- ☐ Yes ☐ No ☐ N/A
 - a) Is the perc concentration equal to, or less than 100 ppm? ----- ☐ Yes ☐ No ☐ N/A
4. Assure that the sampling port on the carbon adsorber exhaust for measuring perc concentrations is at least 8 duct diameters downstream of any bend, contraction, or expansion; is at least 2 duct diameters upstream from any bend, contraction, or expansion; and downstream from no other inlet? ----- ☐ Yes ☐ No ☐ N/A
5. Equip transfer machines (dryers, reclaimers, and washers) with individual condenser coils? ----- ☐ Yes ☐ No ☐ N/A
6. Route airflow to the carbon adsorber (if used) at all times? ----- ☐ Yes ☐ No ☐ N/A

PART V: RECORDKEEPING REQUIREMENTS – Rule 62-213.300(3) FAC

Does the responsible official:

(check ☒ only one box for each question)

1. Maintain receipts for perc purchased? ----- ☐ Yes ☐ No
2. Maintain rolling monthly total of yearly perc consumption? ----- ☐ Yes ☐ No
3. Maintain leak detection inspection and repair reports for the following:
 - a) documentation of leaks repaired w/in 24 hrs? or; ----- ☐ Yes ☐ No ☐ N/A
 - b) documentation of parts ordered to repair leak and leak repaired w/in 2 days and parts installed w/in 5 days of receipt? ----- ☐ Yes ☐ No ☐ N/A
4. Maintain calibration data? (*for applicable direct reading instruments*) ----- ☐ Yes ☐ No ☐ N/A
5. Maintain exhaust duct monitoring data on perc concentrations? ----- ☐ Yes ☐ No ☐ N/A
6. Maintain a startup/shutdown/malfunction plan? ----- ☐ Yes ☐ No
7. Maintain deviation reports? ----- ☐ Yes ☐ No ☐ N/A
 - a) Problem corrected? ----- ☐ Yes ☐ No ☐ N/A
8. Maintain a compliance plan, if applicable? ----- ☐ Yes ☐ No ☐ N/A

PART VI: LEAK DETECTION AND REPAIRS – Rule 62-213.300 FAC

(check ☒ only one box for each question)

1. Does the responsible official conduct a weekly (for small sources, bi-weekly) leak detection and repair inspection? ----- ☐ Yes ☐ No
2. Does the facility maintain a leak log? ----- ☐ Yes ☐ No
3. Does the responsible official check the following areas for leaks?
- | | |
|--|--|
| a) Hose connections, fittings, couplings, and valves ----- ☐ Yes ☐ No ☐ N/A | g) Muck cookers ----- ☐ Yes ☐ No ☐ N/A |
| b) Door gaskets and seating ----- ☐ Yes ☐ No ☐ N/A | h) Stills ----- ☐ Yes ☐ No ☐ N/A |
| c) Filter gaskets and seating ----- ☐ Yes ☐ No ☐ N/A | i) Exhaust dampers ----- ☐ Yes ☐ No ☐ N/A |
| d) Pumps ----- ☐ Yes ☐ No ☐ N/A | j) Diverter valves ----- ☐ Yes ☐ No ☐ N/A |
| e) Solvent tanks and containers -- ☐ Yes ☐ No ☐ N/A | k) Cartridge filter housings ☐ Yes ☐ No ☐ N/A |
| f) Water separators ----- ☐ Yes ☐ No ☐ N/A | |
4. Which method(s) of detection (is/are) used by the responsible official? (check ☒ the appropriate box (es))
- a) Visual examination (condensed solvent on exterior surfaces) ----- a) ☐
- b) Physical detection (airflow felt through gaskets) ----- b) ☐
- c) Odor (noticeable perc odor) ----- c) ☐
- d) Use of direct-reading instrumentation (FID/PID/calorimetric tubes) ----- d) ☐ ** (see below)
- e) Halogen leak detector ----- e) ☐
- **If using direct-reading instrumentation, is the equipment: ----- ** ☐ N/A**
- 1) Capable of detecting perc vapor concentrations in a range of 0-500 ppm? ----- 1) ☐ Yes ☐ No
- 2) Calibrated against a standard gas prior to and after each use (PID/FID only)? ----- 2) ☐ Yes ☐ No
- 3) Inspected for leaks and obvious signs of wear on a weekly basis? ----- 3) ☐ Yes ☐ No
- 4) Kept in a clean and secure area when not in use? ----- 4) ☐ Yes ☐ No
- 5) Verified for accuracy by use of duplicate samples (calorimetric only)? ----- 5) ☐ Yes ☐ No

Inspector's Name (Please Print)

Date of Inspection

Inspector's Signature

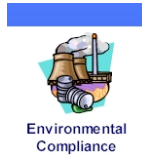
Approximate Date of Next Inspection

COMMENTS: _____



ETHYLENE OXIDE STERILIZERS

COMPLIANCE INSPECTION CHECKLIST



INSPECTION TYPE: ANNUAL (INS1, INS2) ☐ COMPLAINT/DISCOVERY (CI) ☐
RE-INSPECTION (FUI) ☐ ARMS COMPLAINT NO. _____

AIRS ID#: _____ **DATE:** _____ **ARRIVE:** _____ **DEPART:** _____

FACILITY NAME: _____

FACILITY LOCATION: _____

RESPONSIBLE OFFICIAL : _____ **PHONE:** _____

CONTACT NAME: _____ **PHONE:** _____

LAST PAYMENT YEAR: _____ **ENTITLEMENT PERIOD:** _____ / _____
(Year) (To) (From)

PART I: INSPECTION COMPLIANCE STATUS (check ☒ only one box)

☐ IN COMPLIANCE ☐ MINOR Non-COMPLIANCE ☐ SIGNIFICANT Non-COMPLIANCE

PART II: CONTROL TECHNOLOGY – Rule 62-213.300 FAC

Vent type(s) at the facility: Aeration Room--☐ Sterilization Chamber--☐ Chamber Exhaust--☐

Sterilization Chamber Vent

Has one of the following emission control devices been installed? Yes--☐ No--☐

If **yes**, indicate type below.

Acid-Water Scrubber-----☐

Thermal Oxidation Unit--☐

Catalytic Oxidation Unit--☐

Other--☐

(Must submit information to DEP for approval)

Chamber Exhaust Vent

No emission control device. (must use direct measurement in Part III)-----☐

Emissions manifolded to sterilization chamber vent control device.--☐

Dedicated emission control device (indicate type below).-----☐

Acid-Water Scrubber-----☐

Thermal Oxidation Unit--☐

Catalytic Oxidation Unit--☐

Other --☐

(Must submit information to DEP for approval)

PART III: MONITORING REQUIREMENTS – Rule 62-213.300 FAC

Has the facility conducted an initial performance test? (*Existing facilities by 6/8/98; new sources within 180 days after startup*)-----Yes ☐ No ☐

Acid-Water Scrubbers

What process parameter is the facility monitoring to determine compliance?

ethylene glycol concentration---☐

scrubber liquor tank level--☐

If the facility is monitoring the scrubber liquor tank level, has a liquid level indicator been installed?-----Yes ☐ No ☐

Catalytic/Thermal Oxidation Units

Has the facility installed a temperature sensor that is accurate to within $\pm 10^{\circ}$ F?-----Yes ☐ No ☐

Has the facility verified the accuracy of the temperature sensor? (*must be performed semiannually*)-----Yes ☐ No ☐

Direct Measurement

Has the facility installed a gas chromatograph?-----Yes ☐ No ☐

PART IV: RECORDKEEPING REQUIREMENTS – Rule 62-213.300(3) FAC

Has the facility maintained the following records?

Owner's manuals, designs specifications, and other instructional materials for the sterilization unit and control equipment.-----Yes ☐ No ☐

Records of ethylene oxide usage on a 12-month rolling average. -----Yes ☐ No ☐

Records of all initial performance tests, including control efficiency determinations.-----Yes ☐ No ☐

Records of all temperature monitoring. (*oxidation units only*) -----Yes ☐ No ☐ N/A ☐

Records of all ethylene oxide concentration monitoring. (*direct measurement only*)---Yes ☐ No ☐ N/A ☐

Records of gas chromatograph calibration (*direct measurement only*) -----Yes ☐ No ☐ N/A ☐

Records of scrubber liquor level. (*acid-water scrubbers only*)-----Yes ☐ No ☐ N/A ☐

Records of ethylene glycol concentration. (*acid-water scrubbers only*)-----Yes ☐ No ☐ N/A ☐

Inspector's Name

Date of Inspection

Inspector's Signature

Approximate Date of Next Inspection

This image shows a single page of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There is no handwriting or other markings on the paper.



HALOGENATED SOLVENT DEGREASERS



COMPLIANCE INSPECTION CHECKLIST

INSPECTION TYPE: ANNUAL (INS1, INS2) ☐ COMPLAINT/DISCOVERY (CI) ☐
RE-INSPECTION (FUI) ☐ ARMS COMPLAINT NO. _____

AIRS ID#: _____ DATE: _____ ARRIVE: _____ DEPART: _____

FACILITY NAME: _____

FACILITY LOCATION: _____

RESPONSIBLE OFFICIAL: _____ PHONE: _____

CONTACT NAME: _____ PHONE: _____

LAST PAYMENT YEAR: _____ ENTITLEMENT PERIOD: _____ / _____
(Year) (To) (From)

PART I: INSPECTION COMPLIANCE STATUS (check ☒ only one box)

☐ IN COMPLIANCE ☐ MINOR Non-COMPLIANCE ☐ SIGNIFICANT Non-COMPLIANCE

PART II: NOTIFICATION – Rule 62-210.300 FAC

(check ☒ appropriate box(es))

1. Halogenated solvent used at facility:

perchloroethylene ----- ☐

methylene chloride ----- ☐

trichloroethylene ----- ☐

1,1,1-trichloroethane ----- ☐

carbon tetrachloride ----- ☐

chloroform ----- ☐

2. Indication on notification form that facility has the following machine type(s).

Batch Vapor, $x \leq 1.21 \text{ m}^2$ ----- ☐

Batch Vapor, $x > 1.21 \text{ m}^2$ ----- ☐

New In-line ----- ☐

Existing In-line ----- ☐

Batch Cold ----- ☐

PART III: CLASSIFICATION – Rule 62-213.300 FAC

Indicate the machine type(s) observed at the facility:

Batch Vapor, $x \leq 1.21 \text{ m}^2$ -- ☐

New In-line ----- ☐

Batch Cold (immersion)----- ☐

Batch Vapor, $x > 1.21 \text{ m}^2$ -- ☐

Existing In-line -- ☐

Batch Cold (remote reservoir)-- ☐

PART IV: GENERAL CONTROL REQUIREMENTS – Rule 62-213.300 FAC

A. Batch Vapor and In-Line Machines

1. Does the facility maintain an idling and downtime mode cover that is readily opened and closed, that completely covers, has no cracks, holes, or defects; OR maintain a room designed with reduced draft according to Part II, Section (5)(c)6.b of the permit notification? ----- ☐ Yes ☐ No
2. Does the facility maintain a freeboard ratio of 0.75 or greater? ----- ☐ Yes ☐ No
3. Does the facility utilize a parts basket or parts whose size is less than 50% of the solvent-air interface area; OR introduce parts or parts basket at 0.9 m/min (3 ft/min) or less? ----- ☐ Yes ☐ No
4. Does the facility conduct all spraying operations within the vapor zone or an area not directly exposed to ambient air? ----- ☐ Yes ☐ No
5. Does the facility install and maintain an automated parts handling system capable of moving the parts/parts basket at 3.4 m/min. (11 ft/min) or less? ----- ☐ Yes ☐ No
6. Does the facility install and maintain a carbon adsorber on all machines using a lip exhaust? The exhaust concentration should not exceed 100 ppm halogenated solvent, the carbon adsorber should not be by-passed, the lip exhaust shall be located above the closed machine cover. ----- ☐ Yes ☐ No ☐ N/A
7. Does the facility have each machine equipped with:
 - a. a device to shut off sump heat if the solvent level drops to the heater coils? ----- ☐ Yes ☐ No
 - b. a device to shut off sump heat if the vapor level rises above the height of the vapor condenser? ----- ☐ Yes ☐ No
 - c. a primary condenser? ----- ☐ Yes ☐ No
8. Does the facility store all waste solvent, still bottoms, and sump bottoms in closed containers? ----- ☐ Yes ☐ No

B. Batch Cold Cleaning Machines

1. Does the facility collect and store all waste solvent in closed containers? ----- ☐ Yes ☐ No
2. Does the facility use a flexible hose or flushing device only within the freeboard area? ----- ☐ Yes ☐ No
3. Does the facility drain cleaned parts for 15 seconds or longer or until dripping ceases, whichever is longer? ----- ☐ Yes ☐ No
4. Does the facility maintain the solvent level inside the machine at or below the fill line? ----- ☐ Yes ☐ No
5. Does the facility immediately clean up spills during solvent transfer? ----- ☐ Yes ☐ No
6. Does the facility operate the agitator to produce a rolling motion? (*applicable only when air or pump agitated solvent bath used*). ----- ☐ Yes ☐ No ☐ N/A
7. Does the facility ensure that the machine is not exposed to drafts greater than 40 m/min (132 ft/min) when the cover is open? ----- ☐ Yes ☐ No
8. Does the facility ensure that sponges, fabrics, wood and paper products are not placed in the machine? ----- ☐ Yes ☐ No

Remote Reservoir Type Only

9. Does the facility employ a tightly fitting cover over the solvent sump?
The cover must be closed at all times except during parts cleaning. ----- ☐ Yes ☐ No ☐ N/A

Immersion Type Only

10. Does the facility employ a tightly fitting cover and a water layer with a thickness of at least 2.5 cm (1 in.); OR employ a tightly fitting cover and maintain a freeboard ratio of 0.75? Tightly fitting cover must be closed at all times except during parts entry and removal. ----- ☐ Yes ☐ No ☐ N/A

PART V: PROCESS VENT CONTROLS – Rule 62-213.300 FAC (not applicable to batch cold cleaning machines)

Facility chose to meet requirements using:

control device combination / work practice standards ----- ☐

alternative solvent emission limit (proceed to Part VI) ----- ☐

idling emission limit / work practice standards (proceed to Part VI) ----- ☐

A. Batch Vapor Machines, $x \leq 1.21 \text{ m}^2$

(Select control
combination)

DEVICE IN USE

- | | | |
|---|---|--|
| 1. ☐ → working mode cover -- ☐ | 1.0 freeboard ratio -- ☐ | superheated vapor ----- ☐ |
| 2. ☐ → reduced room draft ---- ☐ | 1.0 freeboard ratio -- ☐ | superheated vapor ----- ☐ |
| 3. ☐ → reduced room draft ---- ☐ | 1.0 freeboard ratio -- ☐ | dwel ----- ☐ |
| 4. ☐ → freeboard refrig. device ☐ | superheated vapor --- ☐ | |
| 5. ☐ → freeboard refrig. device ☐ | working mode cover ☐ | |
| 6. ☐ → freeboard refrig. device ☐ | reduced room draft - ☐ | |
| 7. ☐ → freeboard refrig. device ☐ | 1.0 freeboard ratio -- ☐ | |
| 8. ☐ → freeboard refrig. device ☐ | dwel ----- ☐ | |
| 9. ☐ → freeboard refrig. device ☐ | carbon adsorber ----- ☐ | |
| 10. ☐ → carbon adsorber ----- ☐ | 1.0 freeboard ratio -- ☐ | superheated vapor ----- ☐ |

B. Batch Vapor Machines, $x > 1.21 \text{ m}^2$

(Select control
combination)

DEVICE IN USE

- | | | |
|---|--|--|
| 1. ☐ → freeboard refrig. device ☐ | superheated vapor --- ☐ | 1.0 freeboard ratio ----- ☐ |
| 2. ☐ → freeboard refrig. device ☐ | superheated vapor --- ☐ | working mode cover ---- ☐ |
| 3. ☐ → freeboard refrig. device ☐ | superheated vapor --- ☐ | reduced room draft ----- ☐ |
| 4. ☐ → freeboard refrig. device ☐ | superheated vapor --- ☐ | carbon adsorber ----- ☐ |
| 5. ☐ → freeboard refrig. device ☐ | reduced room draft - ☐ | dwel ----- ☐ |
| 6. ☐ → freeboard refrig. device ☐ | reduced room draft - ☐ | 1.0 freeboard ratio ----- ☐ |
| 7. ☐ → 1.0 freeboard ratio ☐ | reduced room draft - ☐ | superheated vapor ----- ☐ |

C. Existing In-Line Machines

(Select control
combination)

DEVICE IN USE

- | | |
|---|---|
| 1. ☐ → freeboard refrig. device ☐ | 1.0 freeboard ratio -- ☐ |
| 2. ☐ → superheated vapor ----- ☐ | 1.0 freeboard ratio -- ☐ |
| 3. ☐ → freeboard refrig. device ☐ | dwel ----- ☐ |
| 4. ☐ → carbon adsorber ----- ☐ | dwel ----- ☐ |

D. New In-Line Machines

(Select control
combination)

DEVICE IN USE

- | | |
|--|--|
| ☐ freeboard refrig. device ☐ | superheated vapor --- ☐ |
| ☐ freeboard refrig. device ☐ | carbon adsorber ----- ☐ |
| ☐ superheated vapor ----- ☐ | carbon adsorber ----- ☐ |

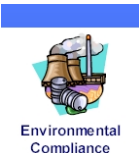
Has the responsible official maintained the following:

- COMMENTS:**

Approximate Date of Next Inspection



HEATING UNITS & GENERAL PURPOSE INTERNAL COMBUSTION ENGINES



COMPLIANCE INSPECTION CHECKLIST

INSPECTION TYPE: ANNUAL (INS1, INS2, INS3) ☐ COMPLAINT/DISCOVERY (CI) ☐
RE-INSPECTION (FUI) ☐ ARMS COMPLAINT NO. _____

AIRS ID#: _____ DATE: _____ ARRIVE: _____ DEPART: _____

FACILITY NAME: _____

FACILITY LOCATION: _____

AUTHORIZED REPRESENTATIVE: _____ PHONE: _____

CONTACT NAME: _____ PHONE: _____

LAST PAYMENT YEAR: _____ ENTITLEMENT PERIOD: _____ / _____
(Year) (To) (From)

PART I: INSPECTION COMPLIANCE STATUS (check ☒ only one box)

☐ IN COMPLIANCE ☐ MINOR Non-COMPLIANCE ☐ SIGNIFICANT Non-COMPLIANCE

PART II: CONTROL TECHNOLOGY/RECORDKEEPING REQUIREMENTS – Rule 62-210.300, F.A.C.

(check ☒ appropriate box(es))

- Does the facility operate any emissions units other than the heating units and general purpose internal combustion engines and emissions units which are exempt from permitting pursuant to the criteria of paragraph 62-210.300(3)(a), or (b), F.A.C., or have been exempted from permitting under Rule 62-4.040, F.A.C.? (Rule 62-210.300(3)(c)3.a., F.A.C.)----- ☐ Yes ☐ No
- Are these heating units or general purpose internal combustion engines subject to the Federal Acid Rain Program as defined at Rule 62-210.200, F.A.C.? (Rule 62-210.300(3)(c)3.b., F.A.C.)----- ☐ Yes ☐ No
- Were visible stack emissions tests conducted during this site visit according to EPA Method 9 (40 CFR 60, Appendix A)?----- ☐ Yes ☐ No
- Pursuant to subparagraph 62-296.320(4)(b)1., F.A.C., are visible emissions from any heating unit(s) or general purpose internal combustion engine(s) equal to or greater than 20% percent opacity as designated as Number 1 on the Ringelmann Chart? (Rule 62-210.300(3)(c)3.c., F.A.C.)----- ☐ Yes ☐ No
- What type of fuel is used by all heating units and general purpose internal combustion engines at this facility? (check ☒ only one box)
a) diesel fuel ☐ b) gasoline ☐ c) natural gas/propane ☐ d) multiple fuels ☐
- Is the total fuel consumption by all heating units and general purpose internal combustion engines within the facility limited to the following thresholds: (Chapter 62-210.300(3)(c)3.d., F.A.C.) (check ☒ only one box)
a) diesel fuel – 250,000 gallons/year (if diesel is the sole source of energy at this facility)?----- ☐ Yes ☐ No
b) gasoline – 22,000 gallons/year (if gasoline is the sole source of energy at this facility)?----- ☐ Yes ☐ No
c) natural gas/propane – 35m standard cubic feet (if gasoline is sole source of energy at this facility)?----- ☐ Yes ☐ No
d) multiple fuels – (equivalent prorated amount)?----- ☐ Yes ☐ No

PART II: CONTROL TECHNOLOGY/RECORDKEEPING REQUIREMENTS – Rule 62-210.300, F.A.C. (continued)

(check ☒ appropriate box(es))

7. Does the owner/operator of the facility maintain records to document the fuel consumption, by type, for each emissions unit? (Rule 62-210.300(3)(c)3.e., F.A.C.)----- ☐ Yes ☐ No
8. Does the owner/operator retain, and make available for Department inspection, these records for a period of at least five years? (Rule 62-210.300(3)(c)3.e., F.A.C.)----- ☐ Yes ☐ No
9. Does the owner or operator voluntarily encourage pollution prevention through such measures as: (Rule 62-210.300(4)(b)2.b., F.A.C.)
- a) employing energy conservation measures to reduce the demand for heat from any heating units?----- ☐ Yes ☐ No
- b) performing regular maintenance of heating units to ensure efficient heat recovery?----- ☐ Yes ☐ No
- c) the use of, or considering the use of economizers to recycle waste heat back into the combustion air stream?----- ☐ Yes ☐ No
- d) improved operating procedures to reduce the load on any internal combustion engines?----- ☐ Yes ☐ No
- e) the use of, or considering the use of alternative fuels?----- ☐ Yes ☐ No

PART III: GENERAL CONDITIONS/MAINTENANCE REQUIREMENTS – Rule 62-210.300(4)(e)6., 8., & 12., F.A.C.

(check ☒ appropriate box(es))

1. Does the owner or operator make every reasonable effort to conduct the specific activity authorized by the general permit in a manner that minimizes adverse effects on adjacent property or on public use of the adjacent property, where applicable, and on the environment, including fish, wildlife, natural resources, water quality, or air quality?----- ☐ Yes ☐ No
2. Does the owner or operator maintain the permitted facility, emission unit, or activity in good condition?--- ☐ Yes ☐ No
3. Has the owner or operator allowed the circumvention of any applicable air pollution control devices?----- ☐ Yes ☐ No
4. Has the owner or operator allowed the emission of air pollutants as the result of the malfunction of, or inoperable condition of applicable air pollution control devices?----- ☐ Yes ☐ No

PART IV: SPECIAL CONDITIONS AND PROCEDURES – Rule 62-210.300(4)(d)4., F.A.C.

(check ☒ appropriate box(es))

A. New or Modified Process Equipment

1. Since the last inspection has there been
- a) installation of any new process equipment?----- ☐ Yes ☐ No
- b) alterations to existing process equipment without replacement?----- ☐ Yes ☐ No
- c) replacement of existing equipment substantially different than that noted on the most recent registration form?----- ☐ Yes ☐ No
- d) If you answered **YES** to any of the above, did the owner submit a new and complete registration form and appropriate fee (Rule 62-4.050, F.A.C.) to the appropriate DEP or local program office?----- ☐ Yes ☐ No

COMMENTS:

Inspector's Name

Date of Inspection

Inspector's Signature

Approximate Date of Next Inspection



NON-METALLIC MINERAL PROCESSING PLANTS



COMPLIANCE INSPECTION CHECKLIST

INSPECTION TYPE: ANNUAL (INS1, INS2, INS3) ☐ COMPLAINT/DISCOVERY (CI) ☐
RE-INSPECTION (FUI) ☐ ARMS COMPLAINT NO. _____

AIRS ID#: _____ DATE: _____ ARRIVE: _____ DEPART: _____

FACILITY NAME: _____

FACILITY LOCATION: _____

AUTHORIZED REPRESENTATIVE: _____ PHONE: _____

CONTACT NAME: _____ PHONE: _____

LAST PAYMENT YEAR: _____ ENTITLEMENT PERIOD: _____ / _____
(Year) (To) (From)

PART I: INSPECTION COMPLIANCE STATUS (check ☒ only one box)

☐ IN COMPLIANCE ☐ MINOR Non-COMPLIANCE ☐ SIGNIFICANT Non-COMPLIANCE

PART II: DETERMINATION OF FACILITY TYPE/APPLICABILITY

(check ☒ only one box)

☐ **FOR FACILITIES SUBJECT TO:** (40 CFR Part 60, Subpart OOO, §60.670(a)(1))
(If you have checked ☒ this category, answer all questions INCLUDING those with **.)

Subject Facilities: (applicable fixed or portable facilities include each crusher, grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, enclosed truck or railcar loading station, crushers & grinding mills at hot mix asphalt facilities that reduce the size of non-metallc minerals embedded in recycled asphalt pavement & subsequent affected facilities up to, but not including the first storage silo or bin.)

☐ **FOR FACILITIES NOT SUBJECT TO:** (40 CFR Part 60, Subpart OOO, §60.670(a)(2), (b), (c), and (d))
(If you have checked ☒ this category, answer all questions EXCEPT those with **.)

Non-Subject Facilities: (includes all facilities in underground mines; stand-alone screening operations at plants w/o crushers or grinding mills; facilities not subject to subparts F (Portland Cement Plants) or I (Hot Mix Asphalt Facilities) of this part; fixed sand & gravel plants, & crushed stone plants w/capacities of 23 megagrams/hr (25 tons/hr) or less; portable sand & gravel plants, & crushed stone plants w/capacities of 136 megagrams/hr (150 tons/hr) or less; common clay plants, and pumice plants w/capacities of 9 megagrams/hr (10 tons/hr) or less.)

PART III: EMISSION STANDARDS – Chapter 62-210.300(4)(c)5., F.A.C.

(check ☒ appropriate box(es))

Stack Emissions - 40 CFR Part 60, Subpart OOO adopted by reference Chapter 62-204.800, F.A.C.

- **1. Were visible stack emissions tests conducted during this site visit according to EPA Method 9 (40 CFR 60, Appendix A)?----- ☐ Yes ☐ No
- **2. Do stack emissions from any crusher, grinding mill, screening operation, bucket elevator, transfer point on belt conveyors, bagging operation, storage bin, enclosed truck or railcar loading station or any other affected emission point:
- **a) exceed 7% percent opacity?----- ☐ Yes ☐ No
- **b) exceed the particulate matter standard of 0.05 grams per dry standard cubic meter (g/dscm)?----- ☐ Yes ☐ No
- **3. Do stack emissions from any baghouse that controls emissions from only an individual, enclosed storage bin exceed 7% percent opacity?----- ☐ Yes ☐ No

Visible Emissions - 40 CFR Part 60, Subpart OOO adopted by reference Chapter 62-204.800, F.A.C.

- **1. Were visible emissions tests conducted during this site visit according to EPA Method 9 (40 CFR 60, Appendix A)?----- ☐ Yes ☐ No
- **2. Do visible emissions from any:
- **a) grinding mill, screening operation, bucket elevator, transfer point on belt conveyors, bagging operation, storage bin, enclosed truck or railcar loading station or any other affected emission point exceed 10% percent opacity?----- ☐ Yes ☐ No
- **b) crusher without a capture system, exceed 15 % opacity?----- ☐ Yes ☐ No
3. Pursuant to subparagraph 62-296.320(4)(b)1., F.A.C., are visible emissions from any crusher, grinding, screening operation, bucket elevator, transfer points on belt conveyors, bagging operation, storage bin, enclosed truck or railcar loading station, or any other emission point **NOT** subject to 40 CFR Part 60, Subpart OOO, equal to or greater than 20% percent opacity?----- ☐ Yes ☐ No

Emission Points Enclosed in Buildings - 40 CFR Part 60, Subpart OOO adopted by reference Chapter 62-204.800, F.A.C.

- **4. Is any crusher, grinding mill, screening operation, bucket elevator, transfer point on belt conveyors, bagging operation, storage bin, enclosed truck or railcar loading station, or any other affected emission point enclosed in a building? (*If answer to question #4 is YES, then proceed to #4.a).*)----- ☐ Yes ☐ No
- **a) If enclosed in a building are the stack emissions discharged from a wet scrubbing control device? (*If answer to this question is NO, then proceed to the next question #4.b)1) & 2). If YES skip to #4.c).*)----- ☐ Yes ☐ No
- **b) If the stack emissions from enclosed emission points are not discharged from a wet scrubbing control device is:
- 1) the particulate matter in excess of 0.05 grams per dry standard cubic meter (g/dscm)?----- ☐ Yes ☐ No
- 2) the opacity greater than 7% percent?----- ☐ Yes ☐ No
- **c) Do the stack emissions from the baghouse(s) inside of the building(s) exceed 7% percent opacity?----- ☐ Yes ☐ No
- **5. Do visible emissions from any:
- **a) grinding mill, screening operation, bucket elevator, transfer point on belt conveyors, bagging operation, storage bin, enclosed truck or railcar loading station or any other affected emission point exceed 10% percent opacity?----- ☐ Yes ☐ No
- **b) crusher without a capture system, exceed 15 % opacity?----- ☐ Yes ☐ No

Wet Screening/Wet Mining Operations:

- **6. Are there any visible emissions discharges at the wet screening operations and subsequent screening operations, bucket elevators and belt conveyors that process saturated material in the production line up to the next crusher, grinding mill, or storage bin?----- ☐ Yes ☐ No
- **7. Are there any visible emissions discharges at the screening operations, bucket elevators, and belt conveyors in the production line downstream of wet mining operations, where such screening operations, bucket elevators, and belt conveyors process saturated materials up to the first crusher, grinding mill, or storage bin in the production line?----- ☐ Yes ☐ No

PART IV: TESTING/RECORDKEEPING REQUIREMENTS – Rule 62-210.300, F.A.C.

(check ☒ appropriate box(es))

Compliance Demonstration – (Rule 62-210.300(4)(c)5.h., F.A.C.)

1. Is each affected emission point tested according to the visible emissions and stack emissions standards as part of the annual compliance demonstration? (Rule 62-210.300(4)(c)5.e., F.A.C.)----- ☐ Yes ☐ No

Compliance New Facilities – (Rule 62-210.300(4)(c)5.h., F.A.C.)

2. Did this facility demonstrate, according to the visible emissions and stack emissions standards of Rule 62-210.300(4)(c)5.e., F.A.C.,:
- a) initial compliance prior to beginning commercial operation? ----- ☐ Yes ☐ No
- b) renewal compliance within 60 days prior to the anniversary of the initial air general permit registration form submittal date?----- ☐ Yes ☐ No

Compliance Existing Facilities – (Rule 62-210.300(4)(c)5.h., F.A.C.)

3. Did this facility demonstrate, according to the visible emissions and stack emissions standards of Rule 62-210.300(4)(c)5.e., F.A.C.,:
- a) compliance within 60 days prior to submitting an air general permit registration form?----- ☐ Yes ☐ No
- b) renewal compliance within 60 days prior to the anniversary of the initial air general permit registration form submittal date? ----- ☐ Yes ☐ No

Test Methods and Procedures – Chapter 62-297, F.A.C., 40 CFR 60.675, and 40 CFR Part 60, Appendix A adopted and incorporated by reference at Rule 62-204.800, F.A.C.

4. Were all referenced visible emissions tests conducted using EPA Method 9?----- ☐ Yes ☐ No
5. Were all referenced unconfined or fugitive emissions tests conducted using EPA Method 22?----- ☐ Yes ☐ No
6. Were all referenced stack emissions or particulate matter tests conducted using EPA Methods 5 or 17?----- ☐ Yes ☐ No

Reporting and Recordkeeping – (Rule 62-210.300(4)(c)5.e., F.A.C.) [Chapter 62-297, F.A.C. and 40 CFR Part 60.670 – 60.676, Subpart OOO, adopted and incorporated by reference at Rule 62-204.800, F.A.C.]

Facility and/or Equipment Replacement

- **7. Did the owner or operator submit to the Administrator, the following information about the replacement of existing facility and/or equipment:
- **a) for a Crusher, Grinding Mill, Bucket Elevator, Bagging Operation, or enclosed truck, or Railcar Loading Station,
- **1) the rated capacity in megagrams or tons per hour of the existing facility being replaced and the rated capacity in tons per hour of the replacement equipment?----- ☐ Yes ☐ No
- **b) for a Screening Operation,
- **1) the total surface area of the top screen of the existing screening operation being replaced and the total surface area of the top screen of the replacement screening operation?----- ☐ Yes ☐ No
- **c) for a Conveyor Belt,
- **1) the width of the existing belt being replaced and the width of the replacement conveyor belt?----- ☐ Yes ☐ No
- **d) for a Storage Bin,
- **1) the rated capacity in megagrams or tons of the existing storage bin being replaced and the rated capacity in megagrams or tons of replacement storage bins?----- ☐ Yes ☐ No

No

Performance/Compliance Testing

- **8. During the initial performance test, did the owner or operator record the measurements of both the change in pressure of the gas stream across the scrubber and the scrubbing liquid flow rate?----- ☐ Yes ☐ No
- **9. After the initial performance test of a wet scrubber, did the owner or operator submit semiannual reports to the Administrator of occurrences when the measurements of the scrubber pressure loss (or gain) and liquid flow rate differ by more than ± 30 percent from the averaged determined during the most recent performance test?----- ☐ Yes ☐ No
- **a) Were the reports postmarked within 30 days following the end of the second and fourth calendar quarters?----- ☐ Yes ☐ No

PART IV: TESTING/RECORDKEEPING REQUIREMENTS – Rule 62-210.300, F.A.C. (Continued)

(check ☒ appropriate box(es))

- **10. Did the owner or operator of the facility submit written reports of the results of all performance tests conducted to demonstrate compliance with the particulate matter standards (40 CFR Part 60.672), opacity (using EPA Method 9 to demonstrate compliance with 40 CFR Part 60.672(b), (c), and (f)), and emission observations of transfer points enclosed in buildings (using EPA Method 22 to demonstrate compliance with 40 CFR Part 60.672(e))?----- ☐ Yes ☐ No

Process Changes

- **11. Does this facility have a screening operation, bucket elevator, and/or a belt conveyor system? *(If your answer to this question is YES, then answer either a)1) or a)2) below.)*----- ☐ Yes ☐ No

**a) Did this screening operation, bucket elevator, and/or belt conveyor system:

**1) originally process saturated material and switch to unsaturated material? *(Note: The unsaturated material handling processes would now be subject to the 10% opacity limit in 40 CFR 60.672(b) and the emission test requirements of 40 CFR 60.11 and Subpart OOO.)*----- ☐ Yes ☐ No

**2) originally process unsaturated material and switch to saturated material? *(Note: The saturated material handling processes would now be subject to the no visible emission limit in 40 CFR 60.672(h).)*
(If answer to 1) or 2) above is YES then proceed to question b) below.)----- ☐ Yes ☐ No

**b) Did the owner or operator submit a report of the process change within thirty (30) days following the change?----- ☐ Yes ☐ No

Notification Requirements

**12. Was notification of the actual date of startup for each affected or combination of affected facilities submitted to the Administrator and postmarked within 15 days after such date?----- ☐ Yes ☐ No

**a) Did the notification include a description of each affected facility, equipment manufacturer, and serial number of the equipment, if available?----- ☐ Yes ☐ No

**b) For portable aggregate processing plants, did the notification of actual date of initial start up also include both the home office and the current address or location of the portable plant?----- ☐ Yes ☐ No

PART V: OPERATING REQUIREMENTS/CONTROL TECHNOLOGY – Rule 62-210.300, F.A.C.

(check ☒ appropriate box(es))

1. Is this facility a: 1) relocatable ☐; 2) stationary ☐; or does it have: 3) both, stationary and relocatable ☐ concrete batching and/or nonmetallic mineral processing plants? *(Please check ☒ only one box above.)*
(NOTE: If you have checked the box for relocatable go to questions 1.a) & 1.b). If you have checked the box for stationary go to question 1.c). If you have checked box #3, both, stationary and relocatable then answer all relocatable and stationary questions 1.a), 1.b), & 1.c) below, respectively.)

a) If this is a relocatable facility was the Department notified by phone prior to this relocation, and was a Facility Relocation Notification form submitted within 1 business day following the relocation?----- ☐ Yes ☐ No

b) If this is a relocatable facility, is it located at a mine and/or quarry, and processing only material from onsite deposits? *(If your answer to this question is NO, please proceed to question 1) below.)*----- ☐ Yes ☐ No

1) Does the owner or operator of this relocatable facility have a water suppression system with spray bars located at the feeder(s), the entrance, and the exit of the crusher(s), the classifier screens and the conveyor drop points?----- ☐ Yes ☐ No

c) If this is a stationary facility, does the owner or operator of this stationary facility have a water suppression system with spray bars located at the feeder(s), the entrance, and the exit of the crusher(s), the classifier screens and the conveyor drop points?----- ☐ Yes ☐ No

PART V: OPERATING REQUIREMENTS/CONTROL TECHNOLOGY – Rule 62-210.300, F.A.C. (Continued)

(check ☒ appropriate box(es))

- **2.** Does this facility incorporate the use of a wet scrubber to control emissions? (40 CFR Part 60, Subpart OOO adopted by reference Chapter 62-204.800, F.A.C.) *(If your answer to this question is YES, then proceed to questions 2.a) and 2.b), below.)*----- ☐ Yes ☐ No
- **a)** Does the wet scrubber have continuous monitoring systems (CMS) for:
- **1)** the measurement of the pressure loss of the gas stream through the scrubber?----- ☐ Yes ☐ No
- **2)** the measurement of the scrubbing liquid flow rate to the wet scrubber?----- ☐ Yes ☐ No
- **b)** Has each CMS been certified by the manufacturer and calibrated annually in accordance with the manufacturer's instructions and to the tolerances below?----- ☐ Yes ☐ No
- **1)** ± 250 pascals ± 1 inch water gauge pressure for measuring pressure losses of the gas stream?----- ☐ Yes ☐ No
- **2)** ± 5 percent of design scrubbing liquid flow rate?----- ☐ Yes ☐ No
- 3.** Is this is a stationary nonmetallic mineral processing plant, with a stationary concrete batching plant using an individual concrete batching plant air general permit at the same location? *(If your answer to this question is YES, then proceed to questions 3.a), thru 3.d), below. If NO, proceed to question #4.)*----- ☐ Yes ☐ No
- a) Is there more than one nonmetallic mineral processing plant in operation at this location?----- ☐ Yes ☐ No
- b) If there is more than one nonmetallic mineral processing plant at this location, do they all operate under a single nonmetallic mineral processing plant air general permit?----- ☐ Yes ☐ No
- c) Are there any additional nonexempt units located at this facility?----- ☐ Yes ☐ No
- d) Are there any Title V sources located at this facility?----- ☐ Yes ☐ No
- 4.** Is this is a stationary nonmetallic mineral processing plant, with one or more relocatable concrete batching plants using individual air general permits at the same location? *(If your answer to this question is YES, then proceed to questions 4.a), thru 4.b) below. If NO, then proceed to question 5.)*--- ☐ Yes ☐ No
- a) Are there any additional nonexempt units located at this facility?----- ☐ Yes ☐ No
- b) Are there any Title V sources located at this facility?----- ☐ Yes ☐ No
- 5.** Does the owner or operator of this facility operate multiple relocatable nonmetallic mineral processing plants using individual nonmetallic mineral processing plant air general permits at this location?----- ☐ Yes ☐ No
- a) Are there any additional nonexempt units located at this facility?----- ☐ Yes ☐ No
- b) Is the total combined annual facility-wide fuel oil usage of all plants less than 240,000 gallons per calendar year?----- ☐ Yes ☐ No
- c) Is the quantity of material processed less than ten million tons per calendar year?----- ☐ Yes ☐ No
- d) Is the fuel oil sulfur content 0.5% by weight or less?----- ☐ Yes ☐ No
- 6.** Does the owner/operator of the concrete batching plant maintain a log book or books to account for:
- a) fuel consumption on a monthly basis?----- ☐ Yes ☐ No
- b) material processed on a monthly basis?----- ☐ Yes ☐ No
- c) the sulfur content of the fuel being burned (Fuel supplier certifications)?----- ☐ Yes ☐ No
- 7.** Is this relocatable nonmetallic mineral processing plant used to perform a routine function of a facility (not a Title V source) subject to regular air permitting, such as crushing recycled asphalt (rap) at an asphalt plant?----- ☐ Yes ☐ No
- a) If YES, does the regularly permitted facility air construction or air operation permit(s) provide for the operation of the nonmetallic mineral processing plant as an emission unit?----- ☐ Yes ☐ No
- 8.** Is this relocatable nonmetallic mineral processing plant used to perform a non-routine activity, such as destruction of a building, at a regularly permitted facility (not a Title V source)?----- ☐ Yes ☐ No
- a) If YES, does it operate under the authority of its air general permit?----- ☐ Yes ☐ No

PART VI: REASONABLE PRECAUTIONS/EMISSION CONTROL MEASURES & TECHNOLOGY – Rule 62-210.300(4)(c)5.d.(i) and (ii), F.A.C.

(check ☒ appropriate box(es))

Unconfined Emissions – (Rule 62-296.320(4)(c), F.A.C.)

1. Does the owner /operator of the nonmetallic mineral processing plant take reasonable precautions to control unconfined emissions by:
 - a) use of a water suppression system with spray bars located at the feeder(s), the entrance and exit of the crusher(s), the classifier screens, and the conveyor drop points?-----☐ Yes ☐ No
 - b) management of roads, parking areas, stock piles, and yards, which shall include one or more of the following:
 - 1) paving and maintenance of roads, parking areas, stock piles, and yards?-----☐ Yes ☐ No
 - 2) application of water or environmentally safe dust-suppressant chemicals when necessary to control emissions?-----☐ Yes ☐ No
 - 3) removal of particulate matter from roads and other paved areas under control of the owner/operator to re-entrainment, and from building or work areas to reduce airborne particulate matter?-----☐ Yes ☐ No
 - 4) reduction of stock pile height, or installation of wind breaks to mitigate wind entrainment of particulate matter from stock piles?-----☐ Yes ☐ No
 - 5) landscaping and/or the planting of vegetation?-----☐ Yes ☐ No
 - 6) the use of hoods, fans, filters and similar equipment to contain, capture and/or vent particulate matter?-----☐ Yes ☐ No
 - 7) the enclosure or covering of conveyor systems?-----☐ Yes ☐ No

PART VII: SPECIAL CONDITIONS AND PROCEDURES – Rule 62-210.300(4)(d)4., F.A.C.

A. New or Modified Process Equipment

1. Since the last inspection has there been
 - a) installation of any new process equipment?-----☐ Yes ☐ No
 - b) alteration of existing process equipment without replacement?-----☐ Yes ☐ No
 - c) replacement of existing equipment substantially different than that noted on the most recent registration form?-----☐ Yes ☐ No
 - d) If you answered **YES** to any of the above, did the owner submit a new and complete registration form and appropriate fee (Rule 62-4.050, F.A.C.) to the appropriate DEP or local program office?-----☐ Yes ☐ No

COMMENTS: _____

ADDITIONAL COMMENTS: _____



POLYESTER RESIN PLASTIC PRODUCTS FABRICATION



COMPLIANCE INSPECTION CHECKLIST

INSPECTION TYPE: ANNUAL (INS1, INS2) ☐ COMPLAINT/DISCOVERY (CI) ☐
RE-INSPECTION (FUI) ☐ ARMS COMPLAINT NO. _____

AIRS ID#: _____ **DATE:** _____ **ARRIVE:** _____ **DEPART:** _____
FACILITY NAME: _____
FACILITY LOCATION: _____

AUTHORIZED REPRESENTATIVE: _____ **PHONE:** _____
CONTACT NAME: _____ **PHONE:** _____
LAST PAYMENT YEAR: _____ **ENTITLEMENT PERIOD:** _____ / _____
(Year) (To) (From)

PART I: INSPECTION COMPLIANCE STATUS (check ☒ only one box)

☐ IN COMPLIANCE ☐ MINOR Non-COMPLIANCE ☐ SIGNIFICANT Non-COMPLIANCE

PART II: CONTROL TECHNOLOGY/RECORDKEEPING REQUIREMENTS – Rule 62-210.300, F.A.C.

(check ☒ appropriate box(es))

1. Does the facility operate any emissions units other than the polyester resin plastic products fabrication units and emissions units which are exempt from permitting pursuant to the criteria of paragraph 62-210.300(3)(a) or (b), F.A.C., or have been exempted from permitting under Rule 62-4.040, F.A.C.?
(Rule 62-210.300(3)(c)5.a., F.A.C.)----- ☐ Yes ☐ No
2. Does the facility comply with the objectionable odor prohibition of subsection 62-296.320(2), F.A.C. and not cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor?----- ☐ Yes ☐ No
3. Does the combined quantity of styrene containing resin and gel-coat used exceed 76,000 pounds (38 tons) in any consecutive twelve month period? (Chapter 62-210.300(3)(c)5.c., F.A.C.)----- ☐ Yes ☐ No
4. Does the owner/operator of the facility maintain records to document the quantity of resin and gel-coat used on a monthly basis? (Chapter 62-210.300(3)(c)5.d., F.A.C.)----- ☐ Yes ☐ No
5. Does the owner/operator retain, and make available for Department inspection, these records for a period of at least five years? (Chapter 62-210.300(3)(c)5.d., F.A.C.)----- ☐ Yes ☐ No
6. Is this polyester resin plastic products fabrication activity subject to a volatile organic compound (VOC) Reasonably Available Control Technology (RACT) emission limiting standard of Chapter 62-296.500, F.A.C.?
(Rule 62-210.300(3)(c)5.b., F.A.C.)----- ☐ Yes ☐ No

PART III: CONTROL/OPERATING/MAINTENANCE REQUIREMENTS – Rule 62-210.300, F.A.C.

(check ☒ appropriate box(es))

1. Does the owner or operator voluntarily encourage pollution prevention through such measures as training employees involved in product fabrication on methods of reducing evaporative losses by:
 - a) lessening the exposure of fresh resin surfaces to the air?----- ☐ Yes ☐ No
 - b) maintaining spray lay-up equipment to ensure effective application with a minimum of overspray?----- ☐ Yes ☐ No
 - c) monitoring the coating thickness to avoid excessive resin/get coat application?----- ☐ Yes ☐ No
 - d) implementing inventory control practices to prevent spillage?----- ☐ Yes ☐ No
 - e) managing cleanup solvents?----- ☐ Yes ☐ No
2. Does the owner or operator make every reasonable effort to conduct the specific activity authorized by the general permit in a manner that minimizes adverse effects on adjacent property or on public use of the adjacent property, where applicable, and on the environment, including fish, wildlife, natural resources, water quality, or air quality?----- ☐ Yes ☐ No
3. Does the owner or operator maintain the permitted facility, emission unit, or activity in good condition?-- ☐ Yes ☐ No

PART IV: SPECIAL CONDITIONS AND PROCEDURES – Rule 62-210.300(4)(d)4., F.A.C.

(check ☒ appropriate box(es))

A. New or Modified Process Equipment

1. Since the last inspection has there been
- a) installation of any new process equipment?----- ☐ Yes ☐ No
- b) alterations to existing process equipment without replacement?----- ☐ Yes ☐ No
- c) replacement of existing equipment substantially different than that noted on the most recent registration form?----- ☐ Yes ☐ No
- d) If you answered **YES** to any of the above, did the owner submit a new and complete registration form and appropriate fee (Rule 62-4.050, F.A.C.) to the appropriate DEP or local program office?----- ☐ Yes ☐ No

COMMENTS:

Inspector's Name

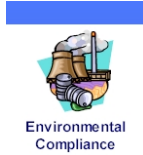
Date of Inspection

Inspector's Signature

Approximate Date of Next Inspection



SECONDARY **ALUMINUM SWEAT FURNACE**



COMPLIANCE INSPECTION CHECKLIST

INSPECTION TYPE: ANNUAL (INS1, INS2) ☐ COMPLAINT/DISCOVERY (CI) ☐
RE-INSPECTION (FUI) ☐ ARMS COMPLAINT NO. _____

AIRS ID#: _____ **DATE:** _____ **ARRIVE:** _____ **DEPART:** _____

FACILITY NAME: _____

FACILITY LOCATION: _____

RESPONSIBLE OFFICIAL : _____ **PHONE:** _____

CONTACT NAME: _____ **PHONE:** _____

LAST PAYMENT RECEIVED: _____ **ENTITLEMENT PERIOD:** _____ / _____
(Year) (To) (From)

PART I: INSPECTION COMPLIANCE STATUS (check ☒ only one box)

☐ IN COMPLIANCE ☐ MINOR Non-COMPLIANCE ☐ SIGNIFICANT Non-COMPLIANCE

PART II: CONTROL TECHNOLOGY – Rule 62-213.300 FAC

1. Does each secondary aluminum sweat furnace have an afterburner? -----Yes ☐ No ☐
2. Does each afterburner has a design residence time of 0.8 seconds or more,
and an operating temperature of 1600 degrees Fahrenheit or greater? -----Yes ☐ No ☐

PART III: BASIC REQUIREMENTS – Rule 62-213.300(3) FAC

1. Has the responsible official (RO) provided a written OM&M plan on-site? -----Yes ☐ No ☐
2. Has the RO provided a temperature monitoring device to continuously monitor and
record the 15-minute block average operating temperature to insure that it is at or
above 1600 degrees F? -----Yes ☐ No ☐

PART IV: RECORDKEEPING/REPORTING REQUIREMENTS – Rule 62-213.300(3) FAC

1. Has the RO maintained records of 15-minute block average afterburner temperature? ----- Yes ☐ No ☐
2. Has the RO provided records of any period when the average temperature in any 3-hour block period falls below 1600 degrees Fahrenheit? -----Yes ☐ No ☐ N/A ☐
3. Has the RO maintained records of afterburner inspections? -----Yes ☐ No ☐
4. Has the RO maintained a startup/shutdown/malfunction plan? -----Yes ☐ No ☐

Inspector's Name (Please Print)

Date of Inspection

Inspector's Signature

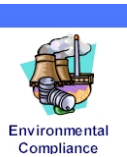
Approximate Date of Next Inspection

COMMENTS:



SURFACE COATING OPERATIONS

COMPLIANCE INSPECTION CHECKLIST



INSPECTION TYPE: ANNUAL (INS1, INS2) ☐ COMPLAINT/DISCOVERY (CI) ☐
RE-INSPECTION (FUI) ☐ ARMS COMPLAINT NO. _____

AIRS ID#: _____ **DATE:** _____ **ARRIVE:** _____ **DEPART:** _____
FACILITY NAME: _____
FACILITY LOCATION: _____

AUTHORIZED REPRESENTATIVE: _____ **PHONE:** _____
CONTACT NAME: _____ **PHONE:** _____
LAST PAYMENT YEAR: _____ **ENTITLEMENT PERIOD:** _____ / _____
(Year) (To) (From)

PART I: INSPECTION COMPLIANCE STATUS (check ☒ only one box)

☐ IN COMPLIANCE ☐ MINOR Non-COMPLIANCE ☐ SIGNIFICANT Non-COMPLIANCE

PART II: RECORDKEEPING REQUIREMENTS – Rule 62-210.300, F.A.C.

(check ☒ appropriate box(es))

1. Does the facility operate any emissions units other than the surface coating operations and emissions units which are exempt from permitting pursuant to the criteria of paragraph 62-210.300(3)(a) or (b), F.A.C., or have been exempted from permitting under Rule 62-4.040, F.A.C.? (Rule 62-210.300(3)(c)4.a., F.A.C.)--- ☐ Yes ☐ No
2. Does the owner/operator of the facility maintain records to document the VOC content of the coatings and the quantity of the coatings used?----- ☐ Yes ☐ No
3. Does the owner/operator retain, and make available for Department inspection, these records for a period of at least five years?----- ☐ Yes ☐ No
4. Is the total quantity of VOC's in such coatings 44 lbs/day or less, averaged monthly?----- ☐ Yes ☐ No
5. Does the amount of coatings used, include solvents and thinners used in the process including those used for cleanups?----- ☐ Yes ☐ No

PART III: CONTROL/OPERATING/MAINTANANCE REQUIREMENTS – Rule 62-210.300, F.A.C.

(check ☒ appropriate box(es))

1. Is/Are the surface coating operation(s) subject to a VOC Reasonably Available Control Technology (RACT) emission limiting standard of Chapter 62-296.500, F.A.C.? (Rule 62-210.300(3)(c)4.b., F.A.C.)----- ☐ Yes ☐ No
2. Does the facility cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor? (Rule 62.296.320(2), F.A.C.)----- ☐ Yes ☐ No

PART III: CONTROL/OPERATING/MAINTENANCE REQUIREMENTS – Rule 62-210.300, F.A.C. – (continued)

(check ☒ appropriate box(es))

3. Does the owner/operator encourage pollution prevention through such measures as training employees involved in surface coating operations on methods of reducing VOC emissions by:
- a) maintaining spray coating equipment to ensure effective application with a minimum of overspray?----☐ Yes ☐ No
 - b) monitoring the coating thickness to avoid excessive coating?-----☐ Yes ☐ No
 - c) considering the use of low-VOC coatings (e.g., waterborne, ultra-violet cured, or powder coatings)?---☐ Yes ☐ No
 - d) implementing inventory control practices to prevent spillage?-----☐ Yes ☐ No
 - e) implementing management practices to reduce VOC emissions during cleanup by:
 - 1. spraying light colored coatings before dark colored coatings to reduce the number of cleaning cycles?-----☐ Yes ☐ No
 - 2) recycling cleaning solvents?-----☐ Yes ☐ No
 - 3) using water based cleaners?-----☐ Yes ☐ No

PART IV: SPECIAL CONDITIONS AND PROCEDURES – Rule 62-210.300, F.A.C.

A. New or Modified Process Equipment

1. Since the last inspection has there been
- a) installation of any new process equipment?-----☐ Yes ☐ No
 - b) alterations to existing process equipment without replacement?-----☐ Yes ☐ No
 - c) replacement of existing equipment substantially different than that noted on the most recent registration form?-----☐ Yes ☐ No
 - d) If you answered **YES** to any of the above, did the owner submit a new and complete registration form and appropriate fee (Rule 62-4.050, F.A.C.) to the appropriate DEP or local program office?-----☐ Yes ☐ No

COMMENTS: _____

Inspector's Name

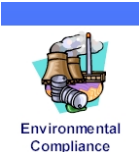
Date of Inspection

Inspector's Signature

Approximate Date of Next Inspection



VOLUME REDUCTION, MERCURY RECOVERY, MERCURY RECLAMATION PROCESSES



COMPLIANCE INSPECTION CHECKLIST

INSPECTION TYPE: ANNUAL (INS1, INS2) ☐ COMPLAINT/DISCOVERY (CI) ☐
RE-INSPECTION (FUI) ☐ ARMS COMPLAINT NO. _____

AIRS ID#: _____ DATE: _____ ARRIVE: _____ DEPART: _____
FACILITY NAME: _____
FACILITY LOCATION: _____
AUTHORIZED REPRESENTATIVE: _____ PHONE: _____
CONTACT NAME: _____ PHONE: _____
LAST PAYMENT YEAR: _____ ENTITLEMENT PERIOD: _____ / _____
(Year) (To) (From)

PART I: INSPECTION COMPLIANCE STATUS (check ☒ only one box)

☐ IN COMPLIANCE ☐ MINOR Non-COMPLIANCE ☐ SIGNIFICANT Non-COMPLIANCE

PART II: CONTROL TECHNOLOGY— Rule 62-210.300, F.A.C.

(check ☒ appropriate box(es))

1. Does the facility operate any emissions units other than the volume reduction, mercury recovery, and mercury reclamation processes and emissions units which are exempt from permitting pursuant to the criteria of paragraph 62-210.300(3)(a), or (b), F.A.C., or have been exempted from permitting under Rule 62-4.040, F.A.C.? (Rule 62-210.300(4)(c), F.A.C.)----- ☐ Yes ☐ No
2. Does this facility emit or have the potential to emit 10 tons per year or more of mercury? (Rule 62-210.300(4)(c)1., F.A.C.)----- ☐ Yes ☐ No
3. Was the highest reported exposure limit observed equal to or less than the United States Occupational Safety and Health Administration's (OSHA) permissible exposure limit (PEL) of 1mg/10m³ for mercury vapor as set forth in 29 CFR 1910.1000, Table Z-2? (Rule 62-296.417(1)(a), F.A.C.)----- ☐ Yes ☐ No
4. Is the area in which the processing equipment (as defined in Rule 62-737.200, F.A.C.) is located, fully enclosed and kept under negative pressure while processing mercury containing lamps or devices? (Rule 62-296.417(1)(b))----- ☐ Yes ☐ No
5. Does this facility control mercury emissions through the use of: (check ☒ either a) or b) whichever is applicable)
 - a) dual air handling systems? ☐
 - b) a single air handling system with redundant mercury controls? ☐

NOTE: *If you have checked 5.a) above, then proceed on to Page 2 and questions 6 through 12 which cover Dual Air Handling Systems.

**If you have checked 5.b) above, then skip questions 6 through 12 and proceed on to questions 13 through 16 which cover Single Air Handling Systems with Redundant Mercury Controls.

PART II: CONTROL TECHNOLOGY– Rule 62-210.300, F.A.C. (continued)

(check ☒ appropriate box(es))

***Dual Air Handling Systems**

6. Has the owner or operator installed a primary air handling system with air pollution control equipment in order to reduce the mercury content of the air collected during the volume reduction and mercury recovery and reclamation processes? (Rule 62-296.417(1)(c)1., F.A.C.)----- ☐ Yes ☐ No
7. Is the air collected by the primary system, vented within a fully enclosed area of the facility after the air is filtered through the air pollution control equipment? (Rule 62-296.417(1)(c)2., F.A.C.)----- ☐ Yes ☐ No
8. Once each day, while mercury-containing lamps or devices are being processed, is a sample of air collected from within the fully enclosed area of the facility in which the air collected by the primary air handling system is vented? (Rule 62-696.417(1)(c)3., F.A.C.)----- ☐ Yes ☐ No
- a) Is the mercury content of the sample determined and compared with the OSHA PEL?----- ☐ Yes ☐ No
9. Does the owner or operator operate, monitor, and maintain the primary system air pollution control equipment in such a manner as not to exceed the OSHA PEL for mercury vapor within the fully enclosed area of the facility in which the air collected by the primary air handling system is vented? (Rule 62-296.417(1)(c)4., F.A.C.)----- ☐ Yes ☐ No
10. Has the owner or operator installed a secondary air handling system in order to maintain negative pressure in the fully enclosed area of the facility in which the air collected by the primary system is vented? (Rule 62-696.417(1)(c)5., F.A.C.)----- ☐ Yes ☐ No
11. Has the owner or operator installed, and do they operate, monitor and maintain air pollution control equipment to reduce the mercury content of the air collected by the secondary air handling system?)Rule 62-696.417(1)(c)6., F.A.C.)----- ☐ Yes ☐ No
12. Is the primary air handling system with air pollution controls independent and separate from the secondary air handling system with air pollution controls? (Rule 62-696.417(1)(c)7., F.A.C.)----- ☐ Yes ☐ No
- a) Do the primary and secondary air handling systems air pollution controls incorporate carbon filters or equivalent technology?----- ☐ Yes ☐ No

****Single Air Handling Systems with Redundant Mercury Controls**

13. Does the owner or operator operate, monitor, and maintain an air handling system with redundant air pollution control equipment in order to reduce the mercury content of the air collected during the volume reduction, and mercury recovery and reclamation processes? (Rule 62-296.417(1)(d)1., F.A.C.)----- ☐ Yes ☐ No
14. Does the redundant air pollution control equipment incorporate at least two (2) carbon filters or equivalent technology arranged in series so that the air passes through both filters before being released? (Rule 62-296.417(1)(d)2., F.A.C.)----- ☐ Yes ☐ No
- a) Is each filter designed to ensure compliance with the OSHA PEL for mercury vapor at the emission point in the event of a single filter failure?----- ☐ Yes ☐ No
- b) Was the highest reported exposure limit observed equal to or less than the OSHA PEL of 1 mg/10m³ for mercury vapor?----- ☐ Yes ☐ No
15. As the facility processes any mercury-containing lamps or devices once each day, and while mercury-containing lamps or devices are being processed, is a sample of air collected downstream of the first carbon filter (or equivalent technology) and upstream of the second? (Rule 62-296.417(1)(d)3., F.A.C.)----- ☐ Yes ☐ No
- a) Is the mercury content of the sample determined and compared with the OSHA PEL?----- ☐ Yes ☐ No
16. Does the owner or operator, operate, monitor and maintain the air pollution control equipment in such a manner as not to exceed the OSHA PEL for mercury vapor downstream of the first carbon filter (or equivalent technology) and upstream of the second? (Rule 62-296.417(1)(d)4., F.A.C.)----- ☐ Yes ☐ No

PART III: RECORDKEEPING REQUIREMENTS—Rule 62-210.300(3)(a)27. & 28., F.A.C. & 62-210.300(4)(c)1., F.A.C.

(check ☒ appropriate box(es))

1. Does the owner or operator of this facility which is subject to this rule maintain records of monitoring information that specifies and includes: (Rule 62-296.417(2), F.A.C.)
 - a) the date, place and time of measurement?----- ☐ Yes ☐ No
 - b) the methodology used?----- ☐ Yes ☐ No
 - c) the analytical results?----- ☐ Yes ☐ No
 - d) calibration and maintenance records of monitoring equipment?----- ☐ Yes ☐ No
2. Does the owner/operator retain records of all monitoring data and supporting information, and make available for Department inspection, these records for a period of at least five years from the date of collection? (Rule 62-296.417(2), F.A.C.)----- ☐ Yes ☐ No

PART IV: GENERAL CONDITIONS/MAINTENANCE REQUIREMENTS – Rule 62-210.300(4)(e)6., 8., & 12., F.A.C.

(check ☒ appropriate box(es))

1. Does the owner or operator make every reasonable effort to conduct the specific activity authorized by the general permit in a manner that minimizes adverse effects on adjacent property or on public use of the adjacent property, where applicable, and on the environment, including fish, wildlife, natural resources, water quality, or air quality?----- ☐ Yes ☐ No
2. Does the owner or operator maintain the permitted facility, emission unit, or activity in good condition?---- ☐ Yes ☐ No
3. Has the owner or operator allowed the circumvention of any applicable air pollution control devices?----- ☐ Yes ☐ No
4. Has the owner or operator allowed the emission of air pollutants as the result of the malfunction of, or inoperable condition of applicable air pollution control devices?----- ☐ Yes ☐ No

PART V: SPECIAL CONDITIONS AND PROCEDURES – Rule 62-210.300(4)(d)4., F.A.C.

(check ☒ appropriate box(es))

A. New or Modified Process Equipment

1. Since the last inspection has there been
 - a) installation of any new process equipment?----- ☐ Yes ☐ No
 - b) alterations to existing process equipment without replacement?----- ☐ Yes ☐ No
 - c) replacement of existing equipment substantially different than that noted on the most recent registration form?----- ☐ Yes ☐ No
 - d) If you answered **YES** to any of the above, did the owner submit a new and complete registration form and appropriate fee (Rule 62-4.050, F.A.C.) to the appropriate DEP or local program office?----- ☐ Yes ☐ No

This image shows a full page of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There is no handwriting or other markings on the paper.

Inspector's Name

Date of Inspection

Inspector's Signature

Approximate Date of Next Inspection

4. Part 61 NESHAPs

Air Contaminants

NESHAPS Air Contaminants

Please refer to the current version of 40 CFR 61 for specific details concerning the applicability of these emissions standards.

NESHAPS

Subpart

- A - General provisions
- B - Radon emissions from underground uranium mines
- C - Beryllium
- D - Beryllium rocket motor firing
- E - Mercury
- F - Vinyl chloride
- G - (proposed 4/23/87) Coke oven emissions
- H - Emissions of radionuclides other than radon from Department of Energy facilities
- I - Radionuclide emissions from facilities licensed by the Nuclear Regulatory Commission (NRC) and federal facilities not covered by Subpart H
- J - Equipment leaks (fugitive emission sources) of benzene
- K - Radionuclide emissions from elemental phosphorous plants
- L - Benzene emissions from coke by-product recovery plants
- M - Asbestos
- N - Arsenic emissions from glass manufacturing plants
- O - Arsenic emissions from primary copper smelters
- P - Arsenic emissions from arsenic trioxide and metallic arsenic production facilities
- Q - Radon emissions from Department of Energy facilities
- R - Radon emissions from phosphogypsum stacks
- S - (proposed 3/07/89) Radon emissions from surface uranium mines
- T - Radon emissions from the disposal of uranium mill tailings
- U - (proposed 3/07/89) Coal fired boilers
- V - Equipment leaks (Fugitive emission sources)
- W - Radon emissions from operating mill tailings
- Y - Benzene emissions from benzene storage vessels
- Z - (canceled 3/07/90) Benzene emissions from ethylbenzene/styrene plants
- AA - (canceled 3/07/90) Benzene emissions from industrial solvent use at pharmaceutical manufacturing facilities
- BB - Benzene emissions from benzene transfer operations
- CC - (canceled 3/07/90) Benzene emissions from gasoline storage vessels at service stations
- DD - (canceled 3/07/90) Benzene emissions from bulk gasoline terminals
- EE - (canceled 3/07/90) Benzene emissions from unloading, loading and storage operations at bulk gasoline plants
- FF - Benzene waste operations
- GG - (canceled 3/07/90) Benzene emissions from industrial solvent use at rubber tire manufacturing facilities

5. 40 CFR Part 63 NESHAPs (MACT) Standards

National Emission Standards for Hazardous Air Pollutants (NESHAP)

MACT Standards by Source Category (40 CFR Part 63)

NESHAP (MACT) STANDARD Source Categories Affected	CFR Sub Parts	Final Federal Register Date & Citation	Compliance Date
Aerospace	GG	09/01/95 (60FR45948)	09/01/98
Acrylic/Modacrylic Fiber(area sources)	LLLLLL (6L)	07/16/07 (72FR38864)	
Asbestos	40 CFR 61 Subpart M	40 CFR 61.140	
Asphalt Processing and Asphalt Roofing Manufacturing	LLLLL	04/29/03 (68 FR 22975)	5/1/06
Auto & Light Duty Truck (surface coating)	IIII	04/26/04 (69FR22601)	04/26/07
Auto Body Refinishing (area sources)	HHHHHH (6H)	01/09/08 (73FR1737)	
Benzene Waste Operations	40 CFR 61 Subpart FF	12/04/03 (68FR67931)	12/04/06
Boat Manufacturing	VVVV	8/22/01 (66FR44217)	8/22/04
Brick and Structural Clay Products Manufacturing Clay Ceramics Manufacturing	JJJJ KKKKK	05/16/03 (68FR26689)	5/16/06
Carbon Black Production (area sources)	MMMMMM (6M)	07/16/07 (72FR38864)	
Cellulose Products Manufacturing - Miscellaneous Viscose Processes - Cellulose Food Casing - Rayon - Cellulosic Sponge - Cellophane - Cellulose Ethers Production - Caroxymethyl Cellulose - Methyl Cellulose - Cellulose Ethers	UUUU	06/11/2002 (67FR40043)	06/11/2005
Chemical Manufacturing Industry (area sources):CMAS	VVVVVV (6V)	10/29/09 (74FR56008)	
Chemical Preparations Industry (area sources)	BBBBBBB (7B)	12/30/09 (74FR69193)	
Chromium Electroplating - Chromic Acid Anodizing - Decorative Chromium Electroplating - Hard Chromium Electroplating	N	01/25/95 (60FR4948)	01/25/96 deco 01/25/97 others
Chromium Compounds (area sources)	NNNNNN (6N)	07/16/07 (72FR38864)	
Clay Ceramics Manufacturing (area sources)	RRRRRR (6R)	12/26/07 (72FR73180)	12/26/07

National Emission Standards for Hazardous Air Pollutants (NESHAP)

MACT Standards by Source Category (40 CFR Part 63)

NESHAP (MACT) STANDARD Source Categories Affected	CFR Sub Parts	Final Federal Register Date & Citation	Compliance Date
Coke Ovens: Pushing, Quenching, & Battery Stacks	CCCCC	4/14/03 (68FR18007)	4/14/06
Coke Ovens Charging, Top Side, and Door Leaks	L	10/27/93 (58FR57898)	Contact Project Lead
Combustion Sources at Kraft, Soda, and Sulfite Pulp & Paper Mills (Pulp and Paper MACT II)	MM	01/12/01 (66FR3180)	01/12/04
Commercial Sterilizers Commercial Sterilization Facilities	O	12/06/94 (59FR62585)	12/06/98
Degreasing Organic Cleaners Halogenated Solvent Cleaners	T	12/02/94 (59FR61801)	12/02/97
Dry Cleaning - Commercial dry cleaning dry-to-dry - Commercial dry cleaning transfer machines - Industrial dry cleaning dry-to-dry - Industrial dry cleaning transfer machines	40 CFR63 Subpart M	09/22/93 (58FR49354)	09/23/96
Electric Arc Furnace Steelmaking Facilities (Area Sources)	YYYYY	12/28/07 (72FR74088)	June 30, 2008
Engine Test Cells/Standards (Combined with Rocket Testing Facilities)	PPPPP	05/27/03 (68FR28774)	see FR
Fabric Printing, Coating & Dyeing	OOOO	05/29/03 68FR32171	05/29/06
Ferroalloys Production (Major Sources)	XXX	05/20/99 (64FR27450)	05/20/01
Ferroalloys Production (Area Sources)	YYYYYY (6Y)	12/23/08 (73 FR 78637)	12/23/11
Flexible Polyurethane Foam Fabrication Operation	MMMMM	04/14/03 (68FR18061)	04/14/04
Flexible Polyurethane Foam Production and Fabrication (area sources)	OOOOOO (6-O)	07/16/07 (72FR38864)	
Flexible Polyurethane Foam Production	III	10/07/98 (63FR53980)	10/08/01
Friction Products Manufacturing	QQQQQ	10/18/02 (67FR64497)	10/18/05
Gasoline Dispensing Facilities (Area Sources)	CCCCC (6C)	1/10/08 (73FR1916)	01/10/2011
Gasoline Distribution (Stage 1)	R	12/14/94 (59FR64303)	12/15/97
Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities (Area Sources)	BBBBBB (6B)	1/10/08 (73FR1916)	01/10/2011
General Provisions	A		

National Emission Standards for Hazardous Air Pollutants (NESHAP)

MACT Standards by Source Category (40 CFR Part 63)

NESHAP (MACT) STANDARD Source Categories Affected	CFR Sub Parts	Final Federal Register Date & Citation	Compliance Date
Generic MACT I-Acetal Resins	YY UU	6/29/99 (64FR34853)	06/29/02
Generic MACT I-Hydrogen Fluoride	YY UU	6/29/99 (64FR34853)	06/29/02
Generic MACT I-Polycarbonates Production	YY UU	6/29/99 (64FR34853)	06/29/02
Generic MACT I-Acrylic/Modacrylic Fibers	YY UU	6/29/99 (64FR34853)	06/29/02
Generic MACT II-Spandex Production	YY UU	7/12/02 (67FR46257)	07/12/05
Generic MACT II-Carbon Black Production	YY UU	7/12/02 (67FR46257)	07/12/05
Generic MACT II-Ethylene Processes	YY UU	7/12/02 (67FR46257)	07/12/05
Glass Manufacturing (area sources)	SSSSSS (6S)	12/26/07 (72FR73180)	12/26/09 (existing sources) or upon startup (new sources)
Gold Mine Ore Processing and Production (area sources)	EEEEEEE (7E)	2/17/11 (FR769450)	2/17/14
Hazardous Waste Combustion - Hazardous Waste Incinerators (A) - Hazardous Waste Incinerators (M)	Parts 63,261 and 270	09/30/99 (64FR52827)	09/30/03
Hazardous Organic NESHAP (Synthetic Organic Chemical Manufacturing Industry)	F, G, H, I	04/22/94 (59FR19402)	F/G-05/14/01 H-05/12/99 New Sources 05/12/98
Hospitals: Ethylene Oxide Sterilizers (area sources)	WWWWW	12/28/07 (72FR73611)	12/28/07 (new sources) 12/28/08 (existing sources)
Hydrochloric Acid Production Fumed Silica Production	NNNNN	4/17/03 (68FR19075)	4/17/06
Industrial, Commercial and Institutional Boilers and Process Heaters - Major Sources	DDDDD	09/13/04 (69FR55217)	09/13/07
Industrial, Commercial and Institutional Boilers - Area Sources	JJJJJ (6J)	03/21/11 (76FR15554)	03/21/14
Industrial Cooling Towers	Q	09/08/94 (59FR46339)	03/08/95
Integrated Iron and Steel	FFFFF	5/20/03 (68FR27645)	5/20/06
Iron and Steel Foundries (Major Sources)	EEEE	4/22/04 (69FR21905)	4/22/07
Iron and Steel Foundries (area sources)	ZZZZZ	1/2/08 (73FR225)	1/2/11

National Emission Standards for Hazardous Air Pollutants (NESHAP)

MACT Standards by Source Category (40 CFR Part 63)

NESHAP (MACT) STANDARD Source Categories Affected	CFR Sub Parts	Final Federal Register Date & Citation	Compliance Date
Large Appliances (surface coating)	NNNN	7/23/02 (67FR48253)	07/23/05
Lead Acid Battery Mfg.(area sources)	PPPPPP (6P)	07/16/07 (72FR38864)	
Leather Finishing Operations	TTTT	02/27/02 (67FR915510)	02/27/05
Lime Manufacturing	AAAAA	01/05/04 (69FR393)	01/05/07
Magnetic Tape (surface coating)	EE	12/15/94 (59FR64580)	without new control devices 12/15/96 with new control devices 12/15/97
Manufacturing Nutritional Yeast (formerly Bakers Yeast)	CCCC	5/21/01 (66FR27876)	5/21/04
Marine Vessel Loading Operations	Y	09/19/95 (60FR48388)	MACT-09/19/99 RACT-09/19/98
Mercury Cell Chlor-Alkali Plants	IIII	12/19/03 (68FR70903)	12/19/06
Metal Can (surface coating)	KKKK	11/13/03 (68FR64431)	11/13/2006
Metal Coil (surface coating)	SSSS	06/10/2002 (67FR39793)	6/10/2005
Metal Fabrication and Finishing Source Nine Categories(area sources)	XXXXXX (6X)	7/25/2008 (73FR42978)	7/25/2011
Metal Furniture (surface coating)	RRRR	05/23/03 (68FR28605)	05/23/06
Mineral Wool Production	DDD	06/01/99 (64FR29489)	06/01/02
Misc. Coating Manufacturing	HHHHH	12/11/03 (68FR69163)	12/11/06
Misc. Metal Parts and Products (surface coating) • Asphalt/Coal Tar Application to Metal Pipes	MMMM	01/02/04 (69FR129)	01/02/07
Misc. Organic Chemical Production and Processes (MON) • Alkyd Resins Production • Ammonium Sulfate Production • Benzyltrimethylammonium Chloride Prod. • Carbonyl Sulfide Production • Chelating Agents Production • Chlorinated Paraffins Production	FFFF	11/10/03 (68FR63851)	05/10/08

National Emission Standards for Hazardous Air Pollutants (NESHAP)

MACT Standards by Source Category (40 CFR Part 63)

NESHAP (MACT) STANDARD Source Categories Affected	CFR Sub Parts	Final Federal Register Date & Citation	Compliance Date
- Ethylidene Norbomene Production - Explosives Production - Hydrazine Production - Maleic Anhydride Copolymers Production - Manufacture of Paints, Coatings, & Adhesives - OBPA/1, 3-diisocyanate Production - Photographic Chemicals Production - Phthalate Plasticizers Production - Polyester Resins Production - Polymerized Vinylidene Chloride Prod. - Polymethyl Methacrylate Resins Prod. - Polyvinyl Acetate Emulsions Prod. - Polyvinyl Alcohol Production - Polyvinyl Butyral Production - Quaternary Ammonium Comp. Prod. - Rubber Chemicals Production - Symmetrical Tetrachloropyridine Production			
Municipal Solid Waste Landfills	AAAA	01/16/03 68FR2227	contact project lead
Natural Gas Transmission and Storage	HHH	06/17/99 (64FR32610)	06/17/02
Nonferrous Foundries: Aluminum, Copper, and Other (area sources)	ZZZZZZ (6Z)	06/25/09 (74FR30366)	Existing sources - June 27, 2011 New sources - "upon start-up"
Off-Site Waste Recovery Operations	DD	07/01/96 (61FR34140)	02/01/00
Oil & Natural Gas Production includes Area Sources	HH	06/17/99 (64FR32609)	06/17/02
Organic Liquids Distribution (non-gasoline)	EEEE	02/03/04 (69FR5038)	02/03/07
Paint Stripping and Miscellaneous Surface Coating Operations - (Area Sources)	HHHHHH (6H)	01/09/08 (73FR1737)	
Paper and Other Web (surface coating)	JJJJ	12/04/02 (67FR72329)	12/04/05
Pesticide Active Ingredient Production 4-Chloro-2-Methyl Acid Production 2,4 Salts & Esters Production 4,6-dinitro-o-cresol Production - Butadiene Furfural Cotrimer - Captafol Production - Captan Production - Chloroneb Production	MMM	06/23/99 (64FR33549)	12/23/03

National Emission Standards for Hazardous Air Pollutants (NESHAP)

MACT Standards by Source Category (40 CFR Part 63)

NESHAP (MACT) STANDARD Source Categories Affected	CFR Sub Parts	Final Federal Register Date & Citation	Compliance Date
- Chlorothalonil Production - Dacthal (tm) production - Sodium Pentachlorophenate Production - Tordon (tm) Acid Production			
Petroleum Refineries	CC	08/18/95 (60FR43244)	08/18/98
Petroleum Refineries - Catalytic Cracking - Catalytic Reforming - Sulfur Plant Units - Associated Bypass Lines	UUU	04/11/02 (67FR17761)	04/11/05
Pharmaceuticals Production	GGG	09/21/98 (63FR50280)	09/21/01
Phosphoric Acid Phosphate Fertilizers	AA BB	06/10/99 (64FR31358)	06/10/02
Plastic Parts (surface coating)	PPPP	4/19/04 (69FR20968)	4/19/07
Plating and Polishing Operations (area sources)	WWWWWW (6W)	07/01/08 73FR37728	07/01/10
Plywood and Composite Wood Products (formerly Plywood and Particle Board Manufacturing)	DDDD	7/30/04 (69FR45943)	
Polyether Polyols Production	PPP	06/01/99 (64FR29419)	06/01/02
Polymers & Resins I - Butyl Rubber - Epichlorohydrin Elastomers - Ethylene Propylene Rubber - Hypalon (TM) Production - Neoprene Production - Nitrile Butadiene Rubber - Polybutadiene Rubber - Polysulfide Rubber - Styrene-Butadiene Rubber & Latex	U	09/05/96 (61FR46906)	07/31/97
Polymers & Resins II - Epoxy Resins Production - Non-Nylon Polyamides Production	W	03/08/95 (60FR12670)	03/03/98
Polymers & Resins III - Amino Resins - Phenolic Resins	OOO	01/20/2000 65FR3275	01/20/2003

National Emission Standards for Hazardous Air Pollutants (NESHAP)

MACT Standards by Source Category (40 CFR Part 63)

NESHAP (MACT) STANDARD Source Categories Affected	CFR Sub Parts	Final Federal Register Date & Citation	Compliance Date
Polymers & Resins IV - Acrylonitrile-Butadiene-Styrene - Methyl Methacrylate-Acrylonitrile+ - Methyl Methacrylate-Butadiene++ - Polystyrene - Styrene Acrylonitrile - Polyethylene Terephthalate - Nitrile Resins	JJJ	09/12/96 (61FR48208)	07/31/97
Polyvinyl Chloride and Copolymers Production	J		
Polyvinyl Chloride and Copolymers Production (area sources)	DDDDDD (6D)		
Portland Cement Manufacturing	LLL	06/14/99 (64FR31898)	06/10/02
Primary Aluminum	LL	10/07/97 (62FR52384)	10/07/99
Primary Copper	QQQ	06/12/02 (67FR40477)	06/12/05
Primary Copper Smelting (area sources)	EEEEEE (6E)	01/23/07 (72FR2930)	Chuck French 919-541-7912 french.chuck@epa.gov
Primary Lead Smelting	TTT	06/04/99 (64FR30194)	05/04/01
Primary Magnesium Refining	TTTTT	10/10/03 (68FR58615)	10/10/04
Primary Nonferrous Metals-Zinc, Cadmium, and Beryllium (area sources)	GGGGGG (6G)	01/23/07 (72FR2930)	Chuck French 919-541-7912 french.chuck@epa.gov
Printing and Publishing (surface coating)	KK	05/30/96 (61FR27132)	05/30/99
Publicly Owned Treatment Works (POTW)	VVV	10/26/99 64FR57572	10/26/02
Pulp & Paper (non-combust)MACT	S	04/15/98 (63FR18504) 03/08/96 (61FR9383)	04/15/01 04/16/01
Reciprocating Internal Combustion Engines (RICE) includes area sources	ZZZZ	6/15/04 (69FR33473)	6/15/07
Refractory Products Manufacturing	SSSSS	04/16/03 (68FR18729)	New or Reconstructed 04/16/03 Existing 4/17/06

National Emission Standards for Hazardous Air Pollutants (NESHAP)

MACT Standards by Source Category (40 CFR Part 63)

NESHAP (MACT) STANDARD Source Categories Affected	CFR Sub Parts	Final Federal Register Date & Citation	Compliance Date
Reinforced Plastic Composites Production	WWWW	04/21/03 (68FR19375)	4/21/06
Rubber Tire Manufacturing	XXXX	7/9/02 (67FR45598)	7/11/2005
Secondary Aluminum	RRR	03/23/00 (65FR15689)	Existing Sources 3/24/2003 New Sources 3/23/2000 or Startup
Secondary Copper Smelting (area sources)	FFFFFF (6F)	01/23/07 (72FR2930)	Chuck French 919-541-7912 french.chuck@epa.gov
Secondary Lead Smelters	X	06/23/95 (60FR32587)	06/23/97
Secondary Nonferrous Metals Processing (Brass, Bronze, Magnesium and Zinc)(Area Sources)	TTTTT (6T)	12/26/07 (72FR73180)	12/26/07 (existing sources) or upon startup (new sources)
Semiconductor Manufacturing	BBBBB	05/22/03 (68FR30848)	05/22/06
Shipbuilding & Ship Repair (surface coating)	II	12/15/95 (60FR64330)	12/16/96
Site Remediation	GGGGG	10/08/03 (68FR58171)	10/08/06
Solvent Extraction for Vegetable Oil Production	GGGG	4/12/2001 (66FR19006)	4/12/2004
Stationary Combustion Turbines	YYYY	03/05/04 (69FR10511)	03/05/07
Steel Pickling-HCL Process	CCC	06/22/99 (64FR33202)	06/22/01
Taconite Iron Ore Processing	RRRRR	10/30/03 (68FR61867)	10/30/06
Tetrahydrobenzaldehyde Manufacture (Formerly Butadiene Dimers Production)	F	05/12/98 (63FR26078)	05/12/01
Utility NESHAP	UUUUU		
Wet Formed Fiberglass Mat Production	HHHH	04/11/02 (67FR17823)	04/11/05
Wood Building Products (surface coating) (formerly Flat Wood Paneling Products)	QQQQ	05/28/03 (68FR31746)	05/28/06
Wood Furniture (surface coating)	JJ	12/07/95 (60FR62930)	11/21/97
Wood Preserving (area sources)	QQQQQQ (6Q)	07/16/07 (72FR38864)	
Wool Fiberglass Manufacturing	NNN	06/14/99 (64FR31695)	06/14/02

6. EPA AP-42 Summary

EPA AP-42 SUMMARY

EPA produced and maintains an emission factor reference document called, “AP 42, Fifth Edition, Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources.” In addition to identifying specific emissions factors for a variety of air pollution sources, this document also provides brief background regarding: industrial process descriptions, process flow diagrams and schematics, types of pollutants emitted, and the typical control equipment used. This is a starting point for understanding a specific industrial source of air pollution. This document is available on EPA’s Clearinghouse for Inventories & Emissions Factors (CHIEF) on the Technology Transfer Network website at:

<http://www.epa.gov/ttn/chief/ap42/index.html>.

The following lists the main chapters and identifies several examples. The chapters are hyperlinked to the website.

- **EXTERNAL COMBUSTION SOURCES**
Examples: Combustion of Coal, natural gas, liquefied petroleum gas, wood waste, bagasse, and waste oil
- **SOLID WASTE DISPOSAL**
Examples: Combustion of refuse, incineration of sewage sludge, incineration of medical waste, landfill operations, etc.
- **STATIONARY INTERNAL COMBUSTION SOURCES**
Examples: Stationary gas turbines, heavy-duty natural gas-fired pipeline compressor engines, gasoline and diesel industrial engines, large stationary diesel and all stationary dual-fuel engines, etc.
- **EVAPORATION LOSS SOURCES**
Examples: Dry cleaning, surface coating, polyester resin plastic products fabrication, solvent degreasing, waste solvent reclamation, graphic arts, etc.
- **PETROLEUM INDUSTRY**
Examples: Petroleum Refining, Transportation and Marketing Of Petroleum Liquids, Natural Gas Processing, etc.
- **ORGANIC CHEMICAL PROCESS INDUSTRY**
Examples: Carbon black, adipic acid, explosives, paint and varnish, plastics, printing ink, methanol, etc.
- **LIQUID STORAGE TANKS**
Examples: Gasoline, diesel, fuel oil, jet fuel, etc.

- **INORGANIC CHEMICAL INDUSTRY**

Examples: Phosphate fertilizers, nitric acid, phosphoric acid, sulfuric acid, etc.

- **FOOD AND AGRICULTURAL INDUSTRIES**

Examples: Tilling operation, growing operation, grain harvesting, rice harvesting, sugar harvesting, cattle feedlots, swine feedlots, poultry houses, dairy farms, meat packing plants, meat smokehouses, meat rendering plants, manure processing, poultry slaughtering dairy products sugar processing, cane sugar processing, salted and roasted nuts and seeds, almond processing, peanut processing, fats and oils, grain processing, malt beverages, wines and brandy, distilled spirits, fish processing, coffee roasting, snack chip deep fat frying, etc.

- **WOOD PRODUCTS INDUSTRY**

Examples: Lumber, chemical wood pulping, pulp bleaching, papermaking, plywood, waferboard, oriented strand board, particleboard, charcoal, wood preserving, etc.

- **MINERAL PRODUCTS INDUSTRY**

Examples: Hot Mix Asphalt Plants, Bricks And Related Clay Products, Portland Cement Manufacturing, Concrete Batching, Glass Manufacturing, Lime Manufacturing, etc.

- **METALLURGICAL INDUSTRY**

Examples: Primary aluminum production, iron and steel production, primary lead smelting, gray iron foundries, secondary lead processing, etc.

- **MISCELLANEOUS SOURCES**

Examples: Wildfires And Prescribed Burning, Fugitive Dust Sources, Objectionable Odor Sources, Asbestos (Demolition and Renovation), Paved Roads, Unpaved Roads, Heavy Construction Operations, Aggregate Handling And Storage Piles, Industrial Wind Erosion, Explosives Detonation, Wet Cooling Towers, Industrial Flares, etc.

Chapter 5

Chapter 5

Air Pollution Control Equipment and Methods



Florida Air Inspector Reference (FAIR)
Training Program

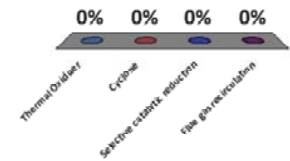
Overview

- > Controlling Particulate Matter
- > Controlling Acid Gases
- > Controlling Nitrogen Oxides
- > Controlling Volatile Organic Compounds
- > Controlling Fugitive Dust
- > Controlling Objectionable Odors
- > Circumvention of Air Pollution Control Equipment

Particulate Matter Control

Which of the following technologies is commonly used for particulate matter control?

- A. Thermal Oxidizer
- ✓ B. Cyclone
- C. Selective catalytic reduction
- D. Flue gas recirculation



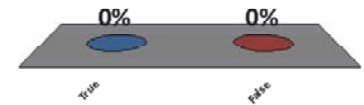
PM Control Device – Cyclone

- > Simple mechanical device commonly used to remove relatively large particles from gas streams by using centrifugal force
- > Oftentimes used to reduce the inlet loading of particulate matter (PM) to downstream collection devices by removing larger, abrasive particles
- > Typical Monitoring Parameters:
 - ❖ Minimum Pressure Drop
 - ❖ Minimum and Maximum Inlet Gas Flow Rate



Cyclones are often used to reduce the inlet loading of particulate matter (PM).

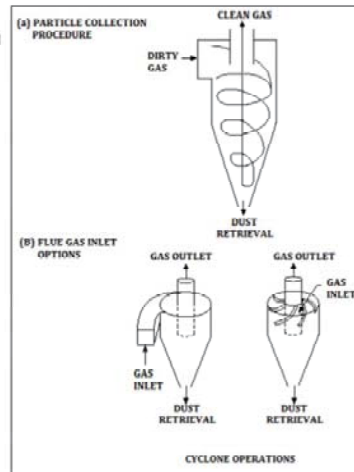
- ✓ A. True
- B. False



- Source: Air Pollution Control Technology Fact Sheet: Cyclones. (<http://www.epa.gov/ttn/catc1/dir1/fcyclon.pdf>).

PM Control Device – Cyclone

- > Part of the group of air pollution controls collectively referred to as “precleaners”
- > They are oftentimes used to reduce the inlet loading of particulate matter (PM) to downstream collection devices by removing larger, abrasive particles
- > Also referred to as: cyclone collectors, cyclone separators, centrifugal separators, and inertial separators



- In applications where many small cyclones are operating in parallel, the entire system is called a multiple tube cyclone, multicyclone, or multicyclone.
- Source: Schematic of a Cyclone (<http://www.epa.gov/ttnchie1/mkb/documents/Cyclone.pdf>).
- **Theory of Operation:**
- Cyclones use inertia to remove particles from the gas stream. The cyclone imparts centrifugal force on the gas stream, usually within a conical shaped chamber. Cyclones operate by creating a double vortex inside the cyclone body. The incoming gas is forced into circular motion down the cyclone near the inner surface of the cyclone tube. At the bottom of the cyclone, the gas turns and spirals up through the center of the tube and out of the top of the cyclone (AWMA, 1992).
- Particles in the gas stream are forced toward the cyclone walls by the centrifugal force of the spinning gas but are opposed by the fluid drag force of the gas traveling through and out of the cyclone. For large particles, inertial momentum overcomes the fluid drag force so that the particles reach the cyclone walls and are collected. For small particles, the fluid drag force overwhelms the inertial momentum and causes these particles to leave the cyclone with the exiting gas. Gravity also causes the larger particles that reach the cyclone walls to travel down into a bottom hopper. While they rely on the same separation mechanism as momentum separators, cyclones are more effective because they have a more complex gas flow pattern (AWMA, 1992).

PM Control Device – Cyclone

- > Generally classified into 4 types, depending on how the gas stream is introduced into the device and how the collected dust is discharged
 - ❖ tangential inlet, axial discharge
 - ❖ axial inlet, axial discharge
 - ❖ tangential inlet, peripheral discharge
 - ❖ axial inlet, peripheral discharge

- The first two types are the most common (AWMA, 1992).

PM Control Device—Cyclone

> Achievable Emission Limits/Reductions:

- ❖ High Efficiency Cyclone - designed to achieve higher control of smaller particles than conventional cyclones
 - ♦ Control Efficiency ranges from 80-99% for PM, 60-95% for PM₁₀, 20-70% for PM_{2.5}
- ❖ High Throughput Cyclone - only guaranteed to remove particles greater than 20 µm
 - ♦ Control Efficiency ranges from 80-99% for PM, 10-40% for PM₁₀, 0-10% for PM_{2.5}

> Typical Industrial Applications:

- ❖ Precleaners for more expensive final control devices like fabric filters or electrostatic precipitators (ESPs)

PM Control Device—Cyclone

> Emission Stream Characteristics:

- ❖ **Air Flow:** Typical gas flow rates for a single cyclone unit are 0.5 to 12 standard cubic meters per second (1,060 to 25,400 scfm)
- ❖ **Inlet gas temperature:** Limited by the materials of construction; could be as high as 540 °C (1000 °F)
- ❖ **Pollutant Loading:** 2.3 to 230 grams per standard cubic meter (1.0 to 100 gr/scf)
- ❖ **Other Considerations:** Perform more efficiently with higher pollutant loadings, provided that the device does not become choked; higher pollutant loadings are generally associated with higher flow designs

> Emission Stream Pretreatment Requirements:

- ❖ None

• Emission Stream Characteristics:

- **Air Flow:** Typical gas flow rates for a single cyclone unit are 0.5 to 12 standard cubic meters per second (sm³/sec) (1,060 to 25,400 standard cubic feet per minute (scfm)). Flows at the high end of this range and higher (up to approximately 50 sm³/sec or 106,000 scfm) use multiple cyclones in parallel (Cooper, 1994). There are single cyclone units employed for specialized applications which have flow rates of up to approximately 30 sm³/sec (63,500 scfm) and as low as 0.0005 sm³/sec (1.1 scfm) (Wark, 1981; Adriana, 1999).
- **Temperature:** Inlet gas temperatures are only limited by the materials of construction of the cyclone, and have been operated at temperatures as high as 540° C (1000° F) (Wark, 1981; Perry, 1994).
- **Pollutant Loading:** Waste gas pollutant loadings typically range from 2.3 to 230 grams per standard cubic meter (g/sm³) (1.0 to 100 grains per standard cubic foot (gr/scf)) (Wark, 1981). For specialized applications, loadings can be as high as 16,000 g/sm³ (7,000 gr/scf), and as low as 1 g/sm³ (0.44 gr/scf) (Avallone, 1996; Adriana, 1999).
- **Other Considerations:** Cyclones perform more efficiently with higher pollutant loadings, provided device does not become choked. Higher pollutant loadings generally associated with higher flow designs (Adriana, 1999).

PM Control Device—Cyclone

- > Pressure drop relates directly to operating costs and control efficiency
- > Higher control efficiencies can be obtained by higher inlet velocities, but this also increases the pressure drop
- > When high-efficiency (which requires small cyclone diameter) and large throughput are both desired, a number of cyclones can be operated in parallel

- In general, 18.3 meters per second (60 feet per second) is considered the best operating velocity. Common ranges of pressure drops for cyclones are 0.5 to 1 kilopascals (kPa) (2 to 4 in. H₂O) for low-efficiency units (high throughput), 1 to 1.5 kPa (4 to 6 in. H₂O) for medium-efficiency units (conventional), and 2 to 2.5 kPa (8 to 10 in. H₂O) for high-efficiency units (AWMA, 1992).
- In a multiple tube cyclone, the housing contains a large number of tubes that have a common gas inlet and outlet in the chamber. The gas enters the tubes through axial inlet vanes which impart a circular motion (AWMA, 1992). Another high-efficiency unit, the wet cyclonic separator, uses a combination of centrifugal force and water spray to enhance control efficiency.

PM Control Device—Cyclone

- > Advantages:
 - ❖ No moving parts therefore few maintenance requirements and low operating costs
 - ❖ Relatively low pressure drop relative to the amount of PM removed
 - ❖ Dry collection and disposal
 - ❖ Relatively small space requirements
- > Disadvantages:
 - ❖ Low PM collection efficiencies for PM < 10 μ m
 - ❖ Unable to handle sticky or tacky materials
 - ❖ High efficiency units may experience high pressure drops

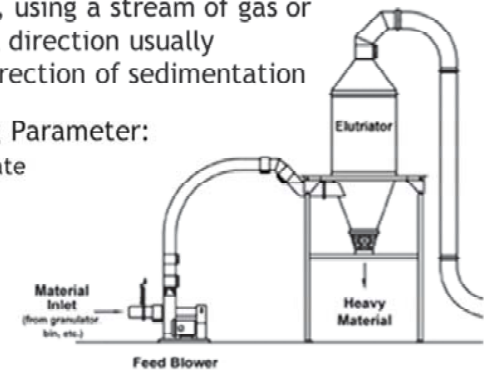
An Elutriator separates particles based on their size, shape and density.

- ✓ A. True
- B. False



PM Control Device—Elutriator

- > Separates particles based on their size, shape and density, using a stream of gas or liquid flowing in a direction usually opposite to the direction of sedimentation
- > Typical Monitoring Parameter:
 - ❖ Inlet Gas Flow Rate



- Source: Air Pollution Control Technology Fact Sheet: Elutriators (<http://www.epa.gov/ttn/catc/dir1/felutri.pdf>).
- **Name of Technology: Elutriators**
- This type of technology is a part of the group of air pollution controls collectively referred to as “precleaners,” because they are oftentimes used to reduce the inlet loading of particulate matter (PM) to downstream collection devices by removing larger, abrasive particles. Elutriators are mainly used in non-pollution control processes to separate particle sizes.

PM Control Device—Elutriator

> Achievable Emission Limits/Reductions:

- ❖ Collection efficiency varies as a function of particle size and elutriator design. Efficiency generally increases with particle size and/or density, decrease in flow velocity, and the number of vertical tubes or towers.
- ❖ Collection efficiency for PM_{10} is typically less than 10%.

> Typical Industrial Applications:

- ❖ Used to separate larger particles from smaller particles in waste gas. They are often followed by other mechanical collectors that remove smaller PM particles.
- ❖ Typical uses of elutriators are in granulated plastic processes, secondary metal operations, food and agriculture processes, and petrochemical industries.

PM Control Device—Elutriator

> Emission Stream Characteristics:

- ❖ **Air Flow:** Typical gas flow rates for a elutriators are 0.25 to 4 standard cubic meters per second (530 to 8,500 scfm)
- ❖ **Inlet gas temperature:** Limited by the materials of construction; could be as high as 540 °C (1000 °F)
- ❖ **Pollutant Loading:** 20 to 4,500 grams per standard cubic meter (9 to 1,970 gr/scf)
- ❖ **Other Considerations:** Leakage of cold air into the unit can cause local gas quenching and condensation; condensation can cause corrosion, dust buildup, and plugging of the hopper or dust removal system

> Emission Stream Pretreatment Requirements:

- ❖ None

• Theory of Operation:

- An elutriator is essentially a vertical settling chamber. Elutriators consist of one or more vertical tubes or towers in series into which a dust-laden gas stream passes upward at a velocity defined by the gas flow rate and the tube cross-sectional area. Large particles with terminal settling velocities greater than the upward gas velocity are separated and collected at the bottom of the chamber. Smaller particles with lower settling velocity are carried out of the collector. The particle size collected may be varied by changing the gas velocities. Size classification of the collected particles can be achieved by using a series of tubes with increasing diameters. Hoppers are generally used to collect the settled-out material. The dust removal system must be sealed to prevent air from leaking into the chamber which increases turbulence, causes dust reentrainment, and prevents dust from being properly discharged from the device (EPA, 1982; EPA, 1998).

PM Control Device—Elutriator

> Advantages:

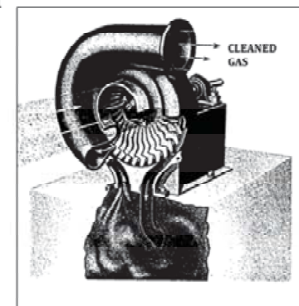
- ❖ No moving parts therefore few maintenance requirements and low operating costs
- ❖ Excellent reliability and low energy cost
- ❖ Low pressure across the device
- ❖ Incidental cooling of the gas stream
- ❖ Dry collection and disposal

> Disadvantages:

- ❖ Low PM collection efficiencies for
- ❖ Unable to handle sticky or tacky materials
- ❖ Large physical size

PM Control Device—Mechanically-Aided Separators

- > Use of a rotary vane (e.g., radial blade fan) to mechanically impart a centrifugal force on the particles in the gas stream causing them to separate from the gas stream
- > Particles are collected in a dust hopper for disposal
- > Mechanically-aided separators may no longer be manufactured
- > Cyclones are generally used for small-space requirement applications where mechanically-aided separators would have been used in the past
- > Typical Monitoring Parameter:
 - ❖ Inlet Gas Flow Rate



- Source: Air Pollution Control Technology Fact Sheet: Mechanically-Aided Separators (<http://www.epa.gov/ttn/catc/dir1/fmechan.pdf>).
- Source: Stationary Source Control Techniques Document for Fine Particulate Matter (<http://www.epa.gov/ttn/catc1/dir1/finepmttech.pdf>).
- **Name of Technology: Mechanically-Aided Separators**
- This type of technology is a part of the group of air pollution controls collectively referred to as “precleaners,” because they are oftentimes used to reduce the inlet loading of particulate matter (PM) to downstream collection devices by removing larger, abrasive particles.
- Mechanically-aided separators are also referred to as mechanical separators, mechanical centrifugal separators, centrifugal collectors, dry dynamic separators, dry rotoclones, and dynamic precipitators.

PM Control Device— Mechanically-Aided Separators

> Achievable Emission Limits/Reductions:

- ❖ The collection efficiency associated with a mechanically-aided separator is comparable with a high-pressure-drop cyclone
- ❖ Mechanically-aided separators are capable of collection efficiencies approaching 30% for PM_{10}

> Typical Industrial Applications:

- ❖ Used in the food, pharmaceutical, and wood-working industries
- ❖ Due to their compact size, often used in applications where space is restricted or many individual units are desired
- ❖ Have generally been supplanted by cyclones for most applications

PM Control Device— Mechanically-Aided Separators

> Emission Stream Characteristics:

- ❖ **Air Flow:** Typical gas flow rates are 0.75 to 10 standard cubic meters per second (1,59 to 21,200 scfm)
- ❖ **Inlet gas temperature:** Limited to less than 370 °C (700 °F)
- ❖ **Pollutant Loading:** Waste gas pollutant loadings typically range from 10 to 250 grams per standard cubic meter
- ❖ **Other Considerations:** None

> Emission Stream Pretreatment Requirements:

- ❖ Mechanically-aided separators may be preceded by another separation device to remove larger particles which may damage or clog the mechanically-aided separator

• Theory of Operation:

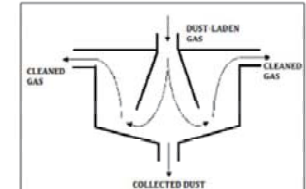
- Mechanically-aided separators involve the use of a rotary vane (e.g., radial blade fan) to mechanically impart a centrifugal force on the particles in the gas stream causing them to separate from the gas stream. The particles are collected in a dust hopper for removal and disposal.
- The most common design is a modified radial blade fan where the particulate laden gas stream enters the device perpendicular to the blade rotation, and momentum forces the particles to cross the gas stream and collect in the side of the device casing. The blades and casing are especially shaped to direct the separated dust into an annular slot leading to the collection hopper while the cleaned gas continues to the device outlet. By operating at low speeds (400 to 800 rpm), the effects of abrasion and material buildup are minimized.

PM Control Device— Mechanically-Aided Separators

- > Advantages:
 - ❖ Compact design and small space requirements
 - ❖ Higher collection efficiencies of smaller particles than other pre-cleaner designs
 - ❖ Dry collection and disposal
- > Disadvantages:
 - ❖ Higher power requirements and operating costs than other pre-cleaner designs
 - ❖ Higher maintenance requirements than other pre-cleaner designs
 - ❖ Unable to handle sticky or tacky materials
 - ❖ More subject to abrasion than other pre-cleaner designs

PM Control Device— Momentum Separators

- > Operate by forcing waste gas to sharply change direction within a gravity settling chamber through the use of strategically placed baffles
- > Typically, the gas first flows downward and is then forced by the baffles to suddenly flow upward
- > Inertial momentum and gravity act in the downward direction on the particles, which causes larger particles to cross the flow lines of the gas and collect in a hopper in the bottom of the chamber
- > Typical Monitoring Parameter:
 - ❖ Minimum Pressure Drop
 - ❖ Inlet Gas Flow Rate



- Source: Air Pollution Control Technology Fact Sheet: Momentum Separators (<http://www.epa.gov/ttn/catc/dir1/fmoment.pdf>).
- **Name of Technology: Momentum Separators**
- This type of technology is a part of the group of air pollution controls collectively referred to as “mechanical collectors,” or “precleaners,” because they are oftentimes used to reduce the inlet loading of particulate matter (PM) to downstream collection devices by removing larger, abrasive particles by mechanical means. Momentum separators are also referred to as impingement separators, baffle chambers, and knock-out chambers.

PM Control Device— Momentum Separators

> Achievable Emission Limits/Reductions:

- ❖ The collection efficiency varies as a function of particle size and the momentum separator's design. Efficiency generally increases with: increased particle size and/or density; increased gas stream velocity; and number of turns, baffles, or other sharp direction changes to gas flow.
- ❖ Collection efficiencies are $\leq 5\%$ for a particle size of $5\text{ }\mu\text{m}$, 10 to 20% for a particle size of $10\text{ }\mu\text{m}$, and up to 99% for particle sizes of $90\text{ }\mu\text{m}$ or greater.

> Typical Industrial Applications:

- ❖ Momentum separators themselves are not adequate to meet stringent air pollution regulations, but they serve an important purpose as pre-cleaners for more expensive final control devices such as fabric filters or electrostatic precipitators (ESPs).

• Achievable Emission Limits/Reductions:

- The collection efficiency of a momentum separator varies as a function of particle size and the momentum separator's design. Momentum separator efficiency generally increases with:
 - (1) increased particle size and/or density;
 - (2) increased gas stream velocity;
 - (3) number of turns, baffles, or other sharp direction changes to gas flow.

PM Control Device— Momentum Separators

> Emission Stream Characteristics:

- ❖ **Air Flow:** Typical gas flow rates are 0.5 to 10 standard cubic meters per second (1,060 to 21,200 scfm)
- ❖ **Inlet gas temperature:** Restricted by material of construction, and have been operated as high as $540\text{ }^{\circ}\text{C}$ ($1,000\text{ }^{\circ}\text{F}$)
- ❖ **Pollutant Loading:** 20 to 4,500 grams per standard cubic meter (9 to 1,970 gr/scf)
- ❖ **Other Considerations:** Leakage of cold air into a momentum separator can cause local gas quenching and condensation. Condensation can cause corrosion, dust buildup, and plugging of the hopper or dust removal system.

> Emission Stream Pretreatment Requirements:

- ❖ None

• Theory of Operation:

- Momentum separators operate by forcing waste gas to sharply change direction within a gravity settling chamber through the use of strategically placed baffles. Typically, the gas first flows downward and is then forced by the baffles to suddenly flow upward. Inertial momentum and gravity act in the downward direction on the particles, which causes larger particles to cross the flow lines of the gas and collect in a hopper in the bottom of the chamber.
- The design of momentum separators must provide sufficient volume to allow settling of materials separated from the high-velocity gas stream and materials of construction hard enough to survive high abrasion.
- As with all mechanical collectors, the design must include methods of sealing dust discharge from hoppers to prevent air leakage. The methods may include use of rotary air locks, flapper valves, or other positive sealing devices. Air leakage through the hopper or shell results in changes in the gas distribution, interferes with dust discharge, and may cause condensation or corrosion.
- Because of the high velocities used to separate the particles from the gas stream and the impaction of these particles on surfaces that direct the gas flow, the materials of construction must have high abrasion resistance.

PM Control Device— Momentum Separators

> Advantages:

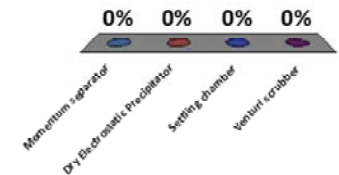
- ❖ No moving parts, therefore few maintenance requirements and low operating costs
- ❖ Relatively low pressure drop (2 to 6 inches water column) compared to amount of PM removed
- ❖ Temperature and pressure limitations are only dependent on the materials of construction
- ❖ Dry collection and disposal

> Disadvantages:

- ❖ Relatively low PM collection efficiencies
- ❖ Unsuitable for sticky or tacky materials
- ❖ Higher pressure drop than settling chambers
- ❖ High operating costs may result due to pressure drop

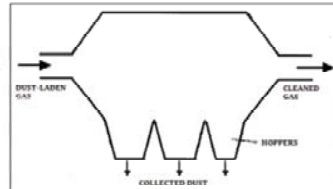
Which of the following technologies is the simplest and oldest mechanical collection method?

- A. Momentum separator
- B. Dry Electrostatic Precipitator
- ✓ C. Settling chamber
- D. Venturi scrubber



PM Control Device— Settling Chambers

- > Rely on gravitational settling as a collection mechanism
- > Simplest and oldest mechanical collectors
- > Generally built in the form of long, horizontal, rectangular chambers with an inlet at one end and an exit at the side or top of the opposite end
- > Hoppers are used to collect the settled-out material, though drag scrapers and screw conveyers have also been employed
- > Typical Monitoring Parameter:
 - ❖ Minimum Pressure Drop
 - ❖ Inlet Gas Flow Rate



- Source: Air Pollution Control Technology Fact Sheet: Settling Chambers (<http://www.epa.gov/ttn/catc/dir1/fsetting.pdf>).
- **Name of Technology: Momentum Separators**
- This type of technology is a part of the group of air pollution controls collectively referred to as “precleaners” because they are oftentimes used to reduce the inlet loading of particulate matter (PM) to downstream collection devices by removing larger, abrasive particles. Settling chambers are also referred to as gravity settling chambers, gravity collectors, expansion chambers, and outfall chambers. Multiple-tray settling chambers are also referred to as Howard settling chambers.
- **Theory of Operation:**
- Settling chambers, reliant on gravitational settling as a collection mechanism, are the simplest and oldest mechanical collectors. Settling chambers are generally built in the form of long, horizontal, rectangular chambers with an inlet at one end and an exit at the side or top of the opposite end. Flow within the chamber must be uniform and without any macroscopic mixing. Uniform flow is often ensured by flow straighteners at the inlet to the chamber. Hoppers are used to collect the settled-out material, though drag scrapers and screw conveyers have also been employed. The dust removal system must be sealed to prevent air from leaking into the chamber which increases turbulence, causes dust reentrainment, and prevents dust from being properly discharged from the device (EPA, 1982; Wark, 1981; Corbitt, 1990; Perry, 1984; Mycock, 1995; Avallone, 1996; EPA, 1998).

PM Control Device— Settling Chambers

- > Achievable Emission Limits/Reductions:
 - ❖ Most effective for large and/or dense particles where gravitational forces can be employed to remove particles with a settling velocity >13 cm/s (25 ft/min)
 - ❖ Collection efficiency for PM less than or equal to $10\text{ }\mu\text{m}$ in diameter (PM_{10}) is typically less than 10%
- > Typical Industrial Applications:
 - ❖ The metals refining industries have used settling chambers to collect large particles, such as arsenic trioxide from the smelting of arsenical copper ores. Power and heating plants have used settling chambers to collect large unburned carbon particles for reinjection into the boiler. They are particularly useful for industries that also need to cool the gas stream prior to treatment in a fabric filter.

- **Achievable Emission Limits/Reductions:**
- The collection efficiency of settling chambers varies as a function of particle size and settling chamber design. Settling chambers are most effective for large and/or dense particles. Gravitational force may be employed to remove particles where the settling velocity is greater than about 13 centimeters per second (cm/s) (25 feet per minute (ft/min)). In general, this applies to particles larger than $50\text{ }\mu\text{m}$ if the particle density is low, down to $10\text{ }\mu\text{m}$ if the material density is reasonably high. Particles smaller than this would require excessive horizontal flow distances, which would lead to excessive chamber volumes. The collection efficiency for PM less than or equal to $10\text{ }\mu\text{m}$ in aerodynamic diameter (PM_{10}) is typically less than 10 percent. Multiple-tray chambers have lower volume requirements for the collection of particles as small as $15\text{ }\mu\text{m}$ (Wark, 1981; Mycock, 1995; EPA, 1998).

PM Control Device—Settling Chambers

> Emission Stream Characteristics:

- ❖ **Air Flow:** Typical gas flow rates are 0.25 to 0.5 standard cubic meters per second per cubic meter of chamber volume (15 to 3- scfm per cubic foot of chamber volume)
- ❖ **Inlet gas temperature:** Restricted by material of construction, and have been operated as high as 540 °C (1,000 °F)
- ❖ **Pollutant Loading:** 20 to 4,500 grams per standard cubic meter (9 to 1,970 gr/scf)
- ❖ **Other Considerations:** Leakage of cold air into a momentum separator can cause local gas quenching and condensation. Condensation can cause corrosion, dust buildup, and plugging of the hopper or dust removal system.

> Emission Stream Pretreatment Requirements:

- ❖ None

PM Control Device—Settling Chambers

> Advantages:

- ❖ No moving parts, therefore few maintenance requirements and low operating costs
- ❖ Temperature and pressure limitations are only dependent on the materials of construction
- ❖ Provides incidental cooling of the gas stream
- ❖ Excellent reliability
- ❖ Dry collection and disposal

> Disadvantages:

- ❖ Relatively low PM collection efficiencies, particularly for PM less than 50 µm in size
- ❖ Unsuitable for sticky or tacky materials
- ❖ Large physical size

• Typical Industrial Applications:

- Despite low collection efficiencies, settling chambers have been used extensively in the past. The metals refining industries have used settling chambers to collect large particles, such as arsenic trioxide from the smelting of arsenical copper ores. Power and heating plants have used settling chambers to collect large unburned carbon particles for reinjection into the boiler. They are particularly useful for industries that need to cool the gas stream prior to treatment.
- Settling chambers have been used to prevent excessive abrasion and dust loading in primary collection devices by removing large particles from the gas stream, such as either very high dust loadings or extremely coarse particles which might damage a downstream collector in series with the settling chamber. The upstream use of settling chambers has declined with improvements in acceptable loading of other, more efficient, control devices and increasing space restrictions at facilities. In cases where sparks or heated material is present in the waste gas, settling chambers are still used to serve as “spark traps” to prevent a downstream baghouse or filter from catching fire.
- These devices are generally constructed for a specific application from duct materials, though almost any material can be used. Settling chambers have been replaced, for most applications, by cyclones due to the lower space requirements and the higher collection efficiency of cyclones. Multiple-tray settling chambers have never been widely used due to difficulty in removing the settled dust from the horizontal trays (Mycock, 1995; Josephs, 1999).

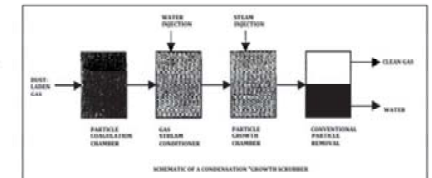
In general, a wet scrubber can be applied to exhaust with flammable and explosive dusts.

- ✓ A. True
- B. False



PM Control Device— Condensation Scrubber

- > PM acts as condensation nuclei for the formation of droplets
- > Once saturation of the stream is achieved, steam is injected into the gas stream
- > Steam creates a condition of supersaturation and leads to condensation of water on the fine PM in the gas stream
- > Large condensed droplets are then removed by one of several conventional devices, such as a high efficiency mist eliminator
- > Typical Monitoring Parameter:
 - ❖ Minimum Pressure Drop
 - ❖ Minimum Liquid Flow Rate



- Source: Air Pollution Control Technology Fact Sheet: Condensation Scrubber (<http://www.epa.gov/ttn/catc/dir1/fcondnse.pdf>).
- Source: Stationary Source Control Techniques Document for Fine Particulate Matter, Section 5.4.2.7 (<http://www.epa.gov/ttn/catc1/dir1/finepmtch.pdf>).
- **Name of Technology: Condensation Scrubber**
- This type of technology is a part of the group of air pollution controls collectively referred to as “wet scrubbers.”
- **Type of Technology:**
- Removal of air pollutants by use of condensation to increase pollutant particle size, followed by inertial interception.

PM Control Device— Condensation Scrubber

- > **Achievable Emission Limits/Reductions:**
 - ❖ Collection efficiencies of greater than 99% have been reported for particulate emissions.
- > **Typical Industrial Applications:**
 - ❖ For use in controlling fine PM-containing waste-gas streams, and are designed specifically to capture fine PM which has escaped a primary PM control device.
 - ❖ Technology is suitable for both new and retrofit installations.

PM Control Device— Condensation Scrubber

- > **Emission Stream Characteristics:**
 - ❖ **Air Flow:** Typical gas flow rates are on the order of 10 standard cubic meters per second (21,000 scfm)
 - ❖ **Inlet gas temperature:** Waste gas entering a unit is generally cooled to saturation condition, 20 °C to 26 °C (68 °F to 78 °F)
 - ❖ **Pollutant Loading:** Dependent upon the control effectiveness for fine PM of the primary PM control system
 - ❖ **Other Considerations:** Use of a condensation scrubber to capture fine PM may provide an effective method of reducing the emission of metals from a combustion source
- > **Emission Stream Pretreatment Requirements:**
 - ❖ Condensation scrubbers are generally intended to be used downstream of another scrubber (eg. Venturi scrubber) which has already removed PM >1.0 µm.

- **Theory of Operation:**
- Condensation scrubbing is a relatively recent development in wet scrubber technology. Most conventional scrubbers rely on the mechanisms of impaction and diffusion to achieve contact between the PM and liquid droplets.
- In a condensation scrubber, the PM act as condensation nuclei for the formation of droplets. Generally, condensation scrubbing depends on first establishing saturation conditions in the gas stream. Once saturation is achieved, steam is injected into the gas stream. The steam creates a condition of supersaturation and leads to condensation of water on the fine PM in the gas stream. The large condensed droplets are then removed by one of several conventional devices, such as a high efficiency mist eliminator.

PM Control Device— Condensation Scrubber

> Advantages:

- ❖ Can handle flammable and explosive dusts with little risk
- ❖ Can handle fine PM
- ❖ Collection efficiency can be varied
- ❖ Corrosive gases and dusts can be neutralized

> Disadvantages:

- ❖ Effluent liquid can create water pollution control problems
- ❖ Waste product is collected wet
- ❖ High potential for corrosion problems
- ❖ Collected particulate may be contaminated, and may not be recyclable
- ❖ Disposal of waste sludge may be expensive

PM Control Device— Fiber-Bed Scrubber

- > Part of the group of air pollution controls collectively referred to as “wet scrubbers”
- > Moisture-laden waste gas passes through beds or mats of packing fibers, such as spun glass, fiberglass, or steel
- > Depending on the scrubber requirements, there may be several fiber mats and an impingement device for PM removal included in the design
- > Final fiber mat is typically for the removal of any droplets that are still entrained in the stream
- > Typical Monitoring Parameter:
 - ❖ Minimum Pressure Drop
 - ❖ Minimum Liquid Flow Rate

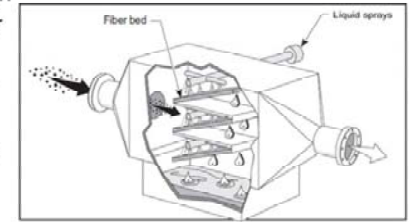


Figure 5-5. Fiber-bed scrubber

- Air Pollution Control Technology Fact Sheet: Fiber-Bed Scrubber (<http://www.epa.gov/ttn/catc/dir1/fiberbed.pdf>).
- **Type of Technology:**
- Removal of air pollutants by inertial and diffusional interception.
- Also known as a wetted-filter scrubber or mist eliminator.
- **Theory of Operation:**
- If only mists are to be collected, small fibers may be used, but if solid particles are present, the use of fiber-bed scrubbers is limited by the tendency of the beds to plug.
- For PM collection, the fiber mats must be composed of coarse fibers and have a high void fraction, to minimize the tendency to plug. The fiber mats are often sprayed with the scrubbing liquid so particles can be collected by deposition on droplets and fibers.

PM Control Device— Fiber-Bed Scrubber

- > Achievable Emission Limits/Reductions:
 - ❖ Collection efficiencies for PM and VOC mists generally range from 70 to 99%, depending upon the size of the aerosols to be collected and the design of the scrubber and the fiber beds.
- > Typical Industrial Applications:
 - ❖ Control aerosol emissions from chemical, plastics, asphalt, sulfuric acid, and surface coating industries
 - ❖ Control lubricant mist emission from rotating machinery and mists from storage tanks
 - ❖ Applied downstream of other control devices to eliminate a visible plume

PM Control Device— Fiber-Bed Scrubber

- > Emission Stream Characteristics:
 - ❖ **Air Flow:** Typical gas flow rates are 0.5 to 47 standard cubic meters per second (1,000 to 100,000 scfm)
 - ❖ **Inlet gas temperature:** Restricted by the choice of materials; plastic fiber beds are generally restricted to operate below 60 °C (140 °F).
 - ❖ **Pollutant Loading:** 0.2 to 11 grams per standard cubic meter (0.1 to 5 gr/scf)
 - ❖ **Other Considerations:** None
- > Emission Stream Pretreatment Requirements:
 - ❖ Waste gas streams are often cooled before entering fiber-bed scrubbers to condense as much of the liquid in the flow as possible and to increase the size of the existing aerosol particles through condensation.

PM Control Device—Fiber-Bed Scrubber

> Advantages:

- ❖ Can handle flammable and explosive dusts with little risk
- ❖ Can handle mists
- ❖ Relatively low pressure drop
- ❖ Provides cooling of hot gases
- ❖ Corrosive gases and dusts can be neutralized

> Disadvantages:

- ❖ Effluent liquid can create water pollution control problems
- ❖ Waste product is collected wet
- ❖ Collection of PM might be contaminated, and may not be recyclable
- ❖ Disposal of waste sludge may be expensive

PM Control Device—Impingement-Plate / Tray Tower Scrubber

> Typical design is vertical chamber with plates mounted horizontally inside a hollow shell

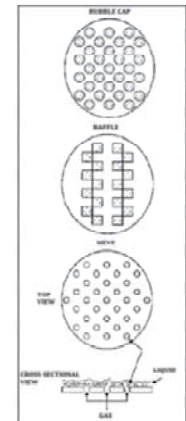
> Scrubbing liquid flows down the tower while the gas stream flows upward

> Contact between the liquid and the particle-laden gas occurs on the plates

> Plates are equipped with openings that allow the gas to pass through

> Typical Monitoring Parameter:

- ❖ Minimum Pressure Drop
- ❖ Minimum Liquid Flow Rate



- Air Pollution Control Technology Fact Sheet: Impingement-Plate / Tray Tower Scrubber (<http://www.epa.gov/ttn/catc/dir1/fimpinge.pdf>).
- **Type of Technology:**
- This type of technology is a part of the group of air pollution controls collectively referred to as “wet scrubbers.” When used to control inorganic gases, they may also be referred to as “acid gas scrubbers.” When used to specifically control sulfur dioxide (SO₂), the term flue-gas desulfurization (FGD) may also be used.
- Air pollutants are removed by inertial or diffusional impaction, reaction with a sorbent or reagent slurry, or absorption into liquid solvent.

PM Control Device—Impingement-Plate / Tray Tower Scrubber

> Achievable Emission Limits/Reductions:

- ❖ Collection efficiencies range from 50-99%, depending upon the application
- ❖ Relies almost exclusively on inertial impaction for PM collection; collection efficiency decreases as particle size decreases

> Typical Industrial Applications:

- ❖ Used in the food and agriculture industry, and at gray iron foundries
- ❖ FGD used to control SO₂ emissions from coal and oil combustion from electric utilities and industrial sources
- ❖ Impingement scrubbers used to bring exhaust gases into contact with a sorbent designed to remove the SO₂

PM Control Device—Impingement-Plate / Tray Tower Scrubber

> Emission Stream Characteristics:

- ❖ **Air Flow:** Typical gas flow rates are 0.47 to 35 standard cubic meters per second (1,000 to 75,000 scfm)
- ❖ **Inlet gas temperature:** Limited to 4 °C to 370 °C (40 °F to 700 °F) for PM control
- ❖ **Pollutant Loading:** Easy to clean and maintain and are not subject to fouling as packed-bed wet scrubbers are; therefore, more suited to PM control and there are no practical limits to inlet PM concentrations
- ❖ **Other Considerations:** None

> Emission Stream Pretreatment Requirements:

- ❖ Pre-cooling may be necessary to reduce the inlet air temperature to acceptable levels to avoid solvent evaporation or reduced absorption rates

• Theory of Operation:

- An impingement-plate scrubber is a vertical chamber with plates mounted horizontally inside a hollow shell. Impingement-plate scrubbers operate as countercurrent PM collection devices. The scrubbing liquid flows down the tower while the gas stream flows upward. Contact between the liquid and the particle-laden gas occurs on the plates. The plates are equipped with openings that allow the gas to pass through. Some plates are perforated or slotted, while more complex plates have valve-like openings.
- The simplest impingement-plate scrubber is the sieve plate, which has round perforations. In this type of scrubber, the scrubbing liquid flows over the plates and the gas flows up through the holes. The gas velocity prevents the liquid from flowing down through the perforations. Gas-liquid-particle contact is achieved within the froth generated by the gas passing through the liquid layer. Complex plates, such as bubble cap or baffle plates, introduce an additional means of collecting PM. The bubble caps and baffles placed above the plate perforations force the gas to turn before escaping the layer of liquid. While the gas turns to avoid the obstacles, most PM cannot and is collected by impaction on the caps or baffles. Bubble caps and the like also prevent liquid from flowing down the perforations if the gas flow is reduced.

• Theory of Operation:

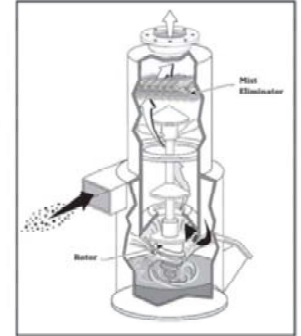
- In all types of impingement-plate scrubbers, the scrubbing liquid flows across each plate and down the inside of the tower onto the plate below. After the bottom plate, the liquid and collected PM flow out of the bottom of the tower. Impingement-plate scrubbers are usually designed to provide operator access to each tray, making them relatively easy to clean and maintain. Consequently, impingement-plate scrubbers are more suitable for PM collection than packed-bed scrubbers. Particles greater than 1 micrometer in aerodynamic diameter can be collected effectively by impingement-plate scrubbers, but many particles <1 micrometer in aerodynamic diameter will penetrate these devices.

PM Control Device—Impingement-Plate / Tray Tower Scrubber

- > Advantages:
 - ❖ Can handle flammable and explosive dusts with little risk
 - ❖ Provides gas absorption and dust collection in a single unit
 - ❖ Can handle mists
 - ❖ Collection efficiency can be varied
 - ❖ Provides cooling of hot gases
 - ❖ Corrosive gases and dusts can be neutralized
- > Disadvantages:
 - ❖ Effluent liquid can create water pollution control problems
 - ❖ Waste product is collected wet
 - ❖ Collection of PM might be contaminated, and may not be recyclable
 - ❖ Disposal of waste sludge may be expensive

PM Control Device—Mechanically Aided Scrubber

- > Power-driven rotor produces the fine spray and the contacting of gas and liquid
- > Rotor acts as a turbulence producer
- > Entrainment separator must be used to prevent carry-over of spray
- > Typical Monitoring Parameter:
 - ❖ Minimum Pressure Drop
 - ❖ Minimum Liquid Flow Rate



- Source: Air Pollution Control Technology Fact Sheet: Mechanically Aided Scrubber (<http://www.epa.gov/ttn/catc/dir1/fmechcal.pdf>).
- **Name of Technology: Mechanically Aided Scrubber**
- This type of technology is a part of the group of air pollution controls collectively referred to as “wet scrubbers”.
- **Theory of Operation:**
- Mechanical scrubbers comprise those devices in which a power-driven rotor produces the fine spray and the contacting of gas and liquid.
- As in other types of scrubbers, it is the droplets that are the principal collecting bodies for the dust particles and the rotor acts as a turbulence producer.
- An entrainment separator must be used to prevent carry-over of spray.
- The simplest commercial devices of this type are essentially fans upon which water is sprayed.

PM Control Device— Mechanically Aided Scrubber

> Achievable Emission Limits/Reductions:

- ❖ Collection efficiencies range from 80 - 99%, depending upon the application
- ❖ Relies on inertial interception for PM collection, and is capable of high collection efficiencies, but only with commensurate high energy consumption

> Typical Industrial Applications:

- ❖ Used in industrial applications including food processing (cereal, flour, rice, salt, sugar, etc.), paper, pharmaceuticals, chemicals, plastics, tobacco, fiberglass, ceramics, and fertilizer.
- ❖ Processes controlled include dryers, cookers, crushing and grinding operations, spraying (pill coating, ceramic glazing), etc.

- Application of mechanically-aided scrubbers is generally limited due to high maintenance requirements.

PM Control Device— Mechanically Aided Scrubber

> Emission Stream Characteristics:

- ❖ **Air Flow:** Typical gas flow rates are 0.47 to 24 standard cubic meters per second (1,000 to 50,000 scfm)
- ❖ **Inlet gas temperature:** In general, can operate at temperatures up to 150 °C (300 °F)
- ❖ **Pollutant Loading:** Can accept waste flows with PM loadings up to 4.5 grams per standard cubic meter (2 gr/scf)
- ❖ **Other Considerations:** None

> Emission Stream Pretreatment Requirements:

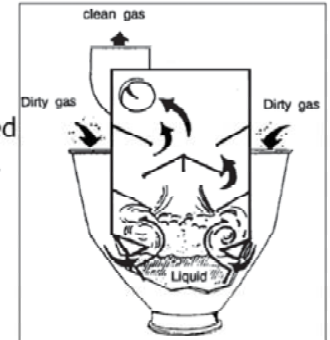
- ❖ Mechanically-aided scrubbers are usually preceded by a cyclone or other pre-cleaner for removal of coarse dust and larger debris.

PM Control Device— Mechanically Aided Scrubber

- > Advantages:
 - ❖ Can handle flammable and explosive dusts with little risk
 - ❖ Can handle mists
 - ❖ Collection efficiency can be varied
 - ❖ Provides cooling of hot gases
 - ❖ Corrosive gases and dusts can be neutralized
- > Disadvantages:
 - ❖ Effluent liquid can create water pollution control problems
 - ❖ Waste product is collected wet
 - ❖ Collection of PM might be contaminated, and may not be recyclable
 - ❖ Disposal of waste sludge may be expensive
 - ❖ Particles may abrade rotors

PM Control Device— Orifice Scrubber

- > Category of gas-atomized spray scrubbers in which a tube or a duct of some other shape forms the gas-liquid contacting zone
- > Particle-laden gas stream is forced to pass over the surface of a pool of scrubbing liquid at high velocity, entraining it as droplets as it enters an orifice
- > Typical Monitoring Parameter:
 - ❖ Minimum Pressure Drop
 - ❖ Minimum Liquid Flow Rate



- Source: Air Pollution Control Technology Fact Sheet: Orifice Scrubbers (<http://www.epa.gov/ttnchie1/mkb/documents/orifice.pdf>).
- **Name of Technology: Orifice Scrubber**
- This type of technology is a part of the group of air pollution controls collectively referred to as “wet scrubbers.” Orifice scrubbers are also known as self-induced spray scrubbers, gas-induced spray scrubbers, and entrainment scrubbers.

PM Control Device— Orifice Scrubber

- > Achievable Emission Limits/Reductions:
 - ❖ Collection efficiencies range from 80 - 99%, depending upon the application and scrubber design
 - ❖ Relies on inertial and diffusional interception for PM collection
 - ❖ Some are designed with adjustable orifices to control the velocity of the gas stream
- > Typical Industrial Applications:
 - ❖ Used in industrial applications including food processing and packaging (cereal, flour, rice, salt, sugar, etc.); pharmaceutical processing and packaging; and the manufacture of chemicals, rubber and plastics, ceramics, and fertilizer
 - ❖ Can be built as high-energy units, but most devices are designed for low-energy service

PM Control Device— Orifice Scrubber

- > Emission Stream Characteristics:
 - ❖ **Air Flow:** Typical gas flow rates are 0.47 to 24 standard cubic meters per second (1,000 to 50,000 scfm).
 - ❖ **Inlet gas temperature:** Can treat waste gases up to approximately 150 °C (300 °F)
 - ❖ **Pollutant Loading:** Accept waste flows with PM loadings up to 23 grams per standard cubic meter (10 gr/scf)
 - ❖ **Other Considerations:** None
- > Emission Stream Pretreatment Requirements:
 - ❖ Orifice scrubbers generally do not require pre-cleaning, unless the waste gas contains large pieces of debris.
 - ❖ Pre-cooling may be necessary for high temperature waste gas flows which increase the evaporation of the scrubbing liquid.

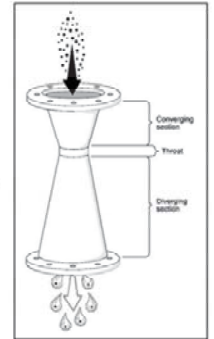
- **Theory of Operation:**
- Orifice scrubbers form a category of gas-atomized spray scrubbers in which a tube or a duct of some other shape forms the gas-liquid contacting zone. The particle-laden gas stream is forced to pass over the surface of a pool of scrubbing liquid at high velocity, entraining it as droplets as it enters an orifice. The gas stream flowing through the orifice atomizes the entrained liquid droplets in essentially the same manner as a venturi scrubber. As the gas velocity and turbulence increases with the passing of the gas through the narrow orifice, the interaction between the PM and atomized liquid droplets also increases. Particulate matter and droplets are then removed from the gas stream by impingement on a series of baffles that the gas stream encounters after exiting the orifice. The collected liquid and PM drain from the baffles back into the liquid pool below the orifice (Perry, 1984; EPA, 1998).
- The scrubbing liquid is fed into the pool at the bottom of the scrubber and later recirculated from the entrainment separator baffles by gravity instead of being circulated by a pump as in venturi scrubbers. Many devices using contactor ducts of various shapes are offered commercially. The principal advantage of this scrubber is the elimination of a pump for recirculation of the scrubbing liquid (Perry, 1984; EPA, 1998).

PM Control Device— Orifice Scrubber

- > **Advantages:**
 - ❖ Can handle flammable and explosive dusts with little risk
 - ❖ Can handle mists
 - ❖ Relatively low water recirculation rate
 - ❖ Provides cooling of hot gases
 - ❖ Corrosive gases and dusts can be neutralized
- > **Disadvantages:**
 - ❖ Effluent liquid can create water pollution control problems
 - ❖ Waste product is collected wet
 - ❖ Collection of PM might be contaminated, and may not be recyclable
 - ❖ Disposal of waste sludge may be expensive

PM Control Device— Venturi Scrubber

- > Accelerates the waste gas stream to atomize the scrubbing liquid and to improve gas-liquid contact
- > “Throat” section is built into the duct that forces the gas stream to accelerate as the duct narrows and then expands
- > As the gas enters venturi throat, both gas velocity and turbulence increase
- > Scrubbing liquid stream is introduced and atomized into small droplets by the turbulence in the throat
- > **Typical Monitoring Parameter:**
 - ❖ Minimum Pressure Drop
 - ❖ Minimum Liquid Flow Rate



- Air Pollution Control Technology Fact Sheet: Venturi Scrubbers (<http://www.epa.gov/ttn/catc/dir1/fventuri.pdf>).
- **Name of Technology: Elutriators**
- This type of technology is a part of the group of air pollution controls collectively referred to as “wet scrubbers.” Venturi scrubbers are also known as venturi jet scrubbers, gas-atomizing spray scrubbers, and ejector-venturi scrubbers.

PM Control Device— Venturi Scrubber

- > Achievable Emission Limits/Reductions:
 - ❖ PM collection efficiencies range from 70 to >99 %, depending upon the application
 - ❖ Collection efficiencies are generally higher for PM with aerodynamic diameters of approximately 0.5 to 5 μm
- > Typical Industrial Applications:
 - ❖ Applied to control PM emissions from utility, industrial, commercial, and institutional boilers fired with coal, oil, wood, and liquid waste
 - ❖ Also applied to control emission sources in the chemical, mineral products, wood, pulp and paper, rock products, and asphalt manufacturing industries; lead, aluminum, iron and steel, and gray iron production industries; and to municipal solid waste incinerators

PM Control Device— Venturi Scrubber

- > Emission Stream Characteristics:
 - ❖ **Air Flow:** Typical gas flow rates for a single unit are 0.2 to 478 standard cubic meters per second (500 to 100,000 scfm)
 - ❖ **Temperature:** Usually in the range of 4 to 400 °C (40 to 750 °F)
 - ❖ **Pollutant Loading:** 1 to 115 grams per standard cubic meter (0.1 to 50 gr/scf)
 - ❖ **Other Considerations:** In situations where waste gas contains both particulates and gases to be controlled, venturi scrubbers are sometimes used as a pretreatment device, removing PM to prevent clogging of a downstream device
- > Emission Stream Pretreatment Requirements:
 - ❖ Generally, no pretreatment is required, though in some cases the waste gas is quenched to reduce the temperature for scrubbers made of materials affected by high temperatures

• Theory of Operation:

- A venturi scrubber accelerates the waste gas stream to atomize the scrubbing liquid and to improve gas-liquid contact. In a venturi scrubber, a “throat” section is built into the duct that forces the gas stream to accelerate as the duct narrows and then expands. As the gas enters the venturi throat, both gas velocity and turbulence increase. Depending upon the scrubber design, the scrubbing liquid is sprayed into the gas stream before the gas encounters the venturi throat, or in the throat, or upwards against the gas flow in the throat. The scrubbing liquid is then atomized into small droplets by the turbulence in the throat and droplet-particle interaction is increased. Some designs use supplemental hydraulically or pneumatically atomized sprays to augment droplet creation. The disadvantage of these designs is that clean liquid feed is required to avoid clogging (EPA, 1998; AWMA, 1992; Corbitt, 1990).
- After the throat section, the mixture decelerates, and further impacts occur causing the droplets to agglomerate. Once the particles have been captured by the liquid, the wetted PM and excess liquid droplets are separated from the gas stream by an entrainment section which usually consists of a cyclonic separator and/or a mist eliminator (EPA, 1998; Corbitt, 1990).

PM Control Device— Venturi Scrubber

> Advantages:

- ❖ Can handle flammable and explosive dusts with little risk
- ❖ Can handle mists
- ❖ Simple design that is relatively low maintenance
- ❖ Provides cooling for hot gases
- ❖ Corrosive gases and dusts can be neutralized

> Disadvantages:

- ❖ Effluent liquid can create water pollution problems
- ❖ Waste product collected wet
- ❖ High potential for corrosion problems
- ❖ Off gas may require reheating to avoid visible plume
- ❖ Collected PM may be contaminated, and may not be recyclable

- Current designs for venturi scrubbers generally use the vertical downflow of gas through the venturi throat and incorporate three features: (1) a “wet-approach” or “flooded-wall” entry section to avoid a dust buildup at a wet-dry junction; (2) an adjustable throat for the venturi throat to provide for adjustment of the gas velocity and the pressure drop; and (3) a “flooded” elbow located below the venturi and ahead of the entrainment separator, to reduce wear by abrasive particles. The venturi throat is sometimes fitted with a refractory lining to resist abrasion by dust particles (Perry, 1984).

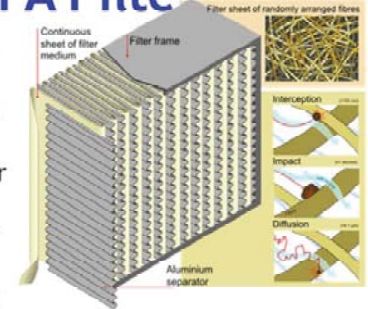
PM Control Device— HEPA Filter or ULPA Filter

- > High Efficiency Particle Air (HEPA) and Ultra Low Penetration Air (ULPA) Filters are used where high collection efficiency of submicron PM is required, where toxic and/or hazardous PM cannot be cleaned from the filter, or where the PM is difficult to clean from the filter.

- > HEPA and ULPA filters are typically utilized for applications involving chemical, biological, and radioactive PM.

- > Typical Monitoring Parameter:

- ❖ Minimum Pressure Drop



- Source: Air Pollution Control Technology Fact Sheet: High Efficiency Particle Air (HEPA) Filter & Ultra Low Penetration Air (ULPA) Filter. (<http://www.epa.gov/ttn/catc/dir1/ff-hepa.pdf>).

- **Name of Technology:** Paper/Nonwoven Filter

- Includes:

- High Efficiency Particle Air (HEPA) Filter
- Ultra Low Penetration Air (ULPA) Filter (also referred to as Extended Media)

HEPA filters never reach removal efficiencies greater than 99%.

A. True

✓ B. False



PM Control Device— HEPA Filter or ULPA Filter

> Achievable Emission Limits/Reductions:

- ❖ HEPA: 99.97% efficiency for the removal of 0.3 μm diameter or larger PM
- ❖ ULPA: 99.9995% efficiency for the removal of 0.12 μm diameter or larger PM

> Typical Industrial Applications:

- ❖ Common industrial applications of HEPA and ULPA filters are hospital, low-level nuclear, and mixed waste incinerators and nuclear air ventilation and safety systems
- ❖ Used in a number of commercial applications and manufacturing processes such as clean rooms, laboratories, food processing, and the manufacture of pharmaceuticals and microelectronics

PM Control Device— HEPA Filter or ULPA Filter

- > Emission Stream Characteristics:
 - ❖ **Air Flow:** Limited to low capacity air flow applications that can handle from less than 0.10 up to 1.0 standard cubic meters per second (sm³/sec)
 - ❖ **Temperature:** Limited by the type of filter media and sealant used in the filter packs; standard cartridges up to 93°C (200°F), commercial HEPA filters up to up to 200°C (400°F)
 - ❖ **Pollutant Loading:** 1 to 30 grams per cubic meter (0.5 to 13 gr/ft³) (Best used in applications with low concentrations)
 - ❖ **Other Considerations:** Humidity up to 95% is acceptable with the proper filter media, coatings, and filter construction; filters are available which can accommodate corrosive gas streams with concentrations up to several percent.
- > Emission Stream Pretreatment Requirements:
 - ❖ HEPA and ULPA filters require pre-filtering (mechanical collectors or baghouses, filters) to remove large PM or for dust concentrations greater 0.03 grams per centimeter squared (g/cm²).

- **Theory of Operation:**

- HEPA and ULPA filters are best applied in situations where high collection efficiency of submicron PM is required, where toxic and/or hazardous PM cannot be cleaned from the filter, or where the PM is difficult to clean from the filter. HEPA and ULPA filters are typically utilized for applications involving chemical, biological, and radioactive PM. HEPA and ULPA filters are installed as the final component in a PM collection system, downstream from other PM collection devices such as electrostatic precipitators or baghouses. (Heumann, 1997).
- Common industrial applications of HEPA and ULPA filters are hospital, low-level nuclear, and mixed waste incinerators and nuclear air ventilation and safety systems. In addition, the filters are used in a number of commercial applications and manufacturing processes such as clean rooms, laboratories, food processing, and the manufacture of pharmaceuticals and microelectronics (Osborn, 1989). The filters can be utilized in any application where dust is generated and can be collected and ducted to a central location.

PM Control Device— HEPA Filter or ULPA Filter

- > Advantages:
 - ❖ Specifically designed for the collection of submicron PM at high collection efficiencies
 - ❖ Filter outlet air is very clean and may be recirculated within the plant, in many cases
 - ❖ Not sensitive to minor fluctuations in gas stream conditions
- > Disadvantages:
 - ❖ The high efficiencies of HEPA and ULPA filters require that the integrity of the filter seals be maintained
 - ❖ The filter media is subject to physical damage from mechanical stress
 - ❖ Temperatures in excess of 95 °C (200 °F) or corrosive pollutant streams require the use of special materials in the filter, which are more expensive

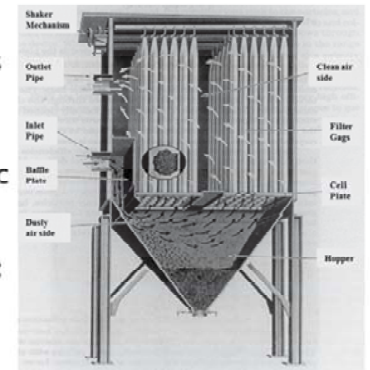
Fabric selection is irrelevant for an efficient operation of a baghouse.

- A. True
✓ B. False



PM Control Device—Baghouse

- > Simple device in which a bag, cartridge, or sheet is used to filter out particulate matter from flue gas
- > Operating temperature affects choice of fabric; some fabrics are useful only at lower temperatures
- > Dust cake buildup on the fabric can increase collection efficiency
- > Typical Monitoring Parameters:
 - ✦ Pressure Drop
 - ✦ Bag Leak Detection Signal



- Source: Air Pollution Control Technology Fact Sheet: Fabric Filter (<http://www.epa.gov/ttnchie1/mkb/documents/ff-shaker.pdf>, <http://www.epa.gov/ttn/catc/dir1/ff-pulse.pdf>, <http://www.epa.gov/ttn/catc/dir1/ff-revar.pdf>).
- **Name of Technology: Baghouses**
- This type of technology is known as capture/disposal. A fabric filter unit consists of one or more isolated compartments containing rows of fabric bags in the form of round, flat, or shaped tubes, or pleated cartridges. Particle laden gas passes up (usually) along the surface of the bags then radially through the fabric. Particles are retained on the upstream face of the bags, and the cleaned gas stream is vented to the atmosphere. The filter is operated cyclically, alternating between relatively long periods of filtering and short periods of cleaning. During cleaning, dust that has accumulated on the bags is removed from the fabric surface and deposited in a hopper for subsequent disposal.

PM Control Device—Baghouse

> Achievable Emission Limits/Reductions:

- ❖ New equipment design efficiencies between 99 and 99.9%
- ❖ Older equipment have operating efficiencies of 95-99.9%
- ❖ Efficiency dependent on filtration velocity, particle and fabric characteristics, filter cake loading
 - Efficiency increases with higher filtration velocity, larger particles, build-up of filter cake

> Typical Industrial Applications:

- ❖ Used in most processes where dust is generated and can be collected and ducted to a central location
- ❖ Boilers, metal processing, mineral products, grain milling, etc.

PM Control Device—Baghouse

- > Operating conditions are important determinants of the choice of fabric
- > Practical application of fabric filters requires the use of a large fabric area in order to avoid an unacceptable pressure drop across the fabric
- > Size for a particular unit is determined by:
 - ❖ choice of air-to-cloth ratio (depends on the particulate loading and characteristics, and the cleaning method used)
 - ❖ ratio of volumetric air flow to cloth area

• Theory of Operation:

- In a fabric filter, flue gas is passed through a tightly woven or felted fabric, causing PM in the flue gas to be collected on the fabric by sieving and other mechanisms. Fabric filters may be in the form of sheets, cartridges, or bags, with a number of the individual fabric filter units housed together in a group. Bags are most common type of fabric filter. The dust cake that forms on the filter from the collected PM can significantly increase collection efficiency. Fabric filters are frequently referred to as baghouses because the fabric is usually configured in cylindrical bags. Bags may be 6 to 9 m (20 to 30 ft) long and 13 to 31 centimeters (cm) (5 to 12 inches) in diameter. Groups of bags are placed in isolable compartments to allow cleaning of the bags or replacement of some of the bags without shutting down the entire fabric filter. (STAPPA/ALAPCO, 1996).
- Some fabrics (e.g., polyolefins, nylons, acrylics, polyesters) are useful only at relatively low temperatures of 95 to 150°C (200 to 300°F). For high-temperature flue gas streams, more thermally stable fabrics such as fiberglass, Teflon, or Nomex must be used (STAPPA/ALAPCO, 1996).
- A high particulate loading will require the use of a larger baghouse in order to avoid forming too heavy a dust cake, which would result in an excessive pressure drop. As an example, a baghouse for a 250 megawatt (MW) utility boiler may have 5,000 separate bags with a total fabric area approaching 46,500 m² (500,000 square feet). (ICAC, 1999).

PM Control Device—Baghouse

> Performance determinants include:

- ❖ *fabric chosen*: Fabrics can be chosen which will intercept a greater fraction of particulate, and some fabrics are coated with a membrane with very fine openings for enhanced removal of submicron particulate. Such fabrics tend to be more expensive.
- ❖ *cleaning frequency and methods*: These are important variables in determining removal efficiency.
- ❖ *particulate characteristics*

• Theory of Operation:

- Because the dust cake can provide a significant fraction of the fine particulate removal capability of a fabric, cleaning which is too frequent or too intense will lower the removal efficiency. On the other hand, if removal is too infrequent or too ineffective, then the baghouse pressure drop will become too high. (ICAC, 1999).

PM Control Device—Baghouse

> Emission Stream Characteristics:

- ❖ **Air Flow**: Standard baghouses handle from less than 0.1 to more than 50 m³/sec; custom baghouses from 50 to over 500 m³/sec
- ❖ **Inlet gas temperature**: Typically, gas temperatures up to about 260°C (500°F), with surges to about 290°C (550°F)
- ❖ **Pollutant Loading**: Typical: 1 to 23 grams per cubic meter (0.5 to 10 gr/scf); Extreme: 0.1 to more than 230 g/m³
- ❖ **Other Considerations**: Moisture and corrosives content are major stream characteristics requiring design considerations. Standard filters can be used in pressure or vacuum service, within limits.

• Emission Stream Characteristics:

- **Air Flow**: Baghouses are separated into two groups, standard and custom, which are further separated into low, medium, and high capacity. Standard baghouses are factory-built, off the shelf units. They may handle from less than 0.10 to more than 50 standard cubic meters per second (sm³/sec) (hundreds to more than 100,000 standard cubic feet per minute (scfm)). Custom baghouses are designed for specific applications and are built to the specifications prescribed by the customer. These units are generally much larger than standard units, i.e., from 50 to over 500 sm³/sec (100,000 to over 1,000,000 scfm). (EPA, 1998b).
- **Temperature**: Typically, gas temperatures up to about 260°C (500°F), with surges to about 290°C (550°F), can be accommodated with the appropriate fabric material. Spray coolers or dilution air can be used to lower the temperature of the pollutant stream. This prevents the temperature limits of the fabric from being exceeded. Lowering the temperature, however, increases the humidity of the pollutant stream. Therefore, the minimum temperature of the pollutant stream must remain above the dew point of any condensable in the stream. The baghouse and associated ductwork should be insulated and possibly heated if condensation may occur. (EPA, 1998b).
- **Pollutant Loading**: Typical inlet concentrations to baghouses are 1 to 23 grams per cubic meter (g/m³) (0.5 to 10 grains per cubic foot (gr/ft³)), but in extreme cases, inlet conditions may vary between 0.1 to more than 230 g/m³ (0.05 to more than 100 gr/ft³). (EPA, 1998b).

PM Control Device—Baghouse

> Three different cleaning mechanisms:

❖ 1) Mechanical Shaker-Cleaned (with or without Sonic Horn)

- ♦ Tops of filters are attached to a shaker bar, which oscillates horizontally to clean the bags
- ♦ Operated by motors or manually

- **Theory of Operation:** Mechanical Shaker Cleaned
- Dusty gas enters an inlet pipe to the shaker cleaned fabric filter and very large particles are removed from the stream when they strike the baffle plate in the inlet duct and fall into the hopper. The particulate-laden gas is drawn from beneath a cell plate in the floor and into the filter bags. The gas proceeds from the inside of the bags to the outside and through the outlet pipe. The particles are collected on the inside surface of the bags and a filter cake accumulates.
- In mechanical shaking units, the tops of bags are attached to a shaker bar, which is moved briskly (usually in a horizontal direction) to clean the bags. The shaker bars are operated by mechanical motors or by hand, in applications where cleaning is not required frequently.

PM Control Device—Baghouse

> Three different cleaning mechanisms:

❖ 2) Pulse-Jet Cleaned

- ♦ Short burst of high pressure air injected at the top of the bag
- ♦ Creates a shock wave which flexes the fabric and dislodges dust

- **Theory of Operation:** Pulse Jet Cleaned
- During pulse-jet cleaning, a short burst, 0.03 to 0.1 seconds in duration, of high pressure [415 to 830 kiloPascals (kPa) (60 to 120 pounds per square inch gage (psig))] air is injected into the bags (EPA, 1998a; AWMA, 1992). The pulse is blown through a venturi nozzle at the top of the bags and establishes a shock wave that continues onto the bottom of the bag. The wave flexes the fabric, pushing it away from the cage, and then snaps it back dislodging the dust cake. The cleaning cycle is regulated by a remote timer connected to a solenoid valve. The burst of air is controlled by the solenoid valve and is released into blow pipes that have nozzles located above the bags. The bags are usually cleaned row by row (EPA, 1998a).
- Because the cleaning pulse is very brief, the flow of dusty gas does not have to be stopped during cleaning. The other bags continue to filter, taking on extra duty because of the bags being cleaned. In general, there is no change in fabric filter pressure drop or performance as a result of pulse-jet cleaning. This enables the pulse-jet fabric filters to operate on a continuous basis with solenoid valves as the only significant moving parts. Pulse-jet cleaning is also more intense and occurs with greater frequency than the other fabric filter cleaning methods. This intense cleaning dislodges nearly all of the dust cake each time the bag is pulsed. As a result, pulse-jet filters do not rely on a dust cake to provide filtration.

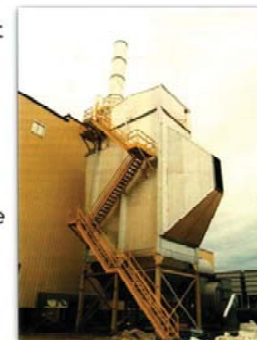
PM Control Device—Baghouse

- > Three different cleaning mechanisms:
 - ❖ 3) Reverse-Air Cleaned (with or without Sonic Horn)
 - ♦ Air forced through bags at opposite direction of usual flow
 - ♦ Gentler, possibly less effective method
- > Sonic Horn produces low-frequency vibration, increasing cleaning efficiency

- **Theory of Operation:** Reverse-Air Cleaned
- Typically, the bags are open on the bottom, closed on top and the gas flows from the inside to the outside of the bags with dust being captured on the inside. However, some reverse air designs collect dust on the outside of the bags. In either design, reverse air cleaning is performed by forcing clean air through the filters in the opposite direction of the dusty gas flow. The change in direction of the gas flow causes the bag to flex and crack the filter cake. In internal cake collection, the bags are allowed to collapse to some extent during reverse air cleaning. The bags are usually prevented from collapsing entirely by some kind of support, such as rings that are sewn into the bags. The support enables the dust cake to fall off the bags and into the hopper. Cake release is also aided by the reverse flow of the gas.
- Sonic horns utilize compressed air to vibrate a metal diaphragm, producing a low frequency sound wave from the horn bell. The number of horns required is determined by fabric area and the number of baghouse compartments. Typically, 1 to 4 horns per compartment operating at 150 to 200 hertz are required. Compressed air to power the horns is supplied at 275 to 620 kiloPascals (kPa) (40 to 90 pounds per square inch gage (psig)).
- Sonic horns activate for approximately 10 to 30 seconds during each cleaning cycle.

PM Control Device—Electrostatic Precipitator (ESP)

- > PM control device that uses electrical forces to move particles entrained within an exhaust stream onto collection surfaces
- > Entrained particles are given an electrical charge when they pass through a corona, a region where gaseous ions flow
- > Electrodes in the center of the flow lane are maintained at high voltage and generate the electrical field that forces the particles to the collector walls
- > Typical Monitoring Parameters:
 - ❖ Minimum Primary or Secondary Voltage
 - ❖ Minimum Primary or Secondary Current
 - ❖ Operating range for Spark Rate



PM Control Device— Electrostatic Precipitator (ESP)

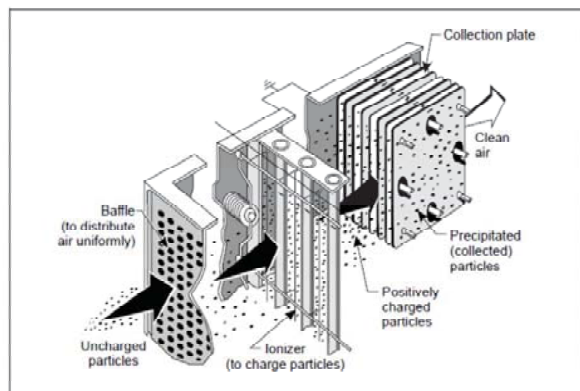


Figure 1-12. Representation of gas flow in a two-stage precipitator

- Example - Two Stage ESP:
- The two-stage precipitator differs from the single-stage precipitator in both design and amount of voltage applied. The two-stage ESP has separate particle charging and collection stages (Figure 1-12). The ionizing stage consists of a series of small, positively charged wires equally spaced 2.5 to 5.1 cm (1 to 2 in.) from parallel grounded tubes or rods. A corona discharge between each wire and a corresponding tube charges the particles suspended in the air flow as they pass through the ionizer. The direct-current potential applied to the wires is approximately 12 to 13 kV.
- Source:
[http://yosemite.epa.gov/oaqps/eogtrain.nsf/b81bacb527b016d785256e4a004c0393/ca9ae17f9567495885256b66004e7985/\\$FILE/12bles1.pdf](http://yosemite.epa.gov/oaqps/eogtrain.nsf/b81bacb527b016d785256e4a004c0393/ca9ae17f9567495885256b66004e7985/$FILE/12bles1.pdf).

PM Control Device— Electrostatic Precipitator (ESP)

> Types of Electrostatic Precipitators (ESPs):

❖ Dry ESP

- Collector walls are knocked, or "rapped", by various mechanical means to dislodge the PM, which slides into a hopper where they are collected.

❖ Wet ESP

- Collectors are either intermittently or continuously washed by a spray of liquid, usually water.
- Collection hoppers used by dry ESPs are replaced with a drainage system; the wet effluent is collected and often treated on-site.

> ESP Designs:

❖ Wire-Pipe Type (or tubular ESP)

- Exhaust gas flows vertically through conductive tubes, generally with many tubes operating in parallel.
- Tubes may be formed as a circular, square, or hexagonal honeycomb.

❖ Wire-Plate Type

- Exhaust gas flows horizontally and parallel to vertical plates of sheet metal.
- Flow areas between the plates are called ducts.

• Sources:

- Dry Electrostatic Precipitator (ESP)- Wire-Pipe Type (Air Pollution Control Fact Sheet: <http://www.epa.gov/ttn/catc/dir1/fdespwpi.pdf>).
- Dry Electrostatic Precipitator (ESP)- Wire-Plate Type (Air Pollution Control Fact Sheet: <http://www.epa.gov/ttn/catc/dir1/fdespwpl.pdf>).
- Wet Electrostatic Precipitator (ESP)- Wire-Pipe Type (Air Pollution Control Fact Sheet: <http://www.epa.gov/ttn/catc/dir1/fwespwpi.pdf>).
- Wet Electrostatic Precipitator (ESP)- Wire-Plate Type (Air Pollution Control Fact Sheet: <http://www.epa.gov/ttn/catc/dir1/fwespwpl.pdf>).

PM Control Device— Electrostatic Precipitator (ESP)

> Achievable Emission Limits/Reductions:

- ❖ Typical new equipment design efficiencies are 99 - 99.9%.
- ❖ Older existing equipment have a range of actual operating efficiencies of 90 - 99.9%.
- ❖ ESP size determines treatment time; the longer a particle spends in the ESP, the greater its chance of being collected.

> Typical Industrial Applications:

- ❖ Dry pipe-type ESPs are occasionally used by the textile industry, pulp and paper facilities, the metallurgical industry, including coke ovens, etc.
- ❖ Wet wire-pipe ESPs are used much more frequently than dry wire-pipe ESPs, which are used only in cases in which wet cleaning is undesirable, such as high temperature streams or wastewater restrictions.

- Many older ESPs are of the wire-pipe design, consisting of a single tube placed on top of a smokestack.

PM Control Device— Electrostatic Precipitator (ESP)

> Advantages:

- ❖ Act only on the particle being removed and only minimally hinder gas flow
- ❖ Low energy requirements and operating costs
- ❖ Capable of high efficiencies, even for smaller particles
- ❖ Wet ESPs can collect sticky particles and mists, as well as explosive dusts and high resistivity particles

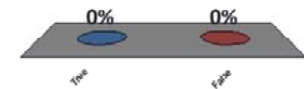
> Disadvantages:

- ❖ High capital and maintenance costs
- ❖ Not suited for use in processes which are highly variable because they are very sensitive to fluctuations in gas stream conditions
- ❖ For wet ESPs, consideration must be given to handling wastewaters and other solid wastes

Acid Gases Control

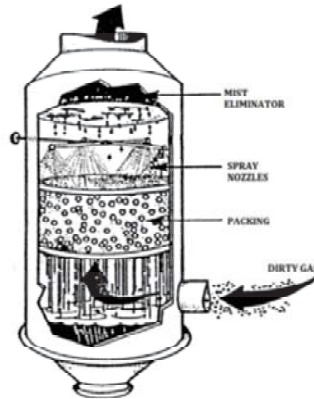
Proper design of a Packed-Bed / Packed-Tower Scrubber ensures that the target pollutant is insoluble in the scrubber liquid.

- A. True
✓ B. False



Acid Gas Control Device— Packed-Bed / Packed-Tower Scrubber

- > Chamber containing layers of variously-shaped packing material that provide a large surface area for liquid-particle contact
- > Scrubbing liquid is evenly introduced above the packing and flows down through the bed
- > Pollutant to be absorbed must be soluble in the fluid
- > Typical Monitoring Parameters:
 - ❖ Minimum Pressure Drop
 - ❖ Minimum Scrubbing Liquid Flow Rate
 - ❖ Minimum pH



Acid Gas Control Device— Packed-Bed / Packed-Tower Scrubber

- > Achievable Emission Limits/Reductions:
 - ❖ Control device vendors estimate that removal efficiencies range from 95 - 99%.
- > Typical Industrial Applications:
 - ❖ Used in the chemical, aluminum, coke and ferroalloy, food and agriculture, and chromium electroplating industries
 - ❖ Limited use as part of flue gas desulfurization (FGD) systems, but the scrubbing solution flow rate must be carefully controlled to avoid flooding

• Source: Air Pollution Control Technology Fact Sheet: Packed-Bed / Packed-Tower Wet Scrubber (<http://www.epa.gov/ttn/catc/dir1/fpack.pdf>).

Acid Gas Control Device— Packed-Bed / Packed-Tower Scrubber

> Emission Stream Characteristics:

- ❖ **Air Flow:** Typical gas flow rates are 0.25 to 35 standard cubic meters per second (500 to 75,000 scfm).
- ❖ **Inlet gas temperature:** Typically the higher the gas temperature, the lower the absorption rate and vice-versa; for gas absorption applications, the temperature range is 4 °C to 38 °C (40 °F and 100 °F).
- ❖ **Pollutant Loading:** Range from 250 to 10,000 ppmv
- ❖ **Other Considerations:** For organic vapor HAP control applications, low outlet concentrations will typically be required, leading to impractically tall absorption towers, long contact times, and high liquid-gas ratios that may not be cost-effective.

> Emission Stream Pretreatment Requirements:

- ❖ Pre-coolers (e.g., an additional spray chamber) may be needed to reduce the inlet air temperature to acceptable levels to avoid solvent evaporation or reduced absorption rates.

• Theory of Operation:

- Removal of air pollutants by inertial or diffusional impaction, reaction with a sorbent or reagent slurry, or absorption into liquid solvent.
- Packed-bed scrubbers consist of a chamber containing layers of variously-shaped packing material, such as Raschig rings, spiral rings, or Berl saddles, that provide a large surface area for liquid-particle contact. The packing is held in place by wire mesh retainers and supported by a plate near the bottom of the scrubber. Scrubbing liquid is evenly introduced above the packing and flows down through the bed. The liquid coats the packing and establishes a thin film. The pollutant to be absorbed must be soluble in the fluid. In vertical designs (packed towers), the gas stream flows up the chamber (countercurrent to the liquid). Some packed beds are designed horizontally for gas flow across the packing (crosscurrent).
- Water is the most common solvent used to remove inorganic contaminants. Pollutant removal may be enhanced by manipulating the chemistry of the absorbing solution so that it reacts with the pollutant. Caustic solution (sodium hydroxide, NaOH) is the most common scrubbing liquid used for acid-gas control (e.g., HCl, SO₂, or both), though sodium carbonate (Na₂CO₃) and calcium hydroxide (slaked lime, Ca[OH]₂) are also used. When the acid gases are absorbed into the scrubbing solution, they react with alkaline compounds to produce neutral salts. The rate of absorption of the acid gases is dependent upon the solubility of the acid gases in the scrubbing liquid.

Acid Gas Control Device— Packed-Bed / Packed-Tower Scrubber

> Advantages:

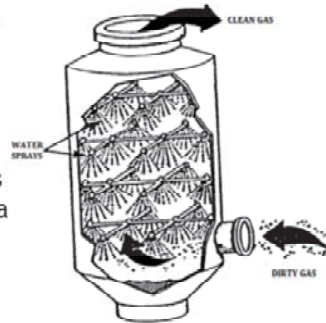
- ❖ Relatively low pressure drop
- ❖ Relatively free from plugging
- ❖ Ability to collect PM as well as gases
- ❖ Capable of achieving high mass-transfer efficiencies
- ❖ Fiberglass-reinforced plastic (FRP) construction permits operation in highly corrosive atmospheres

> Disadvantages:

- ❖ May create water (or liquid) disposal problem
- ❖ Waste product collected wet
- ❖ PM may cause plugging of the bed or plates
- ❖ When FRP construction is used, it is sensitive to temperature
- ❖ Relatively high maintenance costs

Acid Gas Control Device— Spray-Chamber / Spray-Tower Scrubber

- > Empty cylindrical or rectangular chambers in which the gas stream is contacted with liquid droplets generated by spray nozzles
- > Gas flows upward through a bank or successive banks of spray nozzles
- > Similar arrangements are sometimes used in spray chambers which have a horizontal gas flow
- > Typical Monitoring Parameters:
 - ❖ Minimum Pressure Drop
 - ❖ Minimum Scrubbing Liquid Flow Rate
 - ❖ Minimum pH



Acid Gas Control Device— Spray-Chamber / Spray-Tower Scrubber

- > Achievable Emission Limits/Reductions:
 - ❖ Control device vendors estimate that removal efficiencies range from 95 - 99%.
 - ❖ SO₂ removal efficiencies vary from 80 to >99%, depending upon the type of reagent used and the spray tower design.
 - ❖ Most applications have removal efficiency greater than 90%.
- > Typical Industrial Applications:
 - ❖ Popular wet scrubber configuration used to bring waste gases into contact with a sorbent designed to absorb and react with the SO₂
 - ❖ Applied to SO₂ emissions from the primary nonferrous metals processing (c.g., copper, lead, and aluminum), but more popular control device for sulfuric acid or elemental sulfur plants due to the high SO₂ concentrations associated with these processes

• Source: Air Pollution Control Technology Fact Sheet: Spray-Chamber/ Spray-Tower Wet Scrubber (<http://www.epa.gov/ttn/catc/dir1/fsptrytwr.pdf>).

Acid Gas Control Device— Spray-Chamber / Spray-Tower Scrubber

> Emission Stream Characteristics:

- ❖ **Air Flow:** Typical gas flow rates are 0.7 to 47 standard cubic meters per second (1,500 to 100,000 scfm).
- ❖ **Inlet gas temperature:** Typically the higher the gas temperature, the lower the absorption rate and vice-versa; for gas absorption applications, the temperature range is 4 °C to 38 °C (40 °F and 100 °F).
- ❖ **Pollutant Loading:** Typical gaseous pollutant concentrations range from 250 to 10,000 ppmv.
- ❖ **Other Considerations:** For organic vapor HAP control applications, low outlet concentrations will typically be required, leading to impractically tall absorption towers, long contact times, and high liquid-gas ratios that may not be cost-effective.

> Emission Stream Pretreatment Requirements:

- ❖ Pre-coolers (e.g., an additional spray chamber) may be needed to reduce the inlet air temperature to acceptable levels to avoid solvent evaporation or reduced absorption rates.

• Theory of Operation:

- Removal of air pollutants by inertial or diffusional impaction, reaction with a sorbent or reagent slurry, or absorption into liquid solvent.
- Spray scrubbers consist of empty cylindrical or rectangular chambers in which the gas stream is contacted with liquid droplets generated by spray nozzles.
- A common form is a spray tower, in which the gas flows upward through a bank or successive banks of spray nozzles. Similar arrangements are sometimes used in spray chambers with horizontal gas flow. Such devices have very low gas pressure drops, and all but a small part of the contacting power is derived from the liquid stream. The required contacting power is obtained from an appropriate combination of liquid pressure and flow rate.
- Physical absorption depends on properties of the gas stream and liquid solvent, such as density and viscosity, as well as specific characteristics of the pollutant(s) in the gas and the liquid stream (e.g., diffusivity, equilibrium solubility). These properties are temperature dependent, and lower temperatures generally favor absorption of gases by the solvent. Absorption is also enhanced by greater contacting surface, higher liquid-gas ratios, and higher concentrations in the gas stream. Chemical absorption may be limited by the rate of reaction, although the rate-limiting step is typically the physical absorption rate, not the chemical reaction rate.

Acid Gas Control Device— Spray-Chamber / Spray-Tower Scrubber

> Advantages:

- ❖ Can handle flammable and explosive dusts with little risk
- ❖ Relatively low pressure drop
- ❖ Relatively free from plugging
- ❖ Ability to collect PM as well as gases
- ❖ Fiberglass-reinforced plastic (FRP) construction permits operation in highly corrosive atmospheres

> Disadvantages:

- ❖ May create water (or liquid) disposal problem
- ❖ Waste product collected wet
- ❖ Relatively low mass-transfer efficiencies
- ❖ When FRP construction is used, it is sensitive to temperature

- Spray towers do not suffer from restrictions to gas flow by accumulated residues commonly found in packed scrubbers. However, spray towers have the least effective mass transfer capability and thus, are generally limited to use for PM removal and with high-solubility gases.

Acid Gas Controls— Flue Gas Desulfurization (FGD)

- > The FGD/scrubbing process typically uses a calcium or sodium based alkaline reagent
- > Reagent is injected in the flue gas in a spray tower or directly into the duct
- > SO_2 is absorbed, neutralized and/or oxidized by the alkaline reagent into a solid compound
- > Solid is removed from the waste gas stream using downstream equipment
- > Systems can be further categorized as wet, dry, or semi-dry
- > Typical Monitoring Parameters:
 - ❖ Minimum Pressure Drop
 - ❖ Minimum Scrubbing Liquid Flow Rate

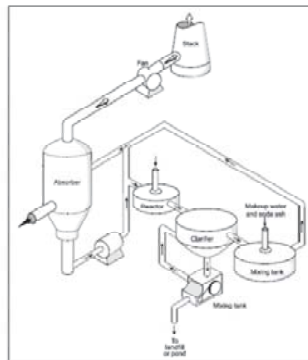


Figure 9.2 Typical process flow for a double-alkali FGD system

Acid Gas Controls— Flue Gas Desulfurization (FGD)

- > Achievable Emission Limits/Reductions:
 - ❖ Capable of reduction efficiencies in the range of 50% - 98%
 - ❖ Highest removal efficiencies are achieved by wet scrubbers (greater than 90%) and lowest by dry scrubbers (> 80%)
 - ❖ Newer dry scrubber designs are capable of higher control efficiencies, on the order of 90%

- **Theory of Operation - Wet Systems**
- In a wet scrubber system, flue gas is ducted to a spray tower where an aqueous slurry of sorbent is injected into the flue gas. To provide good contact between the waste gas and sorbent, the nozzles and injection locations are designed to optimize the size and density of slurry droplets formed by the system. A portion of the water in the slurry is evaporated and the waste gas stream becomes saturated with water vapor. Sulfur dioxide dissolves into the slurry droplets where it reacts with the alkaline particulates. The slurry falls to the bottom of the absorber where it is collected. Treated flue gas passes through a mist eliminator before exiting the absorber which removes any entrained slurry droplets. The absorber effluent is sent to a reaction tank where the SO_2 -alkali reaction is completed forming a neutral salt. In a regenerable system, the spent slurry is recycled back to the absorber. Once through systems dewater the spent slurry for disposal or use as a by-product.
- Typical sorbent material is limestone, or lime. Limestone is very inexpensive but control efficiencies for limestone systems are limited to approximately 90%. Lime is easier to manage on-site and has control efficiencies up to 95% but is significantly more costly (Cooper 2002). Proprietary sorbents with reactivity-enhancing additives provide control efficiencies greater than 95% but are very costly. Electrical utilities store large volumes of limestone or lime on site and prepare the sorbent for injection, but this is generally not cost effective for smaller industrial applications.

- Source: Air Pollution Control Technology Fact Sheet: Flue Gas Desulfurization (FGD) - Wet, Spray Dry, and Dry Scrubbers (<http://www.epa.gov/ttn/catc/dir1/ffdg.pdf>).
- **Theory of Operation:**
- The FGD or SO_2 scrubbing process typically uses a calcium or sodium based alkaline reagent. The reagent is injected in the flue gas in a spray tower or directly into the duct. The SO_2 is absorbed, neutralized and/or oxidized by the alkaline reagent into a solid compound, either calcium or sodium sulfate. The solid is removed from the waste gas stream using downstream equipment.
- Scrubbers are classified as “once-through” or “regenerable”, based on how the solids generated by the process are handled. Once-through systems either dispose of the spent sorbent as a waste or utilize it as a byproduct. Regenerable systems recycle the sorbent back into the system. At the present time, regenerable processes have higher costs than once through processes; however, regenerable processes might be chosen if space or disposal options are limited and markets for byproducts (gypsum) are available. In 1998, approximately 3% of FGD systems installed in the US were regenerable.

Acid Gas Controls— Flue Gas Desulfurization (FGD)

> Typical Industrial Applications:

- ❖ Stationary coal- and oil-fired combustion units such as utility and industrial boilers, as well as other industrial combustion units such as municipal and medical waste incinerators, cement and lime kilns, metal smelters, petroleum refineries, glass furnaces, and H_2SO_4 manufacturing facilities
- ❖ Approximately 85% of the FGD systems installed in the US are wet systems, 12% are spray dry systems (SDA), and 3% are dry injection systems

- Nearly all of Florida's municipal waste combustors utilize lime injection (spray dryer absorption - SDA; dry spray injection - DSI) for acid gases.

Acid Gas Controls— Flue Gas Desulfurization (FGD), SDA

- > Spray Dryer Absorber (SDA) systems make up about 12% of the FGD systems at U.S. power plants
- > Technology also used at many waste incinerators
- > Operation:
 - ❖ Flue gases are introduced into an absorbing tower (dryer) where the gases are contacted with a finely atomized alkaline slurry
 - ❖ Acid gases are absorbed into the liquid droplet where they react with sorbent
 - ❖ The most common material used in a spray dryer absorber is pebble lime or calcium-based sorbent (ex. $\text{Ca}(\text{OH})_2$, CaO)

- Source: Lesson 7 - Dry Scrubbing Systems ([http://yosemite.epa.gov/oaqps/eogtrain.nsf/ae20ef1becae534385256b4100770781/7b32b476a8cc245285256b6c006c8db7/\\$FILE/si412c_lesson7.pdf](http://yosemite.epa.gov/oaqps/eogtrain.nsf/ae20ef1becae534385256b4100770781/7b32b476a8cc245285256b6c006c8db7/$FILE/si412c_lesson7.pdf)).
- **Theory of Operation - Semi-Dry Systems**
- Inject an aqueous sorbent slurry similar to a wet system, however, the slurry has a higher sorbent concentration. As the hot flue gas mixes with the slurry solution, water from the slurry is evaporated. The water that remains on the solid sorbent enhances the reaction with SO_2 . The process forms a dry waste product which is collected with a standard particulate matter (PM) collection device such as a baghouse or ESP. The waste product can be disposed, sold as a byproduct or recycled to the slurry.
- Various calcium and sodium based reagents can be utilized as sorbent. Spray dry scrubbers typically inject lime since it is more reactive than limestone and less expensive than sodium based reagents. The reagent slurry is injected through rotary atomizers or dual-fluid nozzles to create a finer droplet spray than wet scrubber systems.

Acid Gas Controls— Flue Gas Desulfurization (FGD), DSI

- > Dry Sorbent Injection (DSI) systems make up about 3% of the FGD systems at U.S. power plants
- > Operation:
 - ❖ A dry alkaline material (usually hydrated lime or soda ash) is added to the gas stream to react with any acid gases that are present
 - ❖ The sorbent can be injected directly into the flue gas duct ahead of the particulate control device or into an open reaction chamber
 - ❖ The acid gases react with alkaline sorbents to form solid salts which are removed in the particulate control device

- Source: Lesson 7 - Dry Scrubbing Systems ([http://yosemite.epa.gov/oaqps/eogtrain.nsf/ae20ef1becae534385256b4100770781/7b32b476a8cc245285256b6c006c8db7/\\$FILE/si412c_lesson7.pdf](http://yosemite.epa.gov/oaqps/eogtrain.nsf/ae20ef1becae534385256b4100770781/7b32b476a8cc245285256b6c006c8db7/$FILE/si412c_lesson7.pdf)).
- **Theory of Operation - Dry Systems:**
- Pneumatically inject powdered sorbent directly into the furnace, the economizer, or downstream ductwork. The dry waste product is removed using particulate control equipment such as a baghouse or electrostatic precipitator (ESP). The flue gas is generally cooled prior to the entering the PM control device. Water can be injected upstream of the absorber to enhance SO₂ removal.
- Dry sorbent systems typically use calcium and sodium based alkaline reagents. A number of proprietary reagents are also available. A typical injection system uses several injection lances protruding from the furnace or duct walls. Injection of water downstream of the sorbent injection increases SO₂ removal by the sorbent.

Acid Gas Controls— Flue Gas Desulfurization (FGD)

- > Emission Stream Characteristics:
 - ❖ **Combustion Unit Size:** FGD scrubbers have been applied to combustion units from 50 to 15,000 MMBtu/hr; dry and spray scrubbers are generally applied to units less than 3,000 MMBtu/hr.
 - ❖ **Temperature:** For wet scrubbers, temperatures range from 150 °C to 370 °C; for spray dry sorbent injection systems, the temperature ranges from 150 °C to 350 °C.
 - ❖ **Pollutant Loading:** FGD scrubbers are limited to dilute SO₂ waste gas streams of approximately 2000 ppm.
 - ❖ **Other Considerations:** The amount of chlorine in the flue gas affects the amount of water evaporated by the system due to the formation of salts. Chlorine content results in salt deposition on the absorber and downstream equipment.
- > Emission Stream Pretreatment Requirements:
 - ❖ In spray dry and dry injection systems, the flue gas must be cooled to a temperature range 10 °C to 15 °C above the saturation.

- An additional or upgraded induced draft (ID) fan may be required to compensate for flue gas pressure drop across the absorber. Many wet systems reheat the flue gas downstream of the absorber to prevent corrosion caused by condensation inside the ducts and stack and reduce plume visibility.

High SO₂ removal efficiencies can be achieved by Flue Gas Desulfurization.

- ✓ A. True
- B. False



Acid Gas Controls— Flue Gas Desulfurization (FGD)

> Advantages:

- ❖ High SO₂ removal efficiencies, from 50% up to 98%
- ❖ Products of reaction may be reusable
- ❖ Difficulty of retrofit is moderate to low
- ❖ Inexpensive and readily available reagents

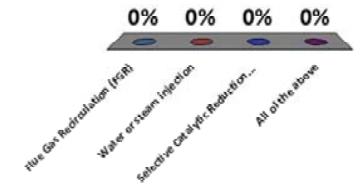
> Disadvantages:

- ❖ High capital and O&M costs
- ❖ Scaling and deposit of wet solids on absorber and downstream equipment
- ❖ Wet systems generate a wet waste product and may result in a visible plume
- ❖ Cannot be used for waste gas SO₂ concentrations greater than 2,000 ppm

Nitrogen Oxides Control

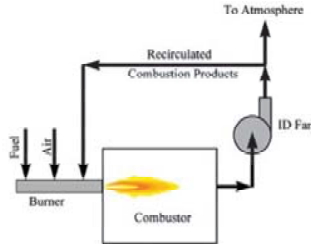
Which of the following technologies is used for NO_x control?

- A. Flue Gas Recirculation (FGR)
- B. Water or steam injection
- C. Selective Catalytic Reduction (SCR)
- ✓ D. All of the above



NO_x Controls— Flue Gas Recirculation (FGR)

- > An FGR involves the forced return of flue gas to the burners and recycles 15-30% of the air/flue mixture into the primary combustion zone of a combustion device.
- > The recirculation of flue gas dilutes the combustion reactants, reduces the peak flame temperature, and reduces O₂ concentrations, therefore inhibiting NO_x formation.
- > Typical Monitoring Parameters:
 - ❖ Operating Range for Oxygen Concentration
 - ❖ Minimum Flue Gas Flow Rate
 - ❖ Minimum Combustion Temperature
 - ❖ Minimum Fan Motor Current



NO_x Control Device—Flue Gas Recirculation (FGR)

- > Achievable Emission Limits/Reductions:
 - ❖ Based on data for oil-fired and gas-fired units, boilers have achieved as much as 55% reduction in NO_x when used in conjunction with low NO_x burners.
 - ❖ FGRs used with standard burners on process heaters are expected to reduce NO_x emission levels by 30%.
- > Typical Industrial Applications:
 - ❖ Oil-fired and gas-fired boilers and process heaters

- Source: Alternative Control Techniques Document— *NO_x Emissions from Process Heaters (Revised)*, Section 5.0(vi).
- <http://www.epa.gov/ttn/catc/dir1/procheat.pdf>

NO_x Control Device—Flue Gas Recirculation (FGR)

> Advantages:

- ❖ Moderate NO_x reduction
- ❖ Potential for low nitrogen fuels
- ❖ Unit operates at low excess air

> Disadvantages:

- ❖ May not apply to all types of fired heaters
- ❖ Low flame temperature and flame instability limits FGR usage in high-temperature applications
- ❖ Moderately high capital cost and operating cost

When using water injection as a control method, the degree of reduction in NO_x formation is proportional to the amount of water injected into the combustion unit.

- ✓ A. True
B. False



NOx Controls— Water or Steam Injection

- > Injects water or steam into the primary combustion zone with the fuel.
- > Water or steam serves to reduce NOx formation by reducing the peak flame temperature.
- > Degree of reduction in NOx formation is proportional to the amount of water injected into the combustion unit.
- > While this type of control will inhibit NOx formation, it could increase the amount of carbon monoxide (CO) and volatile organic compounds (VOCs) emitted due to incomplete combustion.
- > Typical Monitoring Parameters:
 - ❖ Minimum Steam or Water Flow Rate
 - ❖ Maximum Fuel Consumption Limit
 - ❖ Maximum NOx rate or concentration

NOx Controls— Water or Steam Injection

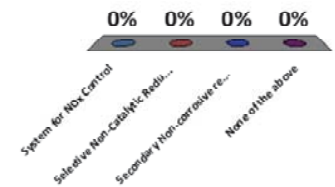
- > Achievable Emission Limits/Reductions:
 - ❖ Injection of steam or water can reduce NOx emissions by at least 20-25%
- > Typical Industrial Applications:
 - ❖ Traditionally this method of minimizing NOx emissions has been associated with combustion turbines however this technology has also been applied to furnaces

NO_x Controls— Water or Steam Injection

- > Advantages:
 - ❖ Moderate capital cost
 - ❖ NO_x reduction similar to FGR
- > Disadvantages:
 - ❖ Efficiency penalty
 - ❖ Fan power higher

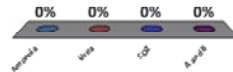
SNCR stands for:

- A. System for NO_x Control and Reduction
- ✓ B. Selective Non-Catalytic Reduction
- C. Secondary Non-corrosive reduction
- D. Synchronoss Control



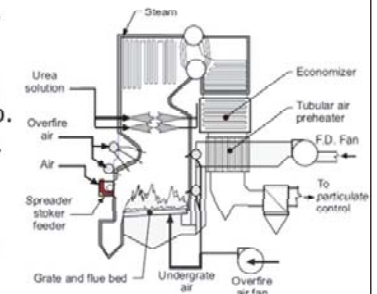
In an SNCR unit, which substance is injected into the post-combustion flue gas to react with NO_x ?

- A. Ammonia
- B. Urea
- C. CO_2
- ✓ D. A or B



NO_x Control Device— Selective Non-Catalytic Reduction (SNCR)

- > In a SNCR unit, either ammonia or urea is injected into the post-combustion flue gas to react with NO_x in a complex set of high temp. homogeneous gas phase reactions.
- > Product of the reactions between ammonia and urea with NO_x is molecular nitrogen, N_2 and water, H_2O .



- > Typical Monitoring Parameters:
 - ✦ Minimum Injection Nozzle Flow Rate or Nozzle Supply Pressure
 - ✦ Operating Range for Oxygen Concentration
 - ✦ Operating Range for Exhaust Gas Temperature

- Source: Air Pollution Control Technology Fact Sheet: Selective Non-Catalytic Reduction (SNCR) (<http://www.epa.gov/ttn/catc/dir1/fsnscr.pdf>).
- **Theory of Operation:**
- SNCR is based on the chemical reduction of the NO_x molecule into molecular nitrogen (N_2) and water vapor (H_2O). A nitrogen based reducing agent (reagent), such as ammonia or urea, is injected into the post combustion flue gas. The reduction reaction with NO_x is favored over other chemical reaction processes at temperatures ranging between 1600°F and 2100°F (870°C to 1150°C), therefore, it is considered a selective chemical process (EPA, 2002).
- Both ammonia and urea are used as reagents. Urea-based systems have advantages over ammonia based systems. Urea is non-toxic, less volatile liquid that can be stored and handled more safely. Urea solution droplets can penetrate farther into the flue gas when injected into the boiler, enhancing the mixing with the flue gas which is difficult in large boilers. However, urea is more expensive than ammonia. The Normalized Stoichiometric Ratio (NSR) defines the ratio of reagent to NO_x required to achieve the targeted NO_x reduction. In practice, more than the theoretical amount of reagent needs to be injected into the boiler flue gas to obtain a specific level of NO_x reduction.

NO_x Control Device— Selective Non-Catalytic Reduction (SNCR)

- > Achievable Emission Limits/Reductions:
 - ❖ SNCR is capable of NO_x reduction efficiencies in the range of 30% - 50%.
 - ❖ For SNCR applied in conjunction with combustion controls, such as low NO_x burners, reductions of 65% - 75% can be achieved.
- > Typical Industrial Applications:
 - ❖ Commercially installed SNCR systems on a wide range of boiler configurations including: dry bottom wall-fired and tangentially-fired units, wet bottom units, stokers, and fluidized bed units
 - ❖ Units fire a variety of fuels such as coal, gas, biomass, and waste

NO_x Control Device— Selective Non-Catalytic Reduction (SNCR)

- > Emission Stream Characteristics:
 - ❖ **Combustion Unit Size:** SCR has been applied to combustion units from 50 to 6,000 MMBtu/hr. Improvements in SNCR injection and control systems have resulted in reductions >60% on utility boilers > 6,000 MMBtu/hr.
 - ❖ **Temperature:** The NO_x reduction reaction occurs at temperatures from 870 °C to 1150 °C (1600 °F to 2100 °F). Enhancers or additives can be added to the reagent to lower the temperature range.
 - ❖ **Pollutant Loading:** Less effective at lower levels of uncontrolled NO_x; Typical uncontrolled levels vary from 200 ppm to 400 ppm
 - ❖ **Other Considerations:** Incomplete reaction of NO_x and the reagent causes ammonia emissions (ammonia slip); Nitrous Oxide (N₂O) is a byproduct formed during SNCR.
- > Emission Stream Pretreatment Requirements:
 - ❖ None

- In the SNCR process, the combustion unit acts as the reactor chamber. The reagent is generally injected within the boiler superheater and reheater radiant and convective regions, where the combustion gas temperature is at the required temperature range. The injection system is designed to promote mixing of the reagent with the flue gas. The number and location of injection points is determined by the temperature profiles and flow patterns within the combustion unit.
- Certain application are more suited for SNCR due to the combustion unit design. Units with furnace exit temperatures of 1550°F to 1950°F (840°C to 1065°C), residence times of greater than one second, and high levels of uncontrolled NO_x are good candidates.
- During low-load operation, the location of the optimum temperature region shifts upstream within the boiler. Additional injection points are required to accommodate operations at low loads. Enhancers can be added to the reagent to lower the temperature range at which the NO_x reduction reaction occurs. The use of enhancers reduces the need for additional injection locations.

NOx Control Device— Selective Non-Catalytic Reduction (SNCR)

> Advantages:

- ❖ Retrofit of SNCR is simple and requires little downtime for large and medium sized units
- ❖ Cost effective for seasonable or variable load applications
- ❖ Waste gas streams with high levels of PM are acceptable

> Disadvantages:

- ❖ Waste gas stream must be within a specified temperature range
- ❖ Not applicable to sources with low NOx concentrations
- ❖ Lower NOx reductions than SCR
- ❖ Results in ammonia in the waste gas stream which may impact plume visibility or resale disposal of the ash

NOx Control Device—Selective Catalytic Reduction (SCR)

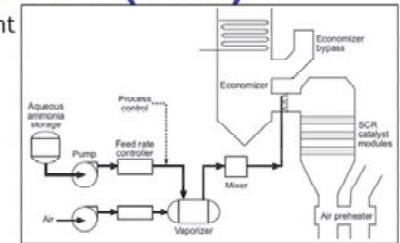
- > Waste gas mixes with the reagent (such as ammonia or urea) and enters a reactor module containing catalyst

- > Hot flue gas and reagent diffuse through the catalyst

- > Reagent reacts selectively with the NO_x within a specific temperature range and in the presence of the catalyst and oxygen

> Typical Monitoring Parameters:

- ❖ Minimum Injection Nozzle Flow Rate or Nozzle Supply Pressure
- ❖ Minimum Inlet Temperature
- ❖ Operating Range for Oxygen concentration
- ❖ Operating Range for Catalyst Bed Pressure Drop



- Source: Air Pollution Control Technology Fact Sheet: Selective Catalytic Reduction (SCR) (<http://www.epa.gov/ttn/catc/dir1/fscr.pdf>).

• Theory of Operation:

- The SCR process chemically reduces the NO_x molecule into molecular nitrogen and water vapor. A nitrogen based reagent such as ammonia or urea is injected into the ductwork, downstream of the combustion unit. The waste gas mixes with the reagent and enters a reactor module containing catalyst. The hot flue gas and reagent diffuse through the catalyst. The reagent reacts selectively with NO_x within a specific temp. range and in the presence of the catalyst and oxygen.
- Temperature, the amount of reducing agent, injection grid design and catalyst activity are the main factors that determine the actual removal efficiency. The use of a catalyst results in two primary advantages of the SCR process over the SNCR: higher NO_x control efficiency and reactions within a lower and broader temperature range. The benefits are accompanied by a significant increase in capital and operating costs. The catalyst is composed of active metals or ceramics with a highly porous structure. Catalysts configurations are generally ceramic honeycomb and pleated metal plate (monolith) designs. The catalyst composition, type, and physical properties affect performance, reliability, catalyst quantity required, and cost. The SCR system supplier and catalyst supplier generally guarantee the catalyst life and performance. Newer catalyst designs increase catalyst activity, surface area per unit volume, and the temperature range for the reduction reaction.

NO_x Control Device—Selective Catalytic Reduction (SCR)

- > Catalyst activity
 - ❖ Measure of the NO_x reduction reaction rate
 - ❖ Function of many variables including:
 - catalyst composition and structure
 - diffusion rates
 - mass transfer rates
 - gas temperature
 - gas composition
- > Catalyst deactivation is caused by:
 - ❖ poisoning of active sites by flue gas constituents
 - ❖ thermal sintering of active sites due to high temperatures within reactor
 - ❖ blinding/plugging/fouling of active sites by ammonia-sulfur salts and particulate matter
 - ❖ erosion due to high gas velocities

- As the catalyst activity decreases, NO_x removal decreases and ammonia slip increases. When the ammonia slip reaches the maximum design or permitted level, new catalyst must be installed. There are several different locations downstream of the combustion unit where SCR systems can be installed. Most coal-fired applications locate the reactor downstream of the economizer and upstream of the air heater and particulate control devices (hot-side). The flue gas in this location is usually within the optimum temperature window for NO_x reduction reactions using metal oxide catalysts. SCR may be applied after PM and sulfur removal equipment (cold-side), however, reheating of the flue gas may be required, which significantly increases the operational costs.

NO_x Control Device—Selective Catalytic Reduction (SCR)

- > Achievable Emission Limits/Reductions:
 - ❖ SCR is capable of NO_x reduction efficiencies in the range of 70% to 90%. Higher reductions are possible but generally not cost effective.
- > Typical Industrial Applications:
 - ❖ Stationary fossil fuel combustion units such as utility boilers, industrial boilers, process heaters, gas turbines, and reciprocating internal combustion engines
 - ❖ SCR has also been applied to nitric acid plants

- SCR is very cost-effective for natural gas fired units. Less catalyst is required since the waste gas stream has lower levels of NO_x, sulfur, and PM. Combined-cycle natural gas turbines frequently use SCR technology for NO_x reduction. A typical combined-cycle SCR design places the reactor chamber after the superheater within a cavity of the heat recovery steam generator system (HRSG). The flue gas temperature in this area is within the operating range for base metal-type catalysts.
- SCR can be used separately or in combination with other NO_x combustion control technologies such as low NO_x burners (LNB) and natural gas reburn (NGR). SCR can be designed to provide NO_x reductions year-round or only during ozone season.
- Catalysts in the SCR:
 - Typical catalysts include vanadium pentoxide, titanium dioxide, noble metals, and tungsten trioxide.
 - Zeolites, which can also be used, can be capable of operating at as high as 1,100 °F (590 °C).
 - Each of the catalysts has a relatively narrow temperature “window.” Variations of as little as plus or minus 50 °F (28 °C) from the optimum temperature could have an impact on the NO_x reduction efficiency.
 - The catalyst must be selected to minimize the conversion of sulfur dioxide to sulfur trioxide.

NOx Control Device—Selective Catalytic Reduction (SCR)

> Emission Stream Characteristics:

- ❖ **Combustion Unit Size:** SCR has been applied to coal- and natural gas-fired electrical utility boilers from 250 to 8,000 MMBtu/hr. They can also be effective for large units (>100 MMBtu/hr coal, >50MMBtu/hr gas).
- ❖ **Temperature:** The optimum temperature range depends on the catalyst used and the flue gas composition. Temperatures can vary from 250 °C to 427 °C (480 °F to 800 °F).
- ❖ **Pollutant Loading:** High reduction efficiencies (>70%) on NOx as low as 20 ppm. Higher NOx levels result in increased performance.
- ❖ **Other Considerations:** Incomplete reaction of NOx and the reagent causes ammonia emissions (ammonia slip).

> Emission Stream Pretreatment Requirements:

- ❖ May require heating to raise the temperature to the optimum range for the reduction reaction. Sulfur and PM may be removed from the waste gas stream to reduce catalyst deactivation and fouling.

- **Ammonia Slip in the SCR**
- Ammonia slip from the SCR system is usually less than 3 to 5 ppm.
- The emission of ammonia increases during load changes because of the instability of the temperature in the catalyst bed.
- Sulfur trioxide can react with ammonia slip in the SCR effluent gas stream. The formed Ammonium bisulfate is corrosive and can also foul the blades of gas turbines. To avoid problems with ammonium bisulfate, the SCR system must operate above the temperature where this compound forms.

NOx Control Device—Selective Catalytic Reduction (SCR)

> Advantages:

- ❖ Higher NOx reductions than low-NOx burners and Selective Non-Catalytic Reduction (SNCR)
- ❖ Applicable to sources with low NOx concentrations
- ❖ Reactions occur within a lower temperature range than SNCR
- ❖ Does not require modifications to the combustion unit

> Disadvantages:

- ❖ Retrofit of SCR on industrial boilers is difficult and costly
- ❖ Large volume of reagent and catalyst required
- ❖ Results in ammonia in the gas stream which may impact plume visibility and resale disposal of ash

Volatile Organics Control

VOC emission reduction can be achieved through pollution prevention practices.

- ✓ A. True
- B. False



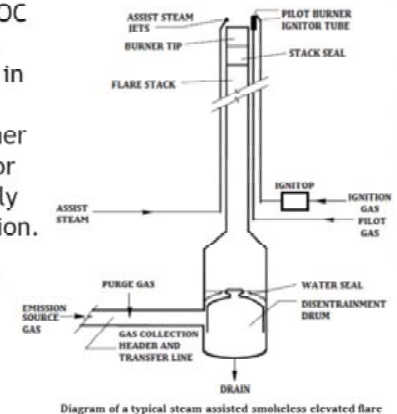
VOC Emission Reduction through Pollution Prevention

- > Product Modifications:
 - ❖ Material Substitution - less toxic alternatives
 - ❖ Redesign - use less material
- > Process Modifications:
 - ❖ Efficiency Improvements
 - ❖ Equipment Modification or Replacement
 - ❖ Layout Modification
- > Good Operating Practices:
 - ❖ Inventory Control (Quality control/spoilage)
 - ❖ Supply Chain Management
 - ❖ Improved Housekeeping (prevention of spills and leaks)
 - ❖ Employee Training (Awareness)
 - ❖ Facility Management (Energy, Water)

- Good Operating Practices:
 - Inventory Control improves quality of input and reduces spoilage.
 - Supply Chain Management reduces waste coming into an enterprise.
 - Preventive Maintenance finds and reduces leaks and spills while prolonging equipment life.
 - Improved Housekeeping reduces opportunities of accidents and increases likelihood of finding spills or leaks.
 - Employee Training raises awareness and reinforces optimum practices.
 - Facility Management provides savings in energy and water use.

VOC Control Device—Flare

- > Flaring is a VOC combustion control process in which the VOC are piped to a remote, usually elevated, location and burned in an open flame in the open air using a specially designed burner tip, auxiliary fuel, and steam or air to promote mixing for nearly complete (>98%) VOC destruction.



- > Typical Monitoring Parameters:
 - ❖ Presence of a pilot flame
 - ❖ Visible Emissions
 - ❖ Minimum Net Heating Value
 - ❖ Maximum Inlet Flow Rate

- Source: Air Pollution Control Technology Fact Sheet: Flare (<http://www.epa.gov/ttn/catc/dir1/fflare.pdf>).
- **Name of Technology: Flare**
- This includes elevated flares, steam-assisted flares, air-assisted flares, non-assisted flares, pressure-assisted flares, and enclosed ground flares.
- **Theory of Operation:**
 - Flaring is a VOC combustion control process in which the VOC are piped to a remote, usually elevated, location and burned in an open flame in the open air using a specially designed burner tip, auxiliary fuel, and steam or air to promote mixing for nearly complete (> 98%) VOC destruction. Completeness of combustion in a flare is governed by flame temperature, residence time in the combustion zone, turbulent mixing of the gas stream components to complete the oxidation reaction, and available oxygen for free radical formation. Combustion is complete if all VOC are converted to carbon dioxide and water. Incomplete combustion results in some of the VOC being unaltered or converted to other organic compounds such as aldehydes or acids.

VOC Control Device—Flare

- > Flares are generally categorized in two ways:
 - ❖ by the height of the flare tip (i.e., ground or elevated)
 - ❖ by the method of enhancing mixing at the flare tip (i.e., steam-assisted, air-assisted, pressure-assisted, or non-assisted)
- > Elevating the flare can prevent potentially dangerous conditions at ground level where the open flame (i.e., an ignition source) is located near a process unit.
- > Elevating the flare also allows the products of combustion to be dispersed above working areas to reduce the effects of noise, heat, smoke, and objectionable odors.

- In most flares, combustion occurs by means of a diffusion flame, in which air diffuses across the boundary of the fuel/combustion product stream toward the center of the fuel flow, forming the envelope of a combustible gas mixture around a core of fuel gas. This mixture, on ignition, establishes a stable flame zone around the gas core above the burner tip. This inner gas core is heated by diffusion of hot combustion products from the flame zone.
- Cracking can occur with the formation of small hot particles of carbon that give the flame its characteristic luminosity. If there is an oxygen deficiency and if the carbon particles are cooled to below their ignition temp., smoking occurs. In large diffusion flames, combustion product vortices can form around burning portions of the gas and shut off the supply of oxygen. This localized instability causes flame flickering, which can be accompanied by soot formation. As in all combustion processes, an adequate air supply and good mixing are required to complete combustion and minimize smoke.
- Some flares use forced air to provide the combustion air and the mixing required for smokeless operation. These flares are built with a spider-shaped burner (with many small gas orifices) located inside but near the top of a steel cylinder 0.6 meters or more in diameter. Combustion air is provided by a fan in the bottom of the cylinder. The amount of combustion air can be varied by varying the fan speed. The principal advantage of air-assisted flares is that they can be used where steam is not available. Although air assistance is not usually used on large flares (because it is generally not economical when the gas volume is large) the number of large air-assisted flares being built is increasing.

VOC Control Device—Flare

- > Types of Flares:
 - ❖ **Steam-assisted flares** are single burner tips, elevated above ground level for safety reasons, that burn the vented gas in a diffusion flame
 - ❖ **Non-assisted flare** consists of a flare tip without any auxiliary provision for enhancing the mixing of air into its flame
 - ❖ **Pressure-assisted flares** use the vent stream pressure to promote mixing at the burner tip

- **Types of Flares:**
- Steam-assisted flares - They reportedly account for the majority of the flares installed and are the predominant flare type found in refineries and chemical plants. To ensure an adequate air supply and good mixing, this type of flare system injects steam into the combustion zone to promote turbulence for mixing and to induce air into the flame.
- The non-assisted flare - Its use is limited to gas streams that have a low heat content and a low carbon/hydrogen ratio that burn readily without producing smoke. These streams require less air for complete combustion, have lower combustion temperatures that minimize cracking reactions, and are more resistant to cracking.
- Pressure-assisted flares - Several vendors now market proprietary, high pressure drop burner tip designs. If sufficient vent stream pressure is available, these flares can be applied to streams previously requiring steam or air assist for smokeless operation. Pressure-assisted flares generally (but not necessarily) have the burner arrangement at ground level, and consequently, must be located in a remote area of the plant where there is plenty of space available. They have multiple burner heads that are staged to operate based on the quantity of gas being released. The size, design, number, and group arrangement of the burner heads depend on the vent gas characteristics.

VOC Control Device—Flare

> Types of Flares:

- ❖ **Enclosed flare's burner heads** are inside a shell that is internally insulated.
- ❖ **Enclosed flares** generally have less capacity than open flares and are used to combust continuous, constant flow vent streams

A properly operated flare can achieve a destruction efficiency of 98% or greater.

- ✓ A. True
- B. False



• Types of Flares:

- An enclosed flare's burner heads - The shell reduces noise, luminosity, and heat radiation and provides wind protection. Enclosed, or ground-based flares are generally used instead of elevated flares for aesthetic or safety reasons. A high nozzle pressure drop is usually adequate to provide the mixing necessary for smokeless operation and air or steam assistance is not required. In this context, enclosed flares can be considered a special class of pressure-assisted or non-assisted flares. The height must be adequate for creating enough draft to supply sufficient air for smokeless combustion and for dispersion of the thermal plume. These flares are always at ground level.
- Enclosed flares - constant flow vent streams, although reliable and efficient operation can be attained over a wide range of design capacity. Stable combustion can be obtained with lower heat content vent gases than is possible with open flare designs (1.9 to 2.2 MJ/sm³ (50 to 60 Btu/scf)), probably due to their isolation from wind effects. Enclosed flares are typically used at landfills to destroy landfill gas. (EPA, 1995)

VOC Control Device—Flare

> Achievable Emission Limits/Reductions:

- ❖ VOC destruction efficiency depends upon an adequate flame temperature, sufficient residence time in the combustion zone, and turbulent mixing.
- ❖ A properly operated flare can achieve a destruction efficiency of 98 % or greater when controlling emission streams with heat contents greater than 300 Btu/scf.

> Typical Industrial Applications:

- ❖ Used to control almost any VOC stream, and can typically handle large fluctuations in VOC concentration, flow rate, heating value, and inert species content
- ❖ Appropriate for continuous, batch, and variable flow vent stream applications, but the primary use is that of a safety device used to control a large volume of pollutant resulting from upset conditions

VOC Control Device—Flare

> Emission Stream Characteristics:

- ❖ **Air Flow:** Flow rate through the flare is dependent upon the properties of the waste gas stream and the configuration of the flare; maximum flow through commercially available flares is about 500 scm/sec.
- ❖ **Inlet gas temperature:** Discharge temperature is typically in the range of 500 °C and 1100 °C (1000 °F and 2000 °F), depending on the composition of the waste gas.
- ❖ **Pollutant Loading:** Depending upon the type of flare configuration and the source of the waste stream, the capacity of flares to treat waste gases can vary up to about 50,000 kg/hr of hydrocarbon gases for ground flares and about 1 million kg/hr or more for elevated flares.
- ❖ **Other Considerations:** Waste gas stream must have a heating value >300 Btu/scf; auxiliary fuel must be added if the minimum is not met.

> Emission Stream Pretreatment Requirements:

- ❖ Liquid in the vent stream can extinguish the flame or cause irregular combustion and smoking therefore they must be removed by a knock out drum.

VOC Control Device—Flare

> Advantages:

- ❖ Can be an economical way to dispose of sudden releases of large amounts of gas
- ❖ In many cases do not require auxiliary fuel to support combustion
- ❖ Can be used to control intermittent or fluctuating waste streams

> Disadvantages:

- ❖ Can produce undesirable noise, smoke, heat radiation, and light
- ❖ Can be a source of SO_x, NO_x, and CO
- ❖ Cannot be used to treat waste streams with halogenated compounds
- ❖ Released heat from combustion is lost

VOC Control Device—Thermal Oxidizer

- > Oxidizes combustible material by raising the temperature of the material above its auto-ignition point in the presence of oxygen, and maintaining it at a high temperature for enough time to complete combustion to CO₂ and H₂O.
- > Time, temperature, turbulence, and O₂ availability affect the rate and efficiency of combustion.
- > Typical Monitoring Parameters:
 - ❖ Minimum Combustion Temperature
 - ❖ Minimum Outlet Temperature

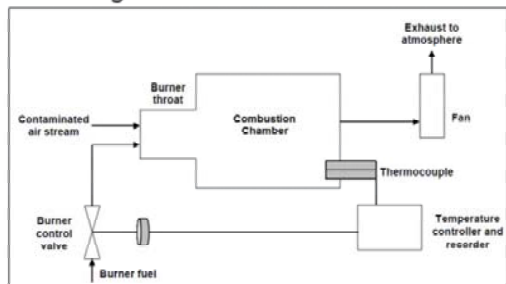


- Source: Air Pollution Control Technology Fact Sheet: Thermal Incinerator (<http://www.epa.gov/ttn/catc/dir1/fthermal.pdf>).
- **Name of Technology: Thermal Incinerator**
- This type of incinerator is also referred to as a direct flame incinerator, thermal oxidizer, or afterburner. However, the term afterburner is generally appropriate only to describe a thermal oxidizer used to control gases coming from a process where combustion is incomplete.
- **Theory of Operation:**
- Incineration, or thermal oxidation is the process of oxidizing combustible materials by raising the temperature of the material above its auto-ignition point in the presence of oxygen, and maintaining it at high temperature for sufficient time to complete combustion to carbon dioxide and water. Time, temperature, turbulence (for mixing), and the availability of oxygen all affect the rate and efficiency of the combustion process. These factors provide the basic design parameters for VOC oxidation systems (ICAC, 1999).

VOC Control Device— Thermal Oxidizer

> Incinerator - Direct Flame Type:

- ❖ Comprised of only of a combustion chamber and does not include any heat recovery of exhaust air by a heat exchanger

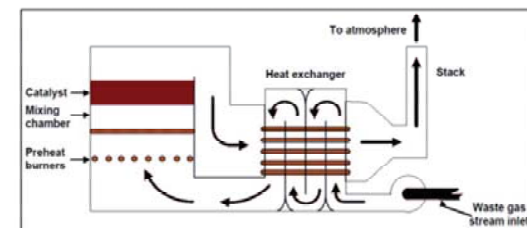


- Source: Air Pollution Control Technology Fact Sheet: Recuperative Incinerator (<http://www.epa.gov/ttn/catc/dir1/frecup.pdf>).
- Source: Air Pollution Control Technology Fact Sheet: Regenerative Incinerator (<http://www.epa.gov/ttn/catc/dir1/fregen.pdf>).
- Source: Schematic of a Thermal Oxidizer (<http://cfpub.epa.gov/oarweb/mkb/contechnique.cfm?ControlID=17>).
- A straight thermal incinerator is comprised of a combustion chamber and does not include any heat recovery of exhaust air by a heat exchanger (this type of incinerator is referred to as a recuperative incinerator).
- The heart of the thermal incinerator is a nozzle-stabilized flame maintained by a combination of auxiliary fuel, waste gas compounds, and supplemental air added when necessary. Upon passing through the flame, the waste gas is heated from its preheated inlet temperature to its ignition temperature. The ignition temperature varies for different compounds and is usually determined empirically. It is the temperature at which the combustion reaction rate exceeds the rate of heat losses, thereby raising the temperature of the gases to some higher value. Thus, any organic/air mixture will ignite if its temperature is raised to a sufficiently high level (EPA, 1996a).

VOC Control Device— Thermal Oxidizer

> Incinerator - Recuperative Type:

- ❖ Comprised of the combustion chamber, a waste gas preheater, and, if appropriate, a secondary energy recovery heat exchanger
- ❖ More economical than straight thermal incinerators because they recover about 70% of the waste heat from the exhaust gases

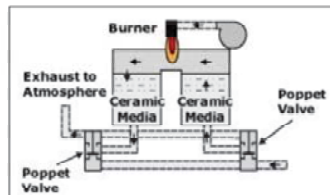


- Source: Air Pollution Control Technology Fact Sheet: Recuperative Incinerator (<http://www.epa.gov/ttn/catc/dir1/frecup.pdf>).
- Source: Air Pollution Control Technology Fact Sheet: Regenerative Incinerator (<http://www.epa.gov/ttn/catc/dir1/fregen.pdf>).
- Source: Schematic of a Recuperative Catalytic Oxidizer (http://www.epa.gov/ttnchie1/mkb/documents/Catalytic_Oxidizer_Schematic.pdf).
- A straight thermal incinerator is comprised of a combustion chamber and does not include any heat recovery of exhaust air by a heat exchanger (this type of incinerator is referred to as a recuperative incinerator).
- The heart of the thermal incinerator is a nozzle-stabilized flame maintained by a combination of auxiliary fuel, waste gas compounds, and supplemental air added when necessary. Upon passing through the flame, the waste gas is heated from its preheated inlet temperature to its ignition temperature. The ignition temperature varies for different compounds and is usually determined empirically. It is the temperature at which the combustion reaction rate exceeds the rate of heat losses, thereby raising the temperature of the gases to some higher value. Thus, any organic/air mixture will ignite if its temperature is raised to a sufficiently high level (EPA, 1996a).

VOC Control Device— Thermal Oxidizer

> Incinerator - Regenerative Type:

- ❖ Regenerative Thermal Oxidizer (RTO) uses a high density media such as a ceramic packed bed still hot from a previous cycle to preheat an incoming VOC laden waste gas stream
- ❖ Preheated, partially oxidized gases enter a combustion chamber where they are heated by auxiliary fuel (natural gas) combustion
- ❖ Purified, hot gases exit chamber and are directed to one or more different ceramic packed beds cooled by an earlier cycle
- ❖ Heat from the purified gases is absorbed by these beds before the gases are exhausted to the atmosphere
- ❖ Reheated packed bed begins heating a new incoming waste gas stream



- Source: Air Pollution Control Technology Fact Sheet: Recuperative Incinerator (<http://www.epa.gov/ttn/catc/dir1/frecup.pdf>).
- Source: Air Pollution Control Technology Fact Sheet: Regenerative Incinerator (<http://www.epa.gov/ttn/catc/dir1/fregen.pdf>).

VOC Control Device— Thermal Oxidizer

> Achievable Emission Limits/Reductions:

- ❖ Typical design efficiencies range from 98-99.99% and above, depending on system requirements and characteristics of the contaminated stream.
- ❖ For vent streams with VOC concentrations below 2,000 ppmv, reaction rates decrease, maximum VOC destruction efficiency decreases, and an outlet concentration of 20 ppmv or lower may be achieved.

> Typical Industrial Applications:

- ❖ Used to reduce emissions from almost all VOC sources, including process vents in the SOGMI industry, paint manufacturing, rubber and polymer manufacturing, storage and loading/unloading of petroleum products, and other volatile organic liquids, etc.

- The required level of VOC control of the waste gas that must be achieved within the time that it spends in the thermal combustion chamber dictates the reactor temperature. The shorter the residence time, the higher the reactor temperature must be. The nominal residence time of the reacting waste gas in the combustion chamber is defined as the combustion chamber volume divided by the volumetric flow rate of the gas. Most thermal units are designed to provide no more than 1 second of residence time to the waste gas with typical temperatures of 650 to 1100°C (1200 to 2000°F). Once the unit is designed and built, the residence time is not easily changed, so that the required reaction temperature becomes a function of the particular gaseous species and the desired level of control (EPA, 1996a).
- Studies based on actual field test data, show that commercial incinerators should generally be run at 870°C (1600°F) with a nominal residence time of 0.75 seconds to ensure 98% destruction of non-halogenated organics (EPA, 1992).

VOC Control Device—Thermal Oxidizer

> Emission Stream Characteristics:

- ❖ **Air Flow:** Typical gas flow rates are 0.24 to 24 standard cubic meters per second (500 to 50,000 scfm).
- ❖ **Inlet gas temperature:** Thermal destruction of most organic compounds occurs between 590 °C and 650 °C (1100 °F and 1100 °F); hazardous waste incinerators are operated at 980 °C to 1200 °C (1800 °F and 2200 °F) to ensure complete destruction.
- ❖ **Pollutant Loading:** Wide range of organic vapor concentrations, but for safety concerns, the concentration of organics in the waste gas must be below the lower explosive limit (LEL) of the compound being controlled.
- ❖ **Other Considerations:** Not recommended for halogen or sulfur-containing compounds because of corrosive, acid gas formation

> Emission Stream Pretreatment Requirements:

- ❖ Typically, no pre-treatment
- ❖ Some cases a concentrator is used to reduce the total gas volume

Thermal oxidizers do NOT typically have the highest DRE for VOC.

A. True

✓ B. False



VOC Control Device—Thermal Oxidizer

- > Advantages:
 - ❖ Most positive and proven methods for destroying VOCs, with efficiencies up to 99.9999% possible
 - ❖ Best choice when high efficiencies are needed and the waste gas is above 20% of the LEL
- > Disadvantages:
 - ❖ Can have high operating costs due to supplemental fuel costs
 - ❖ Not suited for streams with a high variable flow which can reduce combustion chamber temperature and destruction efficiency
 - ❖ Not recommended for halogen or sulfur-containing compounds because of the formation of highly corrosive, acid gases
 - ❖ Not cost effective for low-concentration, high-flow organic vapor streams

VOC Control Device—Catalytic Oxidizer

- > Operate similarly to thermal/recuperative oxidizers, with primary difference that gas passes through a catalyst bed (to increase oxidation rate) after passing through the flame area
- > Oxygen and VOC migrate to the catalyst surface and are adsorbed onto active catalyst sites where the oxidation reaction occurs
- > Typical Monitoring Parameters:
 - ❖ Minimum Combustion Temperature
 - ❖ Minimum Outlet Temperature
 - ❖ Annual Catalyst Activity Checks

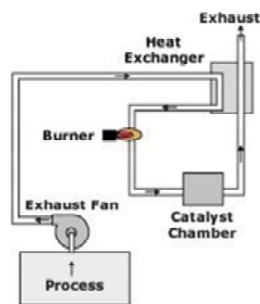


- Source: Air Pollution Control Technology Fact Sheet: Catalytic Incinerator (<http://www.epa.gov/ttn/catc/dir1/fcataly.pdf>).
- **Name of Technology: Catalytic Incinerator**
- Also referred to as a catalytic oxidizer, or catalytic reactor.
- **Theory of Operation:**
- Catalytic incinerators operate very similar to thermal/recuperative incinerators, with the primary difference that the gas, after passing through the flame area, passes through a catalyst bed. The catalyst has the effect of increasing the oxidation reaction rate, enabling conversion at lower reaction temperatures than in thermal incinerator units. Catalysts, therefore, also allow for smaller incinerator size. Catalysts typically used for VOC incineration include platinum and palladium. Other formulations include metal oxides, which are used for gas streams containing chlorinated compounds (EPA, 1998).
- In a catalytic incinerator, the gas stream is introduced into a mixing chamber where it is also heated. The waste gas usually passes through a recuperative heat exchanger where it is preheated by post combustion gas. The heated gas then passes through the catalyst bed. Oxygen and VOC migrate to the catalyst surface by gas diffusion and are adsorbed onto the catalyst active sites on the surface of the catalyst where oxidation then occurs. The oxidation reaction products are then desorbed from the active sites by the gas and transferred by diffusion back into the gas stream (EPA, 1998).

VOC Control Device— Catalytic Oxidizer

> Incinerator - Recuperative Type:

- ❖ Comprised of the combustion chamber, the waste gas preheater, and, if appropriate, a secondary energy recovery heat exchanger
- ❖ More economical than straight thermal incinerators because they recover about 70% of the waste heat from the exhaust gases



- Source: Air Pollution Control Technology Fact Sheet: Recuperative Incinerator (<http://www.epa.gov/ttn/catc/dir1/frecup.pdf>).
- Particulate matter can rapidly coat the catalyst so that the catalyst active sites are prevented from aiding in the oxidation of pollutants in the gas stream. This effect of PM on the catalyst is called blinding, and will deactivate the catalyst over time. Because essentially all the active surface of the catalyst is contained in relatively small pores, the PM need not be large to blind the catalyst. No general guidelines exist as to the PM concentration and size that can be tolerated by catalysts, because the pore size and volume of catalysts vary widely. This information is likely to be available from the catalyst manufacturers (EPA, 1996a).

VOC Control Device— Catalytic Oxidizer

> Incinerator - Regenerative Type:

- ❖ Regenerative Catalytic Oxidizer (RCO) operates in the same manner as an RTO, however, it uses a catalyst material rather than ceramic material in the packed bed.
- ❖ Catalyst allows for VOC destruction at lower oxidation temperature.
- ❖ RCO uses a precious metal catalyst in the packed bed, allowing oxidation to occur at approximately 400 °C (800 °F).
- ❖ Lower temperature requirement reduces the amount of natural gas needed to fuel the VOC abatement system and the overall size of the incinerator.
- ❖ Catalysts typically used for VOC incineration include platinum and palladium.

- Source: Air Pollution Control Technology Fact Sheet: Regenerative Incinerator (<http://www.epa.gov/ttn/catc/dir1/fregen.pdf>).
- Method of contacting the VOC-containing stream with the catalyst serves to distinguish catalytic incineration systems. Fixed-bed and fluid-bed systems used.
- Fixed-bed catalytic incinerators may use a monolith or a packed-bed catalyst:
 - Monolith Catalyst Incinerators - The most widespread method of contacting the VOC-containing stream with the catalyst is the catalyst monolith. In this scheme the catalyst is a porous solid block containing parallel, non-intersecting channels aligned in the direction of the gas flow. Monoliths offer the advantages of minimal attrition due to thermal expansion/contraction during startup/shutdown and low pressure drop.
 - Packed-Bed Catalytic Incinerators - A second contacting scheme is a simple packed-bed in which catalyst particles are supported either in a tube or in shallow trays through which the gases pass. This scheme is not in widespread use due to its inherently high pressure drop, compared to a monolith, and the breaking of catalyst particles due to thermal expansion when the confined catalyst bed is heated/cooled during startup/shutdown. However, the tray type arrangement of a packed-bed scheme, where the catalyst is pelletized, is used by several industries (e.g., heat-set web-offset printing). Pelletized catalyst is advantageous where large amounts of such contaminants as phosphorous or silicon compounds are present. (EPA, 1996a)

VOC Control Device— Catalytic Oxidizer

> Achievable Emission Limits/Reductions

- ❖ Destruction efficiency is dependent upon:
 - ♦ VOC composition and concentration
 - ♦ Operating temperature
 - ♦ Oxygen concentration
 - ♦ Catalyst characteristics
 - ♦ Space velocity (volumetric flow of gas entering the catalyst bed chamber divided by the volume of the catalyst bed)
- ❖ Higher destruction efficiencies are achievable but require larger catalyst volumes and/or higher operating temperatures

- Fluid-bed catalytic incinerators have the advantage of very high mass transfer rates, although the overall pressure drop is somewhat higher than for a monolith. An additional advantage of fluid-beds is a high bed-side heat transfer as compared to a normal gas heat transfer coefficient. This higher heat transfer rate to heat transfer tubes immersed in the bed allows higher heat release rates per unit volume of gas processed and, therefore, may allow waste gas with higher heating values to be processed without exceeding maximum permissible temperatures in the catalyst bed. In these reactors the gas phase temperature rise from gas inlet to gas outlet is low, depending on the extent of heat transfer through imbedded heat transfer surfaces. The catalyst temperatures depend on the rate of reaction occurring at the catalyst surface and the rate of heat exchange between the catalyst and imbedded heat transfer surfaces.

VOC Control Device— Catalytic Oxidizer

> Typical Industrial Applications:

- ❖ Used to reduce emissions from a variety of stationary sources (solvent evaporation processes associated with surface coating and printing, varnish cookers, foundry core ovens, gasoline bulk loading stations, polyethylene, polystyrene and polyester resin manufacturing, etc.)

VOC Control Device— Catalytic Oxidizer

> Emission Stream Characteristics:

- ❖ **Air Flow:** Typical gas flow rates are 0.33 to 24 standard cubic meters per second (700 to 50,000 scfm)
- ❖ **Inlet gas temperature:** Catalysts in catalytic incinerators cause the oxidation reaction to occur at a lower temperature than is required for thermal ignition; maximum design exhaust of the catalyst is typically 540 °C to 675 °C (1000 °F and 1250 °F)
- ❖ **Pollutant Loading:** Wide range of organic vapor concentrations, but for safety concerns, the concentration of organics in the waste gas must be below the lower explosive limit (LEL) of the compound being controlled
- ❖ **Other Considerations:** Inlet stream conditions should be evaluated carefully to avoid catalyst deactivation

> Emission Stream Pretreatment Requirements:

- ❖ Typically, no pre-treatment
- ❖ Some cases PM removal might be necessary before gas enters oxidizer.

VOC Control Device— Catalytic Oxidizer

> Advantages:

- ❖ Lower fuel requirements and operating temperatures
- ❖ Little or no insulation requirements
- ❖ Reduced fire hazards
- ❖ Less volume/size required

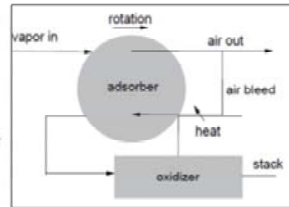
> Disadvantages:

- ❖ High Initial cost
- ❖ Catalyst poisoning is possible
- ❖ Particulates often must first be removed
- ❖ Spent catalyst that cannot be regenerated may need to be disposed

- As a general rule, fluid-bed systems are more tolerant of PM in the gas stream than either fixed-bed or monolithic catalysts. This is due to the constant abrasion of the fluidized catalyst pellets, which helps remove PM from the exterior of the catalysts in a continuous manner. A disadvantage of a fluid-bed is the gradual loss of catalyst by attrition. However, attrition-resistant catalysts have been developed to overcome this disadvantage.

VOC Control Device— Vapor Concentrator

- > Intended to raise the concentration of VOC vapor to provide more economical treatment in either combustion or condensation devices.
- > Air bleed is heated by the oxidizer, and the heat is then fed to a sector or segment of the rotating wheel to regenerate the adsorbent.
- > Sector or segment is isolated by seals which allow the VOC to be recaptured and sent to the oxidizer at a higher concentration than was present in the input air flow.
- > VOC has a greater heating value per cubic foot and, therefore, less additional fuel is required to raise the combustion temperature of the oxidizer.
- > The vapor concentrator is not used by itself, but in conjunction with other units such as thermal oxidizers or catalytic oxidizers.



PTEs are permanently installed structures that partially surround a source(s) of emissions.

A. True

✓ B. False



- As a result of using a vapor concentrator, the incinerator can be much smaller, requiring only about 10% of the volume otherwise required to provide an equal residence time. The cost of an incinerator in the *OAQPS Control Cost Manual* is proportional to the air flow rate times the residence time raised to either the 0.25 or 0.55 power, depending upon the type of incinerator. Therefore, using the concentrator also produces savings in the cost of the incinerator.
- VOC Vapor concentrator allows the stream to have a greater heating value per cubic foot, therefore, less additional fuel (i.e. natural gas) is required to raise the temperature of a control device to a level where the destruction or recovery efficiency (DRE) is above 98 %.
- Source: <http://www.epa.gov/ttn/catc/dir1/fadsorb.pdf>.

VOC Control Device— Permanent Total Enclosures (PTEs)

- > PTEs are permanently installed structures that completely surround a source(s) of emissions.
- > Consist of walls, roof, windows, doors, and exhaust and make-up air fans.
- > In order to qualify as a PTE, enclosure must meet EPA Method 204 Criteria for and Verification of a Permanent or Temporary Total Enclosure.
- > If criteria are met, capture efficiency is assumed to be 100%.
- > Typical Monitoring Parameters:
 - ❖ Minimum differential pressure to maintain negative pressure
 - ❖ Minimum facial velocity

- Source: Air Pollution Control Technology Fact Sheet: Permanent Total Enclosures (PTEs) (<http://www.epa.gov/ttn/catc/dir1/fpte.pdf>).
- **Type of Technology:**
- Capture device - collects and vents pollutants to an abatement device such as an incinerator.

VOC Control Device— Permanent Total Enclosures (PTEs)

- > Achievable Emission Limits/Reductions:
 - ❖ PTEs have a capture efficiency of 100%
 - ❖ Emissions reductions are dependent on the downstream pollution control device
- > Typical Industrial Applications:
 - ❖ Any process or operation where total emissions capture is required
 - ❖ Commonly used in flexographic printing, rotogravure printing, coating (paper, film, fabric, and metal), laminating, screen printing, can coating, and plastic card coating

VOC Control Device— Permanent Total Enclosures (PTEs)

> Emission Stream Characteristics:

- ❖ **Air Flow:** The air flow through a PTE must provide adequate capture and transport of the waste gas. The direction of air flow through all natural draft openings (NDOs) must be into the enclosure.
- ❖ **Inlet gas temperature:** Temperature inside the PTE must comply with standards established by OSHA. If the installation of a PTE results in heat buildup, an air conditioning system (closed loop) may be used to maintain the air temperature and humidity at comfortable levels.
- ❖ **Pollutant Loading:** The maximum concentration of VOC or HAP within the PTE should not exceed permissible exposure levels (PELs), the OSHA standards for worker exposure to toxic substances.
- ❖ **Other Considerations:** Local concentration of pollutants within the enclosure may vary by factors of 1 for well-designed ventilation systems to 10 for poorly designed systems.

> Emission Stream Pretreatment Requirements:

- ❖ None

• Theory of Operation:

- PTEs are permanently installed structures that completely surround a source(s) of emissions. They consist of walls, roof, windows, doors, and exhaust and make-up air fans. The pollutants are captured by means of a ventilation system, which draws contaminated air from the enclosure and replaces it with clean supply air. The waste gas is vented to a control device, such as an incinerator or carbon adsorber, for abatement. The abatement device is not part of the PTE. Auxiliary equipment for the PTE includes pressure monitors, PEL and LFL monitors, smoke detectors, flame detectors and alarm bells.
- The PTE design must prevent build-up of pollutant levels in the enclosure. Localized concentrations within the PTE may vary greatly due to inadequate mixing and thermal stratification.

VOC Control Device— Permanent Total Enclosures (PTEs)

> Advantages:

- ❖ Simple construction
- ❖ 100% capture
- ❖ Once design is approved, there is no need for capture efficiency tests.

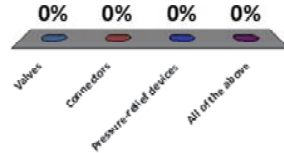
> Disadvantages:

- ❖ Difficult to provide worker comfort and meet OSHA standards; additional air conditioning may be required to avoid substantial heat build-up.
- ❖ Once the PTE has been built, it is difficult to add on equipment or modify the process configuration.
- ❖ The PTE is only a capture device; the amount of pollutant removed is dependent on the abatement device installed.

- In order to qualify as a PTE, an enclosure must meet EPA Method 204 Criteria for and Verification of a Permanent or Temporary Total Enclosure. If the criteria are met, the capture efficiency is assumed to be 100 percent. Overall control efficiency will be equal to the control device reduction efficiency. A capture efficiency test is not required for a PTE. The five point control criteria in Method 204 are given below:
 1. All NDOs are at least four equivalent opening diameters from each VOC emitting point.
 2. The total area of the NDOs shall not exceed 5 % of the surface area of the enclosure's walls, floor, and ceiling.
 3. The average facial velocity (FV) of air through all NDOs shall be at least 3,600 m/hr (200 fpm), or the static pressure in the enclosure must be -0.007 in. of H₂O. The direction of air flow through all NDOs must be into the enclosure.
 4. All access doors and windows shall be closed during routine process operation.
 5. All VOC emissions must be captured and contained for discharge through a control device.

Which of the following is a potential source of fugitive VOC emissions?

- A. Valves
- B. Connectors
- C. Pressure-relief devices
- ✓ D. All of the above



VOC Control—Leak Detection and Repair (LDAR)

- > Fugitive VOC is emitted from equipment such as valves, connectors, pumps, sampling connections, compressors, pressure-relief devices, and open-ended lines.
- > VOC emissions are calculated based on the type of equipment and service (gas/vapor, light liquid, heavy liquid).
- > Emissions measured at interface, readings in ppm.
- > Regulations designate leak thresholds at certain ppm levels.
- > Monitoring using EPA Method 21, involves using a monitoring probe at each piece of equipment.

- Source: Leak Detection and Repair: A Best Practices Guide: (<http://www.epa.gov/compliance/resources/publications/assistance/ldarguide.pdf>).

VOC Control—Leak Detection and Repair (LDAR)

> Achievable Emission Limits/Reductions:

- ❖ Depends on type of LDAR program and component type
- ❖ Lower leak definition = greater emission reduction
 - ♦ i.e., a 500 ppm definition give better reduction than a 10,000 ppm definition
- ❖ Can see reductions from 45% up to 93%

> Typical Industrial Applications:

- ❖ Most often used in synthetic organic chemical manufacturing industry (SOCMI) and oil/gas industry
- ❖ SOCMI emission factors can be used to estimate emissions from equipment in VOC service

VOC Control—Leak Detection and Repair (LDAR)

> Emission Stream Characteristics:

- ❖ The emission stream consists of the VOC that is leaking from the piece of equipment.

> Emission Stream Pretreatment Requirements:

- ❖ No pre-treatment

> Technology Used:

- ❖ Infrared cameras
- ❖ Flame ionization detector
- ❖ Photoionization detector

VOC Control—Leak Detection and Repair (LDAR)

> Advantages:

- ❖ Product recovery - not just controlling emissions, but reducing losses of raw material and saleable product
- ❖ Increased safety for workers, decreased exposure of the surrounding community
- ❖ Avoiding enforcement actions

> Disadvantages:

- ❖ Can be time, resource, and cost intensive
- ❖ Requires coordination between operations, plant management, maintenance, etc.

Fugitive Dust Control

Fugitive Dust Controls

> Rule:

- ❖ Rule 62-296.320(c), F.A.C. for Unconfined Emissions of Particulate Matter states that:
 - ♦ “No person shall cause, let, permit, suffer or allow emissions of unconfined particulate matter from any activity...
 - ♦ Any permit issued to a facility with emissions of unconfined particulate matter shall specify the reasonable precautions taken by that facility...
 - ♦ Reasonable precautions include the following...
 - ♦ In determining what constitute reasonable precautions, Department shall consider cost, environmental impacts, and the degree of reduction expected...”

- The General Pollutant Emission Limiting Standards of Rule 62-296.320(c), F.A.C. regulate fugitive dust as follows:
 - o (c) Unconfined Emissions of Particulate Matter.
 - 1) No person shall cause, let, permit, suffer or allow the emissions of unconfined particulate matter from any activity, including vehicular movement; transportation of materials; construction, alteration, demolition or wrecking; or industrially related activities such as loading, unloading, storing or handling; without taking reasonable precautions to prevent such emissions.
 - 2) Any permit issued to a facility with emissions of unconfined particulate matter shall specify the reasonable precautions to be taken by that facility to control the emissions of unconfined particulate matter.
 - 3) Reasonable precautions.
 - 4) In determining what constitutes reasonable precautions for a particular facility, the Department shall consider the cost of the control technique or work practice, the environmental impacts of the technique or practice, and the degree of reduction of emissions expected from a particular technique or practice.
- This rule applied to stationary sources of air pollution, whether permitted or not.

Fugitive Dust Controls

> Common nuisance compliant for unpermitted sources

> Examples:

- ❖ Process sources are emissions associated with industrial operations that alter the chemical or physical characteristics of a feed material
- ❖ Open dust sources are emissions generated by the forces of wind or machinery acting on exposed materials
- ❖ Industrial sources include emissions associated with the open transport, storage, and transfer of materials
- ❖ Other sources include emissions associated with unpaved roads and parking lots, paved roads, construction activities, and agricultural tilling

- Many industrial processes may generate dust (unconfined particulate matter), which can adversely impact nearby properties.

Landscaping can be used as a corrective action for the control of fugitive dust.

- ✓ A. True
- B. False



Fugitive Dust Controls

> Corrective Action (Reasonable precautions) includes:

- ❖ Paving and maintenance of roads, parking areas and yards.
- ❖ Application of water or chemicals to control emissions from such activities as demolition of buildings, grading roads, construction, and land clearing.
- ❖ Application of asphalt, water, oil, chemicals or other dust suppressants to unpaved roads, yards, open stock piles and similar activities.
- ❖ Removal of PM from roads and other paved areas under the control of the owner or operator of the facility to prevent reentrainment, and from buildings or work areas to prevent particulate from becoming airborne.
- ❖ Landscaping or planting of vegetation.
- ❖ Use of hoods, fans, filters, and similar equipment to contain, capture and/or vent particulate matter.
- ❖ Confining abrasive blasting where possible.
- ❖ Enclosure or covering of conveyor systems.

- “Reasonable” precautions may mean implementing practice in advance, prior to fugitive dust emissions (e.g., installing covered conveyor systems) or after-the-fact (e.g., biomass fuel piles generating dust from high winds results in the application of water to the piles).
- Source: Rule 62-296.320(4)(c)(3), F.A.C. for reasonable precautions.

Objectionable Odors Control

Objectionable Odor Controls

> Rule:

- ❖ 62-296.320(2), F.A.C. states, “No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor.”
- ❖ 62-210.200, F.A.C., **Objectionable Odor** means “Any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance.”

- In Rule 62-210.200, F.A.C., the objectionable odor is defined as any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance.
- Under the General Pollutant Emission Limiting Standards, Rule 62-296.320(2), F.A.C. prohibits objectionable odors as follows, “No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor.”

Objectionable Odor Controls

- > Common nuisance complaint amongst non-permitted sources
- > Examples:
 - ❖ Can include a variety of sources including:
 - ♦ Wastewater treatment plants
 - ♦ Landfills
 - ♦ Recycling facilities
 - ♦ Chemical manufacturing plants
 - ♦ Painting/Coating operations
 - ♦ Rendering plants
 - ♦ Food Packaging plants

Objectionable Odor Controls

- > Corrective Action:
 - ❖ Use of catalytic incinerators, afterburners, scrubbers, absorbers, or other abatement equipment to control odors
 - ❖ Store, transport, and/or handle odorous material so that accumulation of these materials resulting from spillage or other escape is prevented
 - ❖ Tightly close and ventilate buildings that process, handle, or store odorous material so that odorous gases are 100% captured

Circumvention of Air Pollution Control Equipment

Bypassing air pollution control equipment is allowed when back pressure limits production.

- A. True
✓ B. False



Circumvention of Air Pollution Control Equipment

> Rule:

- ❖ 62-210.650, F.A.C. (Circumvention) states, “No person shall circumvent any air pollution control device, or allow the emission of air pollutants without the applicable air pollution control device operating properly.”

Circumvention of Air Pollution Control Equipment

> Examples:

- ❖ Not directing emissions to control device (i.e. dust collector, thermal oxidizer, etc.)
- ❖ Control device not working properly
- ❖ Not utilizing reasonable precaution measures (i.e. not water and/or chemical treatment on roads)
- ❖ Failure to conduct reasonable preventative maintenance

Circumvention of Air Pollution Control Equipment

> Corrective Action:

- ❖ Cease operations and/or production until control device is operational
- ❖ Utilize alternative operational practices that minimize emissions
- ❖ Utilize secondary control measure (i.e., operations previously controlled by thermal oxidizer now routed to carbon absorption system)

Chapter 6

Chapter 6

Enforcement

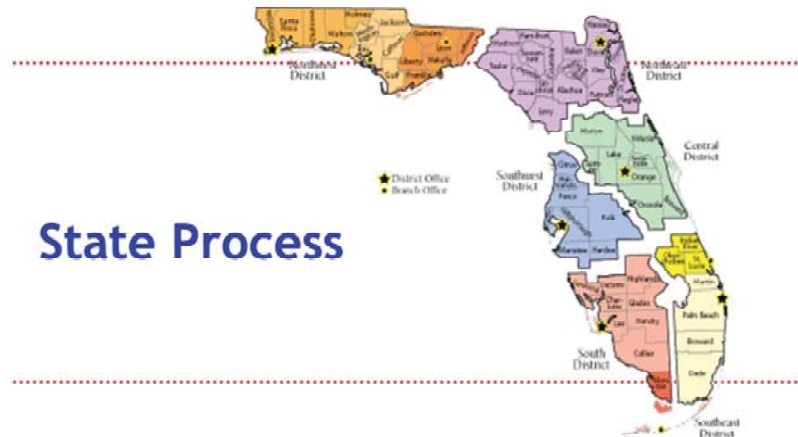


Florida Air Inspector Reference (FAIR)
Training Program

Overview

- > State Process
- > Data entry and case tracking
- > Types of violations
- > Consideration of Compliance without Enforcement (CWOE)
- > Management oversight
- > Peer review by Division of Air Resource Management
- > Interaction with the Office of General Counsel
- > Pursuing formal enforcement

State Process



The goal of enforcement is to return a facility to compliance and reduce the chances of future noncompliance.

- ✓ A. True
- B. False

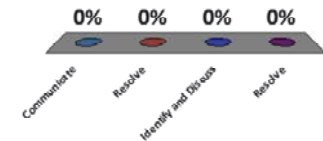


Compliance And Enforcement

- > DEP's number one regulatory objective is compliance with environmental laws
- > Despite DEP's best efforts, noncompliance still occurs
- > The goal of enforcement is to return a facility to compliance and reduce the chances of future noncompliance
- > Four steps: Identify—Discuss—Communicate—Resolve

Which of the following is the first step during the enforcement process?

- A. Communicate
- B. Resolve
- ✓ C. Identify
- D. Discuss



Enforcement Process (1 of 2)

> Identify and Discuss

- ❖ When an inspector identifies something they believe to be noncompliance, the inspector should discuss the situation with their manager to determine whether the circumstance identified, if true, is in fact noncompliance

> Communicate

- ❖ If the circumstance identified would in fact constitute noncompliance, the inspector and their manager should contact the facility to discuss the issue

- Once an inspector and manager decide that noncompliance has occurred, the facility must be contacted.
- Oftentimes, these discussions can resolve the noncompliance. Sometimes it is found noncompliance did not actually occur. Other times, the facility understands the basis for the noncompliance and can inform DEP of what the facility will do to remedy the problem. This understanding leads to a more fluid formal enforcement process.
- If DEP and the Facility don't reach an agreement, more formal action may be required.

Enforcement Process (2 of 2)

> Resolve

- ❖ Based on communications with the facility, a review of the facility's compliance history, assessment of the impact of the noncompliance on the environment, and other relevant factors, staff must decide what type of resolution is appropriate
 - ♦ Compliance Without Enforcement or Formal Enforcement

The Compliance Without Enforcement (CWOE) method does not acknowledge remedial steps taken by a facility when noncompliance occurs.

- A. True
✓ B. False



Compliance Without Enforcement

- > CWOE - method for resolving non-compliance by acknowledging remedial steps taken by the facility
- > Agency may offer compliance assistance to resolve minor non-compliance issues
- > Different approach if there is:
 - ❖ Long history of non-compliance
 - ❖ Significant pollution which poses a threat
- > Formal enforcement - when a party needs to be compelled to do something
 - ❖ e.g. pay a fine or take mandatory corrective actions pursuant to a consent order

- Emphasize importance of history of noncompliance. If same violation, CWOE not as appropriate. If a history of noncompliance generally, you want to know the nature of the violations and how they were resolved
- If a facility has had noncompliance and took substantial steps to correct it and prevent it from occurring in the future, ask yourself what purpose does imposing a penalty serve?
- Department's primary regulatory objective is compliance with Florida's environmental laws.
- When a facility goes out of compliance, DEP's focus should be on returning the facility to compliance and keeping it in compliance.
- Compliance assistance is an excellent method of achieving that goal.
- Another method is resolving noncompliance in a manner that acknowledges remedial steps taken by the facility.
- Oftentimes, facilities self-report noncompliance and take steps to ensure noncompliance does not occur again.
- Facilities recognize the detrimental effect noncompliance has on its operations and they expend substantial resources to avoid noncompliance in the future.
- When resolving noncompliance, inspectors should take into consideration efforts taken by the facility.
- If a facility unknowingly experienced a control device outage, self-reported the event, and agreed to install an alarm, at considerable expense, to alert its operators that the control device is not operating, a positive environmental result has occurred. What purpose would imposing a penalty serve? The facility has already expended resources to resolve the problem and the likelihood that a similar violation would occur is minimal.
- If a facility has responded to noncompliance responsibly and effectively, inspectors should consider whether the facility needs to be compelled to do something beyond actions already taken.

Formal Enforcement

- > Facility is compelled to do something
 - ❖ e.g. pay penalties or perform corrective actions
- > Short Form Consent Order
- > Long Form Consent Order
- > Notice of Violation (NOV)
- > Judicial Intervention

- Many times facilities and the district can agree on the proper enforcement resolution and terms. Other times the DEP Office of General Counsel (OGC) is involved.
- The most common situation is that a facility and district have discussed the noncompliance and agree on a penalty amount.
- The parties can enter into a short form consent order (model forms provided in Enforcement Manual). The executed consent order is then forwarded to OGC.
- If the agreed upon resolution includes corrective action, a long form consent order is required. Draft long form consent orders must be submitted to OGC prior to execution. Attachments to the Enforcement Manual include instructions on the process for forwarding documents to OGC.
- If the parties cannot agree to an enforcement resolution, a Notice of Violation (NOV) is sent. A NOV starts an administrative process where the facility has 20 days to respond or a default order is issued in favor of the Department.
- In rare instances, immediate judicial intervention is needed. Districts can submit a short form case report to OGC to have an injunction filed.
 - The short form Case Report should only be used if the responsible party refuses to cease an ongoing violation after notice from the Department and the ongoing violation involves a potential health threat or potential significant harm to the environment.
 - This option is always available at any step in the process.

Types of Noncompliance (1 of 2)

- > There are multiple categories of noncompliance:
 - ❖ Minor Noncompliance (MNC)
 - ❖ Significant Noncompliance (SNC)
 - ♦ Determined via classification in DEP database and by gravity of harm/deviation from environmental requirements
 - ❖ Federally Reportable Violations (FRV)
 - ❖ High Priority Violations (HPV)

A Minor Noncompliance (MNC) involves low, moderate, or zero environmental harm.

- ✓ A. True
- B. False



Types of Noncompliance (2 of 2)

- > **Minor Noncompliance (MNC)** - involves low, moderate, or zero environmental harm
 - ❖ E.g. paperwork violations and late testing
- > **Significant noncompliance (SNC)** - generally involves anything above moderate environmental harm
 - ❖ E.g. emissions exceedances, circumvention of control devices, failure to maintain any records

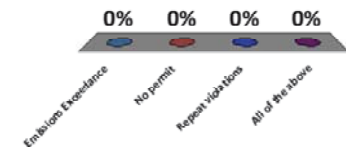
- Examples are air specific but these categories generally exist in other programs as well.
- Additional reference guidance for characterizing the type of noncompliance is available from the Department.

Minor Non Compliance

- > Inadequate testing or monitoring
- > Incomplete recordkeeping or reporting
- > Late permit renewal, reporting or testing
- > Minor visible emissions excursion
- > Minor process or production rate exceedance
- > Other violation of permit conditions

Which of the following constitutes significant non compliance?

- A. Emissions Exceedance
- B. No permit
- C. Repeat violations
- ✓ D. All of the above



Significant Non Compliance

- > Emissions Exceedance
- > No monitoring
- > No permit
- > No reporting or record keeping
- > Failure to operate or maintain a proper pollution control device or
- > Repeat violations

- **Significant Non Compliance** involves anything above moderate environmental harm.

Minor Noncompliance Issues (Low to Moderate Environmental Harm)

- > If minor noncompliance is identified, compliance assistance should be offered
- > Compliance Assistance (verbal offer)
 - ❖ Should be made during inspection if there is no doubt noncompliance has occurred. If potential noncompliance was discovered outside of an inspection, compliance assistance should be offered verbally
- > Compliance Assistance Letter
 - ❖ The purpose of this letter is to offer compliance assistance as a means of resolving the current matter and to maintain compliance in the future
- > Compliance without Enforcement (CWOE)
 - ❖ Noncompliance action is resolved with CWOE when Department is satisfied facility is fully informed of requirements and future noncompliance is unlikely to occur
 - Often as a result of compliance assistance
 - Generally not appropriate for facilities with substantial history of noncompliance

- Compliance assistance should be offered verbally and in writing.
 - A compliance assistance letter is to let the facility know that the Department believes noncompliance may have occurred and that the Department is available to provide compliance assistance regarding the issue.
- Matter is resolved via Compliance Without Enforcement (CWOE) after remedial actions have been verified by the Department, either by conversations or a follow up inspection.

Significant Noncompliance Issues (Above Moderate Environmental Harm)

- > Similar process to minor noncompliance issues.
 - ❖ Contact facility
 - ❖ Compliance assistance should be provided, when appropriate
 - ❖ Non-compliance may be resolved compliance without enforcement or with formal enforcement

- Once an inspector and their manager believe noncompliance has occurred, they should contact the facility to discuss the issue. These discussions ensure that DEP and the facility are both fully informed.

Federally Reportable Violations (FRV)

- > Applicable FRV universe includes:
 - ❖ Title V major sources
 - ❖ Synthetic minor sources
 - ❖ Sources included in an alternative Compliance Monitoring Strategy (CMS) plan
 - ❖ Any source at which a HPV has been identified

- EPA's delegation of the Clean Air Act requires DEP to report violations that are federally reportable or that are high priority violations (HPV).
- For further information, please see the Division's intranet site for EPA's FRV Guidance document.

Federally Reportable Violations (FRV)

> FRVs include the following violations:

- ❖ Violations of any emission limitation, emission standard or surrogate parameter
- ❖ Procedural violations including:
 - ♦ Failure to maintain reports and underlying records as required by permit or regulation such as
 - Continuous emissions monitoring system (CEMS) and continuous parameter monitoring reports
 - Malfunction reports
 - Excess emission reports
 - Semi-annual monitoring and periodic monitoring reports
 - ♦ Failure to timely test (e.g. performance test) or conduct valid monitoring as required by permit or regulation
 - ♦ Failure to timely report (e.g. annual compliance certifications)
 - ♦ Failure to construct, install, or operate facility/equipment in accordance with permit or regulation
 - ♦ Failure to obtain or maintain a permit

- Please contact the Division when deciding if a violation is an FRV or not.
- Be aware that EPA establishes strict timeframes for the reporting of FRV.
 - Noncompliance data must be entered into AirCom as soon possible, but not later than 30 days from the date of discovery.
 - The Division uploads AirCom data to EPA and EPA has a 60-day deadline for noncompliance data.
 - If data is not timely entered into AirCom by inspectors, it cannot be uploaded to EPA on time.

The High Priority Violation (HPV) policy applies to violations at synthetic minor sources which impact the facility's status as a synthetic minor source.

- ✓ A. True
B. False



High Priority Violations (HPV)

> Definition:

A violation at a major source, involving a pollutant for which the facility is major. The policy also applies to violations at synthetic minor sources which impact the facility's status as synthetic minor.

> Unique reporting and resolution timeframe

> EPA term tracked in the federal database

- Please consult the Division when determining HPVs.
- For further information, please see EPA's HPV Policy Memo at end of chapter.

High Priority Violations (HPV)

> Summary of 6 HPV Criteria:

- ❖ Failure to obtain NSR/PSD permit
- ❖ Federally Enforceable emissions limitation, standard or operating parameter violation
- ❖ NSPS emissions limitation, standard or operating parameter violation
- ❖ NESHAP emissions limitation, standard or operating parameter violation
- ❖ Work practice or recordkeeping that interferes with ability to determine compliance
- ❖ Discretionary/mutual agreement with EPA

See EPA's HPV Policy Memo at end of chapter for detailed description of 6 criteria.

High Priority Violations (HPV)

> Day “Zero”

Day zero is whenever an agency has sufficient information to decide it's an HPV, or 90 days from discovery

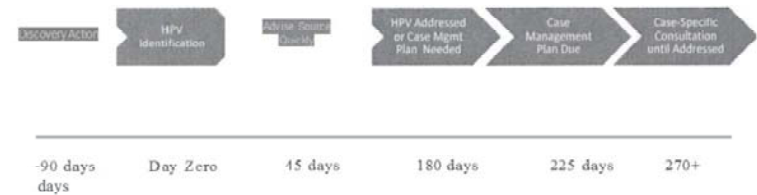
> HPVs must be addressed by day 180 (from day zero)

> Addressing actions include:

- ❖ Require immediate action through an enforceable order such as Court Injunction
- ❖ Require penalties through an enforceable order such as Short Form Consent Order
- ❖ Require long term actions through an enforceable order such as Long Form Consent Order
- ❖ Referred to OGC for filing in Court

High Priority Violations (HPV)

V. APPROPRIATE ENFORCEMENT RESPONSE FOR HPVS



Facilities are not encouraged to self report violations.

- A. True
✓ B. False



Self Reported Violations

> EPA Policies

- ❖ Incentives for Self-Policing: Discovery, Disclosure, Correction and Prevention of Violations Policy (revised, April 11, 2000)
- ❖ Small Business Compliance Policy (65 F.R. 19629, April 11, 2000)

> DEP encourages facilities to self report

> DEP can adjust proposed penalty amount for “good faith efforts” by the facility

- Often facilities have permit requirement to report non-compliance.
- EPA has issued 2 policies whose purpose is to encourage regulated entities to voluntarily discover, disclose, correct and prevent violations of Federal environmental requirements:
- [Incentives for Self-Policing: Discovery, Disclosure, Correction and Prevention of Violations Policy](#) (rev., Apr. 11, 2000) (referred to as the “Audit Policy”)
 - The Audit Policy contains nine conditions, and entities that meet the requirements of the Policy are eligible for up to 100% mitigation of any gravity-based penalties that otherwise could be assessed.
 - The Audit Policy is designed to enhance protection of human health and the environment by encouraging regulated entities to voluntarily discover, disclose, correct and prevent violations of Federal environmental requirements.
- [Small Business Compliance Policy](#):
 - This policy is for businesses with 100 or less employees.
 - The Small Business Compliance Policy implements, in part, the Executive Memorandum on Regulatory Reform (60 F.R. 20621, April 26, 1995) and Section 223 of the Small Business Regulatory Enforcement Fairness Act of 1996 (signed into law on March 29, 1996) (SBREFA).
 - Basically, this policy contains three conditions, and entities that meet the requirements are eligible for up to 100% mitigation of any gravity-based penalties that otherwise could be assessed.
- See DEP Directive 923 for discussion on “good faith efforts” penalty adjustments.

Management Oversight

Management Role

- > Review noncompliance determinations before enforcement
 - ❖ Noncompliance determination must be thoroughly examined and vetted
- > Determine whether formal enforcement is appropriate or not
 - ❖ Penalties vs. Corrective Actions

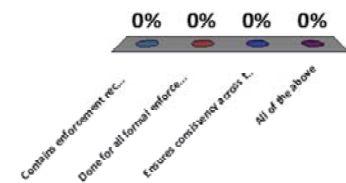
- Don't need documentation of inspector and manager conversation regarding whether noncompliance or not
- Management plays a vital role in resolving noncompliance.
- It is important that the inspector and management discuss potential noncompliance and agree, that if what was observed is true, noncompliance has occurred. Noncompliance correspondence can trigger a resource-intensive process for facilities, such as the hiring of lawyers and consultants. It is important that a district's noncompliance determination has been thoroughly examined and vetted.
- It is up to management to work with inspectors on whether penalties or corrective action is necessary. A review of a facility's history of noncompliance and its level of cooperation are important when making this determination.

Peer Review Process

- How many of you are familiar with the peer review process for formal enforcement?

Which of the following is true about the Peer Review Memo?

- A. Contains enforcement recommendations
- B. Done for all formal enforcement actions
- C. Ensures consistency across the state
- ✓ D. All of the above



Peer Review...

- > If noncompliance is found and enforcement manager deems formal enforcement is necessary, enforcement manager drafts "Peer Review Memo" containing enforcement recommendation and sends to District Director and Division
- > Done for all formal enforcement actions
- > Ensures consistency across the state
- > Must be prepared once if a district concludes formal enforcement is necessary
- > Division has 10 days to review the recommendation

- The recommendation is to the District Director, copying the Division. The Division then has 10 days to review the recommendation and make its own recommendation to the District Director.
- It is important to note that Division's recommendation is only a recommendation, and not a final decision. The District Director then makes a decision based on the information presented.

Peer Review Memo Contents

- > Specific rules or permit conditions allegedly violated
- > All facts necessary to conclude a violation exists
- > Proposed penalty (no initial "inflated" penalties)
- > Why CWOE is not an appropriate alternative
- > Economic benefit consideration
- > Often accompanied by penalty calculation worksheet

- It is understood that circumstances may change during the course of an investigation.
- Enforcement staff should be confident when making a formal enforcement recommendation that they have taken all efforts necessary to gather all required information.
- The Peer Review memorandum should be prepared in good faith, once all necessary information has been gathered.
- To the extent new information comes to light after peer review, that information can be shared informally with the Division, however, any change to the enforcement resolution method or penalty amount should be documented.

Recommendation Review_(1/2)

- > Appropriateness of formal enforcement
 - ❖ CWOE not appropriate?
 - ❖ Penalties or corrective action?
- > Communications between facility and District
 - ❖ Was the facility given a chance to discuss the incident with staff?
- > Consistent with enforcement elsewhere in the state

Recommendation Review_(2/2)

- > Consistent with Department enforcement guidance
 - ❖ Enforcement as a last resort to ensure ongoing compliance
- > Proper application of penalty calculation guidelines
- > Consistent amount applied for Department costs

Office of General Counsel (OGC)

Interaction with OGC

> OGC Roles:

- ❖ Reviews long form consent orders
- ❖ Prepares civil complaints
- ❖ Provides legal guidance to the districts

> Legal proceedings have specific timeframes and are detail intensive

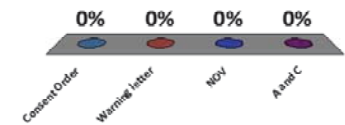
> Districts and inspectors must monitor case status

- Some noncompliance requires the involvement of the Department's Office of General Counsel (OGC).
- OGC often requires information and assistance from inspectors. Inspectors should be sure to respond timely, courteously, and fully.
- EPA and the Department impose strict timeframes for noncompliance resolution and it is ultimately the district's responsibility to ensure all noncompliance is resolved timely.
- Districts should check in regularly with OGC to ensure all information is provided and the case is moving forward accordingly.

Pursuing Formal Enforcement

Which of the following is a vehicle for resolving formal enforcement actions?

- A. Consent Order
- B. CWOE
- C. NOV
- ✓ D. A and C



How it works

- > Begins with the transmittal of enforcement paperwork
- > Depends on the nature of the noncompliance and course of communications with a facility
- > Warning letter - initial enforcement document
- > NOV and Consent Orders - vehicles for resolving formal enforcement

Enforcement documents - Warning Letters

- > **Purpose:** *Puts a facility on legal notice that the district believes noncompliance has occurred and plans to pursue formal enforcement*
- > Facility has 15 days to speak to the District
- > Reserved for cases when compliance assistance is not appropriate, i.e. facility is unresponsive or settlement negotiations have been unfruitful
- > Should not be sent until the district has had, or attempted to have, substantial communication with a facility

- Warning letter identifies previous steps DEP has taken to resolve the issue.
- The letter also seeks resolution, such as a consent order.

The purpose of a Warning Letter is to start an administrative proceeding before the Division of Administrative Hearings.

- A. True
- ✓ B. False



Enforcement documents - *Notices of Violation (NOV)*

- > **Purpose:** starts an administrative proceeding before the Division of Administrative Hearings
- > Used for cases that fall under ELRA
- > Initiates the enforcement action and begins the administrative process
- > Often prepared by districts and edited by OGC
- > Have specific service requirements

- ERLA – Environmental Litigation Reform Act
- Inspectors should review the Department's Enforcement Manual for more specific instructions.

Enforcement documents - *Consent Order*

- > **Purpose:** *settlement agreement*
- > Short form consent order
 - ❖ strictly monetary penalties
- > Long form consent order
 - ❖ corrective action required
 - ❖ must be reviewed by OGC

Penalties

Air Penalty Calculations (1/2)

- > Provided in Guidelines for Characterizing Air Violations document
- > Environmental Litigation Reform Act (ELRA) schedule
 - ❖ Enforcement cases under \$10,000
 - ❖ Penalty amounts set by statute
 - ❖ Division of Administrative Hearings
 - ❖ Excludes asbestos cases

- Added underline above
- ELRA is pronounced as one word "Ell-ra" as compared to E.L.R.A.
- All air penalty calculations should start with ELRA.
- Simply stated, ELRA is a statute which requires the Department to bring enforcement cases under \$10,000 to the Division of Administrative Hearings.
- The majority of air violations fall under ELRA, excluding asbestos.
- ELRA is not required to be followed for asbestos cases but may still be used. Asbestos cases tend to not lend themselves to the use of ELRA.
- Enforcement staff should compile all the violations included in the action and determine the specific ELRA amounts for each.
- ELRA must be used if the total is under \$10,000. If the total exceeds \$10,000, ELRA is not required to be used and calculations should be made using DEP's Penalty Calculation matrix found in DEP Directive 923. Air specific considerations can be found in the Division's Guidelines for Characterizing Air Violations.

Violation (Statutory Language)	Base Penalty	Cite (F.S.)
Air emission permit exceedance, or unpermitted/unauthorized air emission	\$1,000	403.121(3)(f)
Add-On 1 – If the emission results in an air quality violation, add \$1000	+ \$1,000	403.121(3)(f)
Add-On 2 – If the emission was from a major source and the source was major for the pollutant in violation, add \$3000	+ \$3,000	403.121(3)(f)
Add-On 3 – If the emission was more than 150% of the allowable level, add \$1000	+ \$1,000	403.121(3)(f)
Failure to install, maintain, or use a required pollution control system or device	\$4,000	403.121(4)(b)
Failure to obtain a required permit before construction or modification	\$3,000	403.121(4)(c)
Failure to conduct required monitoring or testing	\$2,000	403.121(4)(d)
Failure to construct in compliance with a permit	\$2,000	403.121(4)(d)
Failure to maintain required staff to respond to emergencies	\$1,000	403.121(4)(e)
Failure to conduct required training	\$1,000	403.121(4)(e)
Failure to prepare, maintain, or update required contingency plans	\$1,000	403.121(4)(e)
Failure to adequately respond to emergencies to bring an emergency situation under control	\$1,000	403.121(4)(e)
Failure to submit required notification to the Department	\$1,000	403.121(4)(e)
Failure to prepare, submit, maintain, or use required reports or other required documentation	\$500	403.121(4)(f)
Failure to comply with any other Departmental regulatory statute or rule requirement	\$500	403.121(5)

Negotiation - Adjustment Factors

- > Knowing, deliberate, or chronic violations
- > Good faith efforts to comply (or lack of good faith efforts to comply) either prior to or after
- > Department discovery of the violation
- > History of noncompliance
- > Economic benefit of noncompliance
- > Ability to pay
- > Other unique factors

DEP's Penalty Calculation Matrix should be used for cases under \$10,000.

A. True

✓ B. False



Air Penalty Calculations^(2/2)

- > DEP's Penalty Calculation Matrix
 - ❖ Enforcement cases over \$10,000
- > Multi-day penalties

ENVIRONMENTAL HARM	EXTENT OF DEVIATION FROM REQUIREMENT			
		MAJOR	MODERATE	MINOR
	MAJOR	\$10,000 to \$8,000	\$7,999 to \$6,000	\$5,999 to \$4,600
	MODERATE	\$4,599 to \$3,200	\$3,199 to \$2,000	\$1,199 to \$1,200
	MINOR	\$1,199 to \$500	\$500*	\$500*

- ELRA must be used if the total is under \$10,000. If the total exceeds \$10,000, ELRA is not required to be used and calculations should be made using DEP's Penalty Calculation matrix found in DEP Directive 923. Air specific considerations can be found in the Division's Guidelines for characterizing Air Violations.
- Directive 923 discusses when and how to assess multi-day penalties.
- 'Major' category for Environmental Harm - violation must have actually resulted in pollution in a manner that represents substantial threat to human health or the environment.
- 'Moderate' category - violations that actually or are reasonably expected to result in pollution in a manner that represents significant threat to human health or the environment.
- 'Minor' category - violations that actually or are reasonably expected to result in a minimal threat to human health or the environment.

Matrix Factors

- > Emission Standard Exceedances
- > Visible Emission Violations
- > Testing Violations
- > Construction or Operation w/o Permit
- > Monitoring Performance Violations
- > Recordkeeping Violations
- > Reporting and Notification Violations
- > Permit Conditions Limiting Capacity
- > Improper Operation or Maintenance
- > Circumvention

Data Entry and Case Tracking

EPA evaluates DEP's performance under the CAA based on the data that has been collected.

- ✓ A. True
- B. False



Data In General

- > Data entry and data quality are extremely important because:
 - ❖ It is how DEP provides information to the public
 - ❖ It is how EPA evaluates DEP's performance under the Clean Air Act
 - ❖ DEP has agreed to provide specific data to EPA within specific time frames
 - ♦ EPA then transmits this information to elected officials to be used when making policy decisions

DEP deadlines apply to completion of compliance assurance activities, but database entry needs to meet only the EPA deadline.

- A. True
- ✓ B. False



Data Timelines (1 of 4)

Compliance Assurance Data

- > Data needs to be entered in AirCom prior to EPA deadlines so it can be reviewed and formatted for transmission to EPA's database
- > Review stack tests and enter results into AirCom within 75 days from date of test
 - ❖ EPA requires states to submit stack test reports to ICIS within 120 days of test
 - ❖ Facilities required to submit test report to compliance authority 45 days from test
- > Review Annual Statements of Compliance (ASOC) within 60 days of receipt and enter data into AirCom within 30 days of review
 - ❖ 60 days to review is a guideline. EPA does not provide deadline for review, but it must be done within fiscal year
 - ❖ EPA requires ASOC reviews to be uploaded to ICIS within 60 days of review

Data Timelines (2 of 4)

- > Enter any other compliance or complaint activity (such as inspections, report reviews, etc.) into AirCom within 30 days of conducting the activity
 - ❖ EPA requires all compliance and complaint activities to be uploaded to ICIS within 60 days

Data Timelines (3 of 4)

Enforcement Data

- > Enter noncompliance into AirCom as soon as possible, but no later than 30 days of discovery
 - ❖ EPA requires states to upload noncompliance to ICIS within 60 days of discovery
- > Identify, enter, and flag FRVs in AirCom as soon as possible, but no later than 30 days of discovery
 - ❖ EPA requires states to accurately identify and upload FRVs to ICIS within 60 days of discovery
 - ❖ Please see EPA's FRV Policy at: <https://www.fldepnet.org/content/darm/enforcement>

Data Timelines (4 of 4)

High Priority Violations

- > Identify, enter, and flag HPVs in AirCom as soon as possible; Better safe than sorry on flagging HPVs in AirCom
- > EPA requires HPVs to be uploaded to ICIS within 60 days of "day zero"
 - ❖ Day zero is whenever an agency has sufficient information to decide it's an HPV, or 90 days from discovery
- > Identify which HPV criteria violations falls into
- > Identify programs and pollutants in violation (for example, 'NSPS' and 'particulate matter')
 - ❖ Please see EPA's HPV Policy and DARM's HPV presentation at: <https://www.fldepnet.org/content/darm/enforcement>

AirCom is a database designed to capture and report the information associated with compliance and enforcement activities at a regulated facility or complaint site.

- ✓ A. True
- B. False



Compliance Assurance Overview

- > AirCom captures and reports compliance & enforcement information
 - ❖ Both regulated facility or complaint site
 - ❖ Available online for public
- > Guidance and training for using the new AirCom system is being developed and trainings are being provided in the meantime on a regular basis

- AirCom is a new system enhancement that replaces the ARMS Compliance Assurance Module for capturing/reporting information associated with compliance and enforcement activities at a regulated facility or complaint site.
- Contact DARM's Compliance Office for details about AirCom training.

Compliance Assurance Process Guidance

> Purpose

- ❖ Define business process to ensure offices are consistently and timely recording data
- ❖ Intended for non-asbestos sites
- ❖ Additional program guidance may apply to the General Permitted facilities
- ❖ Does not replace AirCom database training, but is designed to complement it

- Define business process to ensure all offices are consistently and timely recording compliance and enforcement data in AirCom.
- Intended for non-asbestos sites.

Compliance Assurance Categories

- > Inspections
- > Tests and Reports
- > Annual Operating Reports
- > Continuous Emissions Monitoring Systems (CEMS)

- In AirCom, air compliance at a facility is grouped into 4 compliance assurance categories.
- Each of these categories records specific compliance activities conducted, based on conditions in the facility's permit and Florida's air regulations.
- Activities in each of the four categories are discussed in detail in the guidance.
- In general, most activities tracked in AirCom are those undertaken to determine compliance of a facility and record a compliance result.
- Activities that determine non compliance will have either significant or minor non compliance as the compliance status result.
- Some activities will have an expanded definition of minor or significant non compliance in the guidance, but in general Activity Non - Compliance Status Results fall into one of these groups.

1. Directive 923
State of Florida
Settlement Guidelines
For Civil and
Administrative
Penalties

SETTLEMENT GUIDELINES FOR CIVIL AND ADMINISTRATIVE PENALTIES

1. Purpose

These guidelines are provided solely for the use of Department staff in determining what position the agency should take in settlement negotiations concerning civil and administrative penalties. They are intended to provide a rational, fair and consistent method for determining whether the Department should seek a civil penalty in an enforcement action and the appropriate amount of civil and administrative penalties the Department should seek from responsible parties in settling enforcement actions when imposition of a civil penalty is appropriate. These guidelines are not a rule and may not be cited as legal authority for any agency action. These guidelines are not applicable for assessing damages to natural resources. In an appropriate case, monetary relief for actual damages caused to the State's natural resources can be sought in addition to civil or administrative penalties. These guidelines will be periodically reviewed to determine their effectiveness, and whether refinements are needed.

2. Authority

With the enactment of the Environmental Litigation Reform Act (ELRA), the Department has administrative penalty authority for most regulatory programs. The Department now has the authority to impose up to a total of \$10,000 in civil penalties in one administrative action for most regulatory violations as provided in ELRA. This authority is codified at Section 403.121, Florida Statutes.

Independent of ELRA, the Department has statutory authority to assess administrative penalties in Beaches and Coastal Systems cases for up to \$10,000 per day, Section 161.054(1), Florida Statutes, and in State Lands cases for up to \$10,000 per day, Section 253.04(2), Florida Statutes. ELRA does not modify or add to that existing authority. Penalty guidelines for these programs have been adopted by rule.

The Department also has the authority in a judicial proceeding to ask a court to assess penalties of up to \$10,000 per day per violation, Sections 403.141, 376.302, and 373.129(5) Florida Statutes; up to \$25,000 per day per violation for hazardous substance violations, Section 403.726, Florida Statutes; up to \$50,000 per day per violation for hazardous waste violations, Section 403.727,

Florida Statutes; up to \$5,000 per day per violation for violations of the Safe Drinking Water Act, Section 403.860, Florida Statutes; and up to \$5,000 per day per violation for violations involving phosphate mines in Section 378.211(2),(4), Florida Statutes.

3. Introduction

This Department is directed by the Legislature to protect and enhance Florida's water, air, and lands, to protect human health, safety and welfare from adverse environmental conditions, and to manage the state's natural resources. To accomplish these goals, the Legislature has passed laws restricting or prohibiting activities that may cause pollution, harm the resources of the state, or threaten human health or safety. It has also given the Department the authority to adopt environmental standards, to require that persons engaging in certain activities obtain permits or other authorizations before those activities are undertaken, and to take appropriate actions to ensure that all persons comply with the statutory, rule, and permit requirements.

The Department has multiple ways to encourage compliance with the law, and to address non-compliance. Effective education of the public and regulated persons may prevent non-compliance from occurring in many instances. Such education may be in the form of training or outreach efforts. If a violation occurs, the Department may often obtain a return to compliance by informal means. In such cases, education may still be the appropriate remedy, and the Department may establish an environmental education course for such persons. Assisting with a prompt return to compliance without formal enforcement is the preferred means to correct a violation committed by a person who did not know that the person's actions were contrary to law, or whose actions were inadvertent, if the violation caused no more than "minor harm" as identified in the Program's Penalty Guidelines. An inadvertent violation is one that occurs despite the good faith efforts of the responsible party to comply with the applicable requirements.

Once a decision has been made that formal enforcement is appropriate, Department staff must then decide whether a civil penalty is appropriate. Even when formal enforcement is necessary, these guidelines do not require imposition of a civil penalty in every enforcement action. The Department staff involved in pursuing enforcement, with appropriate supervisory review, should use their sound judgment, along with any program specific guidance that is consistent with this policy, to decide when a penalty should be sought. In exercising this judgment, the user should remember that the imposition of penalties is an enforcement tool that is intended to insure immediate and continued compliance by the subject of the action and by others who may face a similar situation in the future. Thus, penalties should be considered in those

cases in which it is determined that penalties are needed to ensure that the responsible party and others similarly situated will be deterred from future non-compliance.

For example, a person – perhaps a homeowner or a person new to a business venture--may have committed a violation out of sheer ignorance. The person may acknowledge the mistake and be willing to correct any problems created by the violation. For this first time violator, the staff may reasonably believe that the violation was inadvertent or occurred because the responsible party was not aware of or did not understand the requirement, and that a civil penalty would not provide a deterrent effect under the circumstances. In general, such cases may be appropriate for education. However, because of the nature of the corrective actions, the Department staff may decide that a consent order would be most appropriate to ensure that the corrective actions are completed or to provide needed authorization to conduct the corrective actions. In such cases, the staff should ensure that impacts on the environment are corrected, while also minimizing the impact of the consent order on the responsible party. Under these circumstances, devices such as conservation easements, institutional controls, etc., should only be required if necessary to achieve the restoration goal. On the other hand, a penalty may be entirely appropriate for a first time violator who knew or had reason to know that the actions were illegal, who refuses to correct the problem that the person created by those illegal actions, or whose violation resulted in harm to the public health or the environment. A penalty should normally be sought against a person with a pattern of non-compliance.

Once you have made a determination that a civil penalty is appropriate, these guidelines should be used in settling both administrative and judicial enforcement actions brought against the persons violating Department statutes or rules. Although ELRA, enacted in the 2001 legislative session, sets specific penalty amounts for certain violations covered under the Act when those violations are pursued with a Notice of Violation, these guidelines provide: (1) direction about the application of the ELRA penalty schedule to the penalty calculation and negotiation process, (2) direction for programs not covered under ELRA, and (3) direction on cases that involve penalties calculated under ELRA that exceed \$10,000.

When formal enforcement is necessary, staff should attempt to negotiate a consent order to resolve all issues, including civil penalties, whenever possible and appropriate, before issuing a notice of violation or filing a judicial complaint. No such notice of violation or complaint should refer to these guidelines. If a settlement cannot be reached and recovering penalties is appropriate, the

Department must issue a notice of violation in all cases that are covered under ELRA that involve only penalties, and that involve penalties in an amount that is \$10,000 or less as calculated under ELRA.

In determining whether the Department should settle a case, file a notice of violation, or go to court for a judicial assessment of penalties, the Department will not only look at the statutory authorizations and requirements, but also at the following: does formal enforcement result in the elimination of any economic benefit gained by the violator as a result of the violation; and beyond that, does formal enforcement provide enough of a financial disincentive to discourage future violations not only by the violator but by others contemplating similar activities? At the same time, this policy should not be used to try to obtain more without litigation than could be obtained as civil penalties in an administrative or a judicial action. It must also be recognized that in some cases the benefits to the Department and public are not worth the costs and effort necessary to recover a penalty. In carrying out the mission of the agency, the District and Division Directors are authorized to deviate from these guidelines consistent with state law. However, penalties which are increased for the reasons cited below are subject to Secretarial approval.

4. Applicability to Program Areas

This policy is designed to apply to all program areas except those overseen by the Board of Trustees, unless otherwise preempted by an interagency agreement or other obligation of the Department. The Department currently has guidance and interagency agreements with the EPA, which are updated from time-to-time. Although such guidance and agreements represent a basis for establishing consistency, they are to not be used as mandates, but rather guidelines, applied on a case-by-case basis.

Most of the Department's programs have developed program specific guidelines for characterizing violations routinely found in their program areas. The program specific guidelines do not provide guidelines for every possible violation that may be discovered. The program specific guidelines are intended to be used in conjunction with these Settlement Guidelines when calculating the appropriate penalties to be sought in cases involving penalties exceeding \$10,000 or in cases involving programs not covered under ELRA. There may be some cases that involve unusual circumstances that have not been factored into the program specific guidelines. The program area should be consulted in these cases so as to enhance state-wide consistency.

5. Penalty Calculation

The initial step in calculating any penalty is to determine whether the program under which the penalty is being assessed is covered by ELRA, and whether the penalty using ELRA exceeds \$10,000. The RCRA, UIC, Asbestos, and Beaches and Coastal Systems programs are not specifically covered by ELRA.

A. If the program is not covered by ELRA:

The penalty should be calculated using: (a) the program specific guidelines to determine how the violation should be characterized; and (b) the guidance below in Sections 6, 7, and 8 to determine the total penalty amount.

B. If the program is covered by ELRA and the penalty does not exceed \$10,000:

1. The civil penalty calculation should start with the application of the specific penalty schedule in ELRA. If the total amount of penalties calculated for all violations using the ELRA penalty schedule is \$10,000 or less, those calculations should be used as a basis for settlement discussions.

2. Once the baseline penalty has been established, a decision must be made as to whether there are any mitigating circumstances involved in the particular case that would warrant downward or upward adjustments of the baseline penalty.

3. Downward adjustments could be made for good faith efforts to comply before or after the discovery of the violation, or for violations caused by circumstances beyond the control of the responsible party which could not have been prevented by due diligence. A downward adjustment could also be made if it is determined, after review of the responsible party's financial information, that the responsible party is unable to pay the baseline penalty.

4. Upward adjustments to the baseline penalty could be made based upon a history of non-compliance as provided in ELRA or for economic benefit gained from the violation. If the upward adjustments together with the ELRA schedule baseline penalty exceeds a total of \$10,000, the penalty must be capped at \$10,000, if the Department is going to pursue the penalty under ELRA.

C. If the calculated penalty using the specific penalty schedule in ELRA exceeds \$10,000:

The penalty should be calculated using: (a) the program specific guidelines to determine how the violation should be characterized; and (b) the guidance below in Sections 6, 7, and 8 to determine the total penalty amount unless a decision is made by the District Director to cap the recovery of penalties at \$10,000 for the particular case. There may be cases in which the calculated penalty marginally exceeds \$10,000 and would not warrant a state court action, if not settled. As a practical matter, those cases should either be settled at \$10,000 or pursued administratively for the maximum allowed under the ELRA. In all cases where a proposed penalty is to exceed \$10,000, a peer review by the Division should be conducted and the proposed penalty must gain Deputy Secretary approval. Proposed penalties established at a value of \$50,000 or more must gain approval by the Secretary.

6. Penalty Matrix

The penalty matrix in Attachments I, II, III, and IV have two factors:

- a. actual (or in some cases potential) environmental harm; and
- b. extent of deviation from a statutory or regulatory requirement.

Subsection a. addresses the actual or potential harm to human health or the environment that may occur as a result of the violation. Generally, penalties that are assessed predominantly for potential harm (where little or no actual harm is done, nor willful intent to violate existed) should not exceed \$10,000. There are three levels of harm within this axis of the matrix:

1. MAJOR: violations that actually result in pollution in a manner that represents a substantial threat to human health or the environment;
2. MODERATE: violations that actually or are reasonably expected to result in pollution in a manner that represents a significant threat to human health or the environment;
3. MINOR: violations that actually or are reasonably expected to result in a minimal threat to human health or the environment.

An example of a major violation is a discharge or emission of a pollutant to the air or a water body in a manner which exceeds air or water quality standards by an order of magnitude amount and over a substantial period of time, or where the environment is measurably and substantially affected by the discharge or emission.

Subsection b. addresses the degree to which the violation deviates from Department statutes and rules and thereby upsets the orderly and consistent application of the law. The three levels are classified as follows:

1. MAJOR: the violator deviates from the requirements of the law by a significant extent (e.g. an order of magnitude or more) or the violation was willful and intentional.
2. MODERATE: the violator deviates from the legal requirements of the law significantly but for a short period of time and/or most of the requirements are implemented as intended.
3. MINOR: the violator deviates somewhat from the requirements of the law but most of the requirements are met.

Each box in the penalty matrices contains a range of penalty amounts. If it is determined that the violations were knowing, deliberate or chronic violations, penalties should be calculated by using the top of the applicable ranges.

7. Multiple and Multi-Day Penalties

Violations usually occur in multiples, over extended periods of time. While the policy must be designed to encourage a prompt return to compliance, assessing the full matrix penalty amount for each day of a violation for those cases outside the scope of ELRA could result in an astronomical amount being sought. On the other hand, such a calculation might be useful in setting outside limits if a large economic benefit has been received from the violation. In order to recognize ongoing and multiple violations without unrealistic results, the following applies:

Other than cases where willful or intentional violations have occurred, multiple penalties should not be calculated where a single activity, cause or omission resulted in the exceedances. For example, an accidental water or air release could result in several constituent violations, yet penalties should not be calculated for each individual constituent.

Multi-day penalties may be pursued where daily advantage is being gained by the violator for an ongoing violation; or, where the violation is causing daily adverse impacts to the environment and the violator knew or should have known of the violation after the first day it occurred and either failed to take

action to mitigate or eliminate the violation or took action that resulted in the violation continuing. On the other hand, deference should be given to those rare cases involving regulated entities, whereby the sole alternative to a violation would result in the loss of essential services (e.g. water or electricity) to Florida citizens. Multi-day penalties should be computed by multiplying the appropriate daily penalty calculated or a part thereof by the number of days of noncompliance. Where the impact of the ongoing violation is not significantly detrimental to the environment, a penalty amount that is lower than the matrix amount should be calculated for the violations that occur after the first day. For violations that are significantly detrimental to the environment, a penalty amount at the matrix amount should be calculated for the violations that occur after the first day, up to 30 days of non-compliance. For violations that occur for more than 30 days, judgment should be exercised to determine the appropriate penalty amount to be sought for each additional day of non-compliance that occurs over 30 days. For multi-day hazardous waste violations, staff should consider the guidance provided in EPA's most current RCRA Civil Penalty Policy. Multi-day penalties are also useful when a facility agrees to come into compliance by a specific date. In that case stipulated daily penalties could be required for missing the agreed upon compliance date. Or the overall penalty could be lowered based upon the number of days the violator comes into compliance prior to the compliance date.

An alternative to multiplying the total daily penalty by the number of days of noncompliance for non-ELRA cases that are not significantly detrimental to the environment would be to use one or more of the adjustment factor amounts chosen multiplied by the number of days the adjustment factor is appropriate. For example, assume a total one day penalty of \$8,000 was arrived at by adding \$6,000 derived from the matrix, \$1,000 for lack of good faith before the Department discovered the violation, and \$1,000 for lack of good faith after the Department informed the responsible party of the violation, but you feel the penalty is too low considering the nature of the violation. A multi-day penalty could be calculated, for example, by adding to the total one day penalty (\$8,000) a multiple of \$1,000 times the number of days the violation occurred prior to being discovered by the Department and the violator acted with lack of good faith, and/or by multiplying \$1,000 times the number of days the violation occurred after the Department informed the responsible party of the violation and the violator acted with lack of good faith.

If the above described example involved a violation that took place over a twenty day period with the violator acting with lack of good faith for five days prior to the Department discovering the violation, and the violator acting with lack of

good faith for ten days after being informed of the violation by the Department, the total penalty could be calculated as follows:

- a. One day penalty - \$6,000 (without adjustments), plus
- b. A multi-day penalty using the adjustment factor amount for lack of good faith prior to the Department discovering the violation times the number of days lack of good faith was demonstrated by the violator - $\$1,000 \times 5 = \$5,000$, plus
- c. A multi-day penalty using the adjustment factor amount for lack of good faith after the violator was informed of the violation by the Department times the number of days lack of good faith was demonstrated by the violator - $\$1,000 \times 10 = \$10,000$.
- d. Total penalty proposed for settlement: $\$6,000 + \$5,000 + \$10,000 = \$21,000$.

It is important in using daily penalties of this type that the amount be sufficient to discourage the violator from continuing a violation by making it more expensive to pay the daily penalty than to come into compliance. Also, if the case is within the scope of ELRA, multi-day penalties should be pursued consistent with ELRA.

8. Adjustment Factors

The attached Penalty Computation Worksheet sets out the steps you should follow in calculating a penalty based upon the matrix and adjustment factors. After you have calculated the penalty amount derived from the matrix, you should consider the adjustment factors and determine whether any or all of them should be used. When applying adjustment factors, a penalty can be reduced to zero or increased up to the statutory maximum per day allowed for the particular violation.

Good Faith Efforts to Comply/Lack of Good Faith Prior to Discovery of the Violation by the Department: This adjustment factor can be used to increase or decrease the amount of penalties derived from the penalty matrix. This adjustment factor allows you to consider what efforts the responsible party made prior to the Department's discovering a violation to comply with applicable regulations. Some examples of lack of good faith are:

- a. The responsible party knew it was not complying with the Department's regulations.
- b. The responsible party claims it did not know it was not complying with the Department's regulations, but because of the nature of the responsible party's business and the length of time the business was operating, it is reasonable to assume that the responsible party should have known about the Department's regulations.
- c. The violation was caused by an uninformed employee or agent of the responsible party, and the responsible party knew or should have known about the Department's regulations and made no or little effort to train, educate or inform its employees or agents.

Some examples of good faith efforts to comply are:

- a. The violation was caused by the responsible party's employees or agents despite the responsible party's reasonable efforts to train, educate or inform its employees or agents.
- b. The violation was caused by the responsible party as a result of a legitimate\misinterpretation of the Department's regulations.
- c. The violation occurred after a Department regulation was changed and compliance was required, but the responsible party had been making reasonable efforts to bring its operation into compliance with the new Department regulation.
- d. The responsible party took action on its own to mitigate the violation once it discovered that a violation had occurred.
- e. Once the responsible party discovered the violation, it made changes to its operation on its own to prevent future violations from occurring.
- f. The responsible party has demonstrated that it is implementing an acceptable pollution prevention plan.
- g. The responsible party has demonstrated that it is operating in accordance with a DEP Ecosystem Management Agreement.

Good Faith Efforts to Comply/Lack of Good Faith after the Department Informed the Responsible Party of the Violation: This adjustment factor

can be used to increase or decrease the amount of penalties derived from the penalty matrix. Some examples of good faith efforts to comply are:

- a) Once the responsible party was notified of the violation by the Department, it took immediate action to stop the violation and mitigate any effects of the violation.
- b) Once the responsible party was notified of the violation by the Department, it cooperated with the Department in reaching a quick and effective agreement for addressing the violation.

Some examples of lack of good faith efforts to comply are:

- a. The responsible party took affirmative action that was in violation of the Department's regulation after being notified by the Department that such action constituted a violation of the Department's regulation.
- b. The responsible party failed to take action to stop an ongoing violation or to mitigate the effects of a violation after being notified by the Department that it was in violation of a Department regulation.
- c. The responsible party ignores the Department's requests to negotiate a settlement.

History of Non-Compliance: This adjustment factor can be used to increase the amount of penalties derived from the penalty matrix or ELRA schedule. This adjustment factor may be used if a violation has occurred within a five year period previous to the occurrence of the current violation and a consent order, final order, judgment, judicial complaint or notice of violation was issued for the violation; the previous violations involved any of the programs regulated by the Department; and the previous violations involved a penalty obtained or being pursued where at least one of the violations was deemed as major for either the "environmental harm" or "extent of deviation from requirement" categories and was in the amount of \$2,000 or more. For ELRA cases, the history of non-compliance prior to June of 2001 cannot be considered.

Economic Benefit of Non-Compliance (requires Deputy Secretary approval): Economic benefits can be both passive, such as avoided costs gained from inaction, where the benefits come from the money saved from avoiding or delaying costs of compliance; and active, such as increased profits or revenue gained from actions taken in violation of Department statutes or rules where the benefits would not have been gained, if the facility had only been

operated in compliance. In certain situations a responsible party could both actively and passively gain economic benefit from violating Department statutes or rules. Other than in ELRA cases, the statute does not specifically authorize the recovery of economic benefits gained by the violator.

Passive economic benefits usually consist of the money that was made or that could have been made by an alternate use of the money that should have been expended to bring the facility into compliance. Assuming the responsible party will be forced to spend money to come into compliance as a result of the enforcement action, the minimum economic benefit associated with avoiding or delaying costs can be determined by calculating the amount of interest that was or could have been earned on the amount of money that should have been spent to bring the facility into compliance. The amount of this form of economic benefit will depend upon the amount of money that should have been spent, the period of time the costs were avoided or delayed, and the prevailing interest rate. A common example of economic benefits gained from avoiding or delaying costs is the situation in which an owner or operator of a regulated source of pollution fails to purchase a pollution control device needed to operate the facility in compliance with pollution control laws.

Active economic benefits usually consist of any increase in profits, revenue gained or reduction in costs that are directly attributable to the activity conducted in violation of Department statutes or rules. Increased profits and/or a reduction of costs, for example, can occur when a facility that is required to operate with a pollution control device is operated without the use of the pollution control device in order to increase the production or reduce the costs of production. Increased profits can also be gained when action is taken such as constructing and operating a facility without obtaining the required permits in order to make money from the operation of the facility sooner than would have been allowed. A possible example could involve a situation in which the developer of a shopping center conducts dredging and filling activities, constructs a stormwater facility or runs water and sewer lines without waiting to obtain permits so that the construction of the shopping center can meet a deadline for opening.

In addition to adjusting ELRA penalties by considering economic benefit, in non-ELRA cases the economic benefit adjustment factor can be used to increase the amount of penalties derived from the penalty matrix. There may be cases that arise in which the economic benefit gained by the violator exceeds the amount of money that can be recovered in civil penalties authorized by law. For example, three days of circumvention of a pollution control device could result in increased profits, revenue gained and/or a reduction in costs amounting to more than

\$30,000, the statutory amount that would be allowed for three days of violations for which a \$10,000 penalty per day can be imposed. Other than in ELRA cases, the statute does not specifically authorize the recovery of economic benefits gained by the violator. The statute does allow for penalties to be imposed in an amount that ensures immediate and continued compliance, and unless the economic benefit from the violation is taken away by the penalties, the penalties will not ensure immediate and continued compliance. Therefore, economic benefits that are not de minimis may be included in all penalty calculations up to the amount allowed by the applicable statutory per day penalty cap. For example, if a violation occurs for 10 days and the statute allows for the imposition of a penalty up to \$10,000 per day, and the matrix penalty calculated for the violations is \$60,000, the amount of economic benefit gained by the violator may be added to the matrix penalty up to the statutory maximum penalty of \$100,000. Continuing with the example, if the matrix penalty calculated for the violations is \$60,000, and the economic benefit to the violator from the violations is \$30,000, the penalty sought may be as high as \$90,000. If the matrix penalty calculated for the violations is \$60,000 and the economic benefit to the violator from the violations is \$50,000, the Department would be limited to pursuing a penalty of \$100,000. Staff should consider capturing the economic benefit gained by one or more violations by using the statutory penalty cap for the total of all violations.

For non-ELRA cases, the statute provides that a penalty may be calculated in an amount sufficient to ensure future compliance. Since one factor to ensure future compliance is to eliminate the economic benefits of non-compliance, the approach described for ELRA cases may be applied to the calculation of non-ELRA civil penalties where appropriate.

In some cases it may be very difficult to determine the economic benefits of non-compliance, or the amount of the benefits may be insignificant. For any significant economic benefits the District staff should request that OGC assist in the development of an appropriate amount by use of EPA's computer model for calculating economic benefits (BEN) or by use of some other accepted economic method. The request should be directed to OGC or the appropriate department financial analyst.

Ability to Pay: This adjustment factor may be used to decrease or increase the amount of penalties derived from the penalty matrix. This adjustment factor may be used to decrease the amount of penalties derived from the ELRA schedule. The violator has the burden of providing to the Department all of the financial information needed to determine ability to pay. If sufficient information is not provided by the violator, an ability to pay adjustment decreasing the

penalty may not be considered. Like economic benefits, ability to pay may be a difficult matter to determine by the District staff. If the District staff needs assistance in determining ability to pay, a request should be made by the District staff to OGC to assist in the ability to pay determination by use of EPA's computer model for determining ability to pay (ABEL) or by use of some other accepted financial method.

Other Unique Factors: This adjustment factor can be used to increase or decrease the amount of penalties derived from the penalty matrix, or to decrease the amount of penalties to be pursued in an ELRA case, but may not be used to increase the amount of penalties that can be pursued in an ELRA case. This adjustment factor is intended to provide the District with flexibility to make adjustments in a particular case based upon unique circumstances that do not clearly fit within the other adjustment factors. When it is used, the unique circumstances justifying its use must be specifically explained on the penalty worksheet, and a peer review by the Division should be conducted.

9. In-Kind Penalties

Once the settlement amount has been established, staff should make the violator aware of the opportunity to propose, and should consider if proposed, an in-kind penalty project by the violator as a way of reducing the total cash amount owed the Department. The in-kind penalty project is not designed to give the violator credit for the cost of corrective actions that he would be required to undertake anyway, but only to offset all or some portion of the cash settlement in a mutually satisfactory manner. So long as the financial impact upon the violator is equivalent to that established pursuant to these settlement guidelines, the Department is encouraged to work cooperatively to find alternative ways that the violator may pay the penalty.

In-kind penalties should only be considered in the following circumstances:

- a) If the responsible party is a government entity, such as a federal agency, state agency, county, city, university, or school board, including a port or airport, or
- b) If the responsible party is a private party proposing an environmental restoration or enhancement project, or
- c) If the responsible party is a private party proposing an in-kind project that does not involve environmental restoration or enhancement for a calculated penalty of \$10,000 or more.

In-kind penalties are limited to the following specific options:

- a. **Material and/or Labor Support for Environmental Enhancement or Restoration Projects.** Preference should be given to proposals that involve participation in existing or proposed government sponsored environmental enhancement or restoration projects such as SWIM projects. The responsible party shall be required to place appropriate signs at the project site during the implementation of the project indicating that the responsible party's involvement with the project is the result of a Department enforcement action. Once the project has been completed as required by the Consent Order, the sign may be taken down. However, the responsible party should not be allowed to post a sign at the site after the project has been completed indicating that the reason for the project being completed was anything other than a DEP enforcement action. For most environmental enhancement or restoration projects conducted on private property, the responsible party should provide a conservation easement to the Department for the land on which the restoration project took place. For an environmental enhancement or restoration project on public land, the responsible party may need to provide a conservation easement to the Department for private land adjoining the environmental enhancement or restoration project if it is required to protect the completed restoration project.
- b. **Environmental Information/Education Projects.** Any information or education project proposed must demonstrate how the information or education project will directly enhance the Department's pollution control activities. An example of an acceptable information or education project is one that involves training, workshops, brochures, PSAs, or handbooks on what small quantity generators of hazardous waste need to do to comply with RCRA. The information or education projects must not include recognition of the development of the projects by the responsible parties.
- c. **Capital or Facility Improvements.** Any capital or facility improvement project proposed must demonstrate how the capital or facility improvement project will directly enhance the Department's pollution control activities. An example of an acceptable capital or facility improvement project is one that involves the construction of a sewer line to hook up a failing package plant, owned and operated by an insolvent third party, to a regional sewage treatment plant. An example of an

unacceptable capital or facility improvement project is one that involves the planting of upland trees and shrubs.

- d. **Property.** A responsible party may propose to donate environmentally sensitive land to the Department as an in-kind penalty. Any proposals concerning the donation of land to the Department as an in-kind penalty must receive prior approval from the Department's Division of State Lands. The DEP may require proposals concerning the donation of land to another government entity or non-profit organization to include a conservation easement involving the donated property.

If an in-kind penalty is used in lieu of a cash penalty, the value of the in-kind penalty should be 1 and 1/2 times the amount of the penalty if paid in cash. Department staff should not be involved in choosing vendors or agents used by the responsible party in implementing an in-kind project. No in-kind penalty project should include the purchase or lease of any equipment for the Department.

10. Pollution Prevention Projects

Whenever practicable, enforcement staff should affirmatively consider and discuss with responsible parties the option of offsetting civil penalties with pollution prevention projects. Responsible parties should be provided materials on the definition of a pollution prevention project, the nature of preferred pollution prevention projects, a description of the information that would need to be submitted by the responsible party to the Department for a pollution prevention project to be approved, and a description and sample of a pollution prevention plan that would be attached as an exhibit to a consent order or settlement agreement.

Pollution Prevention Project in the context of enforcement is defined as a process improvement that can be classified in one of the following three categories:

- a. Source Reduction - Source reduction involves eliminating the source of pollution. It is accomplished when chemicals or processes that produce pollution are eliminated or replaced with chemicals or processes that cause less pollution. The ideal source reduction project is to produce goods with no pollution. This has the most benefit for the environment, and usually requires the greatest change in the production process. Source reduction can be as sweeping as terminating the production of products that cannot be manufactured without pollution, or it can be as

mundane as eliminating an unneeded cleaning step. Other examples of source reduction include:

- (1) Replacing a vapor degreaser with a re-circulating, water based cleaning process;
- (2) Using darker wood to eliminate solvents in ordinary staining;
- (3) Using UV cure paint to eliminate the solvents in ordinary paint;
- (4) Using a painted or plastic surface instead of chrome plated surface such as those found on lawnmower handles and the "Euro-look" cars and bumpers;
- (5) Eliminating the release of CFC by sending electronic parts for sterilization to a plant that can use pure ethylene oxide instead of the more common ethylene oxide/freon mix;
- (6) Keeping supplies and stock out of the weather to eliminate cleaning between processes;
- (7) Having a vendor use a no-clean rust inhibitor on incoming parts; and
- (8) Using propylene carbonate instead of acetone to clean tools used in fiberglass parts manufacturing.

b. Waste Minimization - Waste minimization involves the conservation of materials that are the source of pollution. This is accomplished when releases of chemicals to the environment are reduced. The ideal situation is a no-loss process. Waste minimization can be as expensive as replacing a regular vapor degreaser with one that has an airlock, or it can be as simple as using large, refillable containers to reduce the amount of material disposed of on the walls of emptied containers. Other examples include:

- (1) Using High Volume Low Pressure paint guns in place of High Pressure Low Volume paint guns in a painting line to reduce paint loss.
- (2) Using electrostatics with painting to reduce paint loss.

- (3) Keeping containers of liquids covered and cool to minimize evaporation.
 - (4) Using processes less likely to produce spills.
 - (5) Using rollers instead of sprayers to reduce evaporation loss from atomization.
 - (6) Adjusting floating lid tanks to keep fixed volume tanks full, reducing evaporation.
 - (7) Using counter current rinsing to reduce water use.
 - (8) Reducing dragout to minimize chemical depletion.
- c. On-Site Recycling - On-site recycling involves the reuse of materials that are the source of pollution. Process - chemicals are reused directly in the process or are revived in some manner and reused in either their original process or in some other operation within the facility. The ideal is total reuse of materials. On-site recycling can be as complex as an ion exchange system for the recovery of dissolved metals in a rinse water, or it can be as simple as a batch solvent still for the recycling of a cleaner. Other examples include:
- (1) Using a cart that rolls up to a vehicle, filters oil or coolant and returns the clean fluid to the vehicle;
 - (2) Using a solvent still to clean solvent for reuse;
 - (3) Filtering machining fluids for reuse;
 - (4) Installing a paint gun cleaner that filters and recirculates the cleaning solvent;
 - (5) Using electrowinning to remove dissolved metals from plating rinse water and allowing the water to be reused;
 - (6) Capturing solvent vapors from printing operations for their distillation and reuse.
- d. Pollution prevention does NOT include:

- (1) Off-site recycling such as sending used process water to be reused at a golf course, sending used motor oil or coolant off-site for reclamation or incineration, off-site solvent recovery, or regeneration of ion exchange columns;
- (2) Treatment such as: wastewater treatment to remove contaminants prior to disposal, evaporation of a waste stream to remove water from contaminants, sludge de-watering to reduce volume, air stack scrubbers to remove gaseous contaminants or catalytic incinerators to remove VOCs from air;
- (3) Disposal such as: landfilling or incineration.

Before a pollution prevention project should be approved to offset civil penalties, the responsible party must submit a waste audit report to the Department. The responsible party should be given the option of preparing the report on his or her own, by hiring a consultant or by requesting the help of the Department's Pollution Prevention Program staff. The waste audit report must include: 1) a waste audit of the facility or of the process or processes that are relevant to the proposed pollution prevention project; 2) a pollution prevention opportunity penalty calculation; and 3) a conceptual pollution prevention proposal.

The Department retains the option to approve or disapprove the submitted conceptual proposal depending upon the environmental merits of the proposal. The Divisions should provide programmatic guidance to the enforcement staff concerning the nature of preferred pollution prevention projects. Potential or actual economic benefits gained by the responsible party should not be used as a basis for denying an otherwise acceptable proposal for a pollution prevention project.

Once a conceptual pollution prevention project has been approved, the responsible party must prepare a pollution prevention project plan that must, when applicable, include information on the following: design, construction, installation, testing, training, maintenance/operation, capital/equipment costs, monitoring, reporting, and scheduling of activities.

No costs expended by a responsible party on a pollution prevention project that are necessary to bring the facility into compliance with

current law should be used to offset civil penalties. The following costs associated with pollution prevention projects can be used to offset up to 100% of civil penalties on a dollar for dollar basis:

- a. Preparation of a pollution prevention plan.
- b. Design of a pollution prevention project.
- c. Installation of a pollution prevention project.
- d. Construction of a pollution prevention project.
- e. Testing of a pollution prevention project.
- f. Training of staff concerning the implementation of a pollution prevention project.
- g. Capital/equipment needed for a pollution prevention project.

The following costs should not be used to offset a civil penalty:

- a. Cost incurred in conducting a waste audit and preparing a waste audit report (includes waste audit, opportunity assessment and conceptual proposal).
- b. Maintenance and operation costs involved in implementing a pollution prevention project.
- c. Monitoring and reporting costs.

A responsible party should not be given the opportunity to bank or transfer pollution prevention credits to offset future civil penalties.

Whenever possible, approval of specific pollution prevention projects should be obtained prior to entering into a consent order or settlement agreement. District Directors or Division Directors are authorized to approve pollution prevention proposals. If the specifics of a pollution prevention plan cannot be worked out in time to meet EPA timelines for taking formal enforcement action, the responsible party can be given the option of paying the civil penalty in cash or having a pollution prevention project reviewed and approved by a time certain to be identified in a consent order or settlement agreement.

For all approved pollution prevention projects, the responsible party must maintain/operate the pollution prevention project for a time certain after initial implementation, and must be required to submit at least one report discussing the status of implementation and the pollution prevention results of the project.

11. Review by the Office of General Counsel

In addition to any unique case identified by a Division or District Director, cases which exceed certain threshold penalties should be reviewed for legal defensibility by OGC. These three situations are:

- a. The case involves a proposed penalty of \$25,000 or more for non-RCRA cases.
- b. The case involves a proposed penalty of \$50,000 or more for RCRA cases.
- c. The case involves a proposed cash penalty of \$10,000 or more to be satisfied with an in-kind proposal that does not involve environmental enhancement or restoration.

All above-described penalty proposals should be submitted to the Office of General Counsel using the Department's form penalty authorization memo and routed to the Chief Deputy General Counsel for review to determine whether the penalty proposals are consistent with this policy.

12. Procedure for Implementation

In order for these guidelines to be implemented properly, adequate record keeping must be followed. The penalty determination matrices are attached.

Also attached is the penalty computation worksheet. This worksheet should be used in all cases in which a penalty is calculated and proposed, and (following applicable peer reviews) should be sent along with the draft Consent Order that is to be reviewed by OGC for final approval. If the penalty being sought includes an adjustment and/or a multi-day determination, fill out both Part I and Part II.

If the penalty amount calculated as the Total Penalties for all Violations in Part I is reduced after meeting with the responsible party, a new penalty computation worksheet or Part III of the penalty computation worksheet must be filled out. If the penalty is being reduced based upon new information concerning the facts or law relied upon to determine the number or character of the violations for which penalties are being sought, a new penalty computation worksheet should be

filled out reflecting the changes in the violations for which penalties are being sought or the characterization of the violations. If the penalty is being reduced for other reasons, Part III of the penalty computation worksheet must be filled out and signed and dated by the Director of District Management.

A narrative explanation should also be prepared in all cases to be reviewed by the Chief Deputy General Counsel to explain how the penalty proposal was reached, and in all cases in which the program specific guidelines are not being followed. This should be completed at the time the penalty is calculated and forwarded with the penalty computation worksheet.

Responsible Office: Office of General Counsel

ATTACHMENTS:

Penalty Calculation Matrix (Potable Water Cases),
(ATTACHMENT I)

Penalty Calculation Matrix (Cases other than PW, HS
or HW)
(ATTACHMENT II)

Penalty Calculation Matrix (Hazardous Substance Cases)
(ATTACHMENT III)

Penalty Calculation Matrix (Hazardous Waste Cases)
(ATTACHMENT IV)

Penalty Computation Worksheet,
(ATTACHMENT V)

ATTACHMENT I

PENALTY CALCULATION MATRIX* (Potable Water Cases)

EXTENT OF DEVIATION FROM REQUIREMENT

E N V I R O N M E N T A L H A R M		MAJOR	MODERATE	MINOR
	MAJOR	\$5,000 to \$ 4,000	\$4,999 to \$3,000	\$2,999 to \$2,300
	MODERATE	\$2,299 to \$1,600	\$1,599 to \$1,000	\$999 to \$600
	MINOR	\$999 to \$500	\$500 ¹⁾	\$500 ¹⁾

1) – Environmental Education may be an acceptable substitute

ATTACHMENT II

PENALTY CALCULATION MATRIX EXTENT OF DEVIATION FROM REQUIREMENT (For Cases other than PW, HS, or HW)

E N V I R O N M E N T A L H A R M		MAJOR	MODERATE	MINOR
	MAJOR	\$10,000 to \$ 8,000	\$7,999 to \$6,000	\$5,999 to \$4,600
	MODERATE	\$4,599 to \$3,200	\$3,199 to \$2,000	\$1,999 to \$1,200
	MINOR	\$1,199 to \$ 500	\$500 ¹⁾	\$500 ¹⁾

1) – Environmental Education may be an acceptable substitute

ATTACHMENT III

PENALTY CALCULATION MATRIX EXTENT OF DEVIATION FROM REQUIREMENT (Hazardous Substance Cases)

E N V I R O N M E N T A L H A Z A R D O U S S U B S T A N C E S		MAJOR	MODERATE	MINOR
	MAJOR	\$25,000 to \$ 20,000	\$19,999 to \$15,000	\$14,999 to \$11,000
	MODERATE	\$10,999 to \$ 8,000	\$7,999 to \$5,000	\$4,999 to \$3,000
	MINOR	\$2,999 to \$1,500	\$1,499 to \$500 ³⁾	\$500 ³⁾

This matrix should be used whenever the following two conditions exist:

- 1) The violation creates an imminent hazard as defined in Section 403.726(3), Florida Statutes: "If any hazardous substance creates an immediate and substantial danger to human health, safety, or welfare or to the environment."
- 2) The violation involves the release, discharge of a hazardous substance as defined in Section 403.703(29), Florida Statutes. Florida's definition of a hazardous substance refers to the federal definition of a hazardous substance under CERCLA. The CERCLA definition of a hazardous substance includes a list of substances that can be found at 40 CFR 302.4. In addition to the list of hazardous substances, hazardous substances can include any toxic pollutant listed under Section 307(a) of the Clean Water Act, any substance designated pursuant to Section 311(b)(2)(A) of the Clean Water Act, and any hazardous air pollutant listed under Section 112 of the Clean Air Act. The list of hazardous air pollutants should only be used as a basis for pursuing hazardous substance penalties if the pollutants have been released or discharged to the ground, surface water or ground water. All hazardous wastes are hazardous substances. If the violation involves a hazardous waste, the hazardous waste matrix should be used for that violation.
- 3) Environmental Education may be an acceptable substitute

ATTACHMENT IV

PENALTY CALCULATION MATRIX EXTENT OF DEVIATION FROM REQUIREMENT (Hazardous Waste Cases)

E N V I R O N M E N T A L H A Z A R D O U S W A S T E		MAJOR	MODERATE	MINOR
	MAJOR	\$37,500 to \$ 28,330	\$28,330 to \$21,250	\$21,250 to \$15,580
	MODERATE	\$15,580 to \$11,330	\$11,330 to \$7,090	\$7,090 to \$4,250
	MINOR	\$4,250 to \$2,130	\$2,130 to \$710 ¹⁾	\$710 to \$150 ¹⁾

Note: If the violation involving a hazardous waste results in human injury or death, or involves the deliberate disposal to the ground, surface water or groundwater, the \$50,000 per day statutory maximum penalty may be pursued.

1) – Environmental Education may be an acceptable substitute

ATTACHMENT V
PENALTY COMPUTATION WORKSHEET

Violator's Name: _____

Identify Violator's Facility _____

Name of Department Staff Responsible for the Penalty Computations:

Date: _____

PART I - Penalty Determinations

	Violation Type	ELRA Schedule	ENVIRON- MENTAL Harm	Extent of Dev.	Matrix Amount	Multi- day	Adjust- ments	Total
1	_____	_____	_____	_____	_____	_____	_____	_____
2	_____	_____	_____	_____	_____	_____	_____	_____
3	_____	_____	_____	_____	_____	_____	_____	_____
4	_____	_____	_____	_____	_____	_____	_____	_____
5	_____	_____	_____	_____	_____	_____	_____	_____
6	_____	_____	_____	_____	_____	_____	_____	_____
7	_____	_____	_____	_____	_____	_____	_____	_____
8	_____	_____	_____	_____	_____	_____	_____	_____
9	_____	_____	_____	_____	_____	_____	_____	_____

Total Penalties for all Violations: _____

Director of District Management
Division Director
Peer reviewed by Division: Yes () No ()

Date

Deputy Secretary (if required by these guidelines)

Date

DEP Secretary (if required by these guidelines)

Date

ATTACHMENT V

Part II - Multi-day Penalties and Adjustments

ADJUSTMENTS

Dollar Amount

Good faith/Lack of good faith prior to discovery: _____

Justification: _____

Good faith/Lack of good faith after discovery: _____

Justification: _____

History of Non-compliance: _____

Justification: _____

Economic benefit of non-compliance: _____

Justification: _____

Ability to pay: _____

Justification: _____

Total Adjustments: _____

MULTI-DAY PENALTIES

Dollar Amount

Number of days adjustment factor(s) to be applied: _____

Justification: _____

Or

Number of days matrix amount is to be multiplied: _____

Justification: _____

ATTACHMENT V

Part III - Other Adjustments Made After Meeting with the Responsible Party

ADJUSTMENT	Dollar Amount
Relative merits of the case:	
Resource considerations:	
Other justification:	

Date _____

Director of District Management or Division
Director

2. DEP 4/3/2012

Memo

Florida Department of Environmental Protection

Memorandum

TO: District Directors

FROM: Jeff Littlejohn, P.E., Deputy Secretary for Regulatory Programs

DATE: April 3, 2012

SUBJECT: Compliance & Enforcement Strategy for DEP's Air Regulation Program

In my November 16, 2011 memorandum to the Regulatory Directors, I provided guidance on the considerations critical to determining the appropriate response when noncompliance is found during an inspection. I also indicated I would seek further recommendations from the Divisions and Districts. You will also recall that the Division of Air Resource Management (DARM) made a presentation on this subject at last November's Regulatory Directors' meeting. I have reviewed your comments on that presentation and subsequent recommendations from DARM and intend that we proceed as follows with regard to inspections and addressing noncompliance in the Air program.

Compliance Inspections

DEP's compliance program must be designed to meet its federal commitments regarding inspection frequency and must be responsive to the public's complaints. At the same time, it is essential that we target available resources to maximize environmental benefit and public health protection based on Florida's Air program priorities.

Resource allocation is key to achieving priority outcomes. The Air program's objective is to secure *reasonable* assurance that air emission sources are operating in compliance with emission standards. If we have a source with documented historical compliance with regulatory requirements, we should not continue to allocate limited resources on mere rote inspections of that source. In addition, to maximize actual environmental benefit throughout Florida, DEP must target facilities that represent more significant environmental consequences. Our focus should be to achieve reasonable assurance of compliance at major air emission sources and permit-limited "minor" air emission sources rather than devoting excessive effort inspecting general permit and other minor air emission sources.

Accordingly, I am asking each District, in consultation with DARM, to develop an inspection strategy that focuses its compliance efforts along these lines, to be implemented no later than **May 1, 2012**. In developing the inspection strategy, please consider each source's historical compliance record (frequency and result) and the potential that noncompliance at the source will cause environmental harm. Prioritize your resources to achieve reasonable assurance of compliance first at sources with significant past noncompliance issues, followed by sources with minor noncompliance issues in the past. This strategy fulfills the new regulatory

performance objective to increase the frequency of compliance inspections at higher risk facilities.

Based on inspection data presented by DARM in November, implementation of these focused inspection strategies will free resources that can be redeployed to expand compliance assistance, including outreach, education and technical assistance to help regulated facilities avoid violations. This approach is consistent with DEP's primary regulatory objective—to achieve compliance with Florida's environmental laws. Implementing a focused inspection strategy in combination with increased compliance assistance measures, and assessing the results, presents a perfect opportunity to reevaluate workload in the Air program. Therefore, I am asking each District Director, in consultation with DARM, to present staffing recommendations to me no later than **July 1, 2012**. Those staffing recommendations may take the form of shifting resources within the Air program, more flexible organizational structures, redeployment to other district needs, position reductions, etc.

Enforcement Process

After a District identifies an instance of noncompliance, it must determine whether formal administrative or legal steps (i.e., enforcement) are necessary to attain, and continue to maintain, compliance. As I indicated in the November 16, 2011 guidance, if compliance can be achieved without enforcement, the outcome is usually more efficient. The process is often timelier, less costly, and allows the focus to be on fixing the problem while achieving positive environmental results and moving forward. DEP's longstanding policy is that compliance is the objective—enforcement, particularly imposition of penalties, is only one tool to achieving that end.

Determining whether achieving compliance without enforcement is the right approach, however, is not always straightforward. Sometimes rule and permit requirements are, unfortunately, ambiguous and need to be fixed rather than pointlessly "enforced." Or, a particular issue may have been considered in another district or state and you are simply not aware of that fact. DARM can help districts arrive at defensible enforcement decisions by providing this sort of context and promote general statewide consistency in compliance and enforcement decisions.

For these reasons, effective immediately, all District staff recommendations to initiate enforcement in the Air program will be peer-reviewed by DARM so that DARM may make an independent recommendation to the District Director. District staff recommendations are to identify the specific rules or permit conditions alleged to have been violated, include all facts necessary to conclude a violation has occurred, propose a penalty, and indicate why compliance without enforcement is not an appropriate alternative (e.g., egregiousness, non-responsiveness, historical noncompliance). I expect DARM to base its recommendation on this same information that District staff otherwise would provide directly to the District Director.

I ask that District staff prepare and submit to DARM any recommendation to initiate enforcement action no later than 30 days after the inspection or other activity raising the question of noncompliance. I ask that DARM review the District staff's recommendation and return its own recommendation in no more than 10 days. Districts and DARM should track and be mindful of these timelines, but I understand that strict adherence will not always be possible or reasonable. For example, District staff may require additional time to discuss the allegations with the source prior to recommending enforcement. Conversely, DARM may require additional time to discuss the allegations with the U.S. Environmental Protection Agency (EPA) prior to recommending enforcement.

Peer review does not supplant the existing enforcement process and should not create undue process. It is an intermediate step, intended to add value and inform the decision whether to initiate enforcement (i.e., issuing a Warning Letter, proposing a Consent Order, or issuing a Notice of Violation). Peer review would only occur after District staff concludes that compliance without enforcement is not the alternative that best achieves a positive environmental result.

DARM's review does not reduce or change District staff responsibility to make a well-founded, independent recommendation to initiate enforcement. DEP's [Enforcement Manual](#) remains an essential guide to the decision-making process. I do, however, encourage District staff to contact DARM's industry contacts for assistance in understanding relevant permit conditions or regulations early in the investigation process. This communication can help ensure that District staff correctly classifies perceived instances of noncompliance.

Similarly, DARM's input does not reduce or change the District Director's responsibility to make ultimate enforcement decisions. I encourage the District Directors to consider both thoughtful recommendations and make the decision that aligns with DEP's regulatory goals. I expect that the instances where District staff and DARM present significantly different recommendations will be few. If, after initial implementation of this effort, additional guidance is necessary, I ask that DARM prepare such guidance for my review no later than **July 1, 2012**.

Conclusion

DEP's compliance inspection efforts should meet federal requirements while effectively deploying resources to target higher risk emissions sources and maximizing environmental benefits. These benefits will be best realized by allocating DEP's compliance efforts first on sources with a history of non-compliance and secondly on major air emission sources and permit-limited "minor" air emission sources, rather than on general permit and other minor air emission sources. Effective immediately, all District staff recommendations to initiate enforcement will be peer-reviewed by DARM so that independent recommendations may be made to the District Director who, in turn, will make the enforcement decision. Timely

exchange of information and routine up front consultation will enable this intermediate step to better inform enforcement decisions once the District has determined that compliance without enforcement is not best alternative to achieve timely, positive environmental results.

3. Overview of the HPV Policy



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
ENFORCEMENT AND
COMPLIANCE ASSURANCE

August 25, 2014

MEMORANDUM

SUBJECT: Revision of U.S. Environmental Protection Agency's Enforcement Response Policy for High Priority Violations of the Clean Air Act: *Timely and Appropriate Enforcement Response to High Priority Violations- 2014*.

FROM: Phillip A. Brooks *PAB*
Director, Air Enforcement Division
Office of Civil Enforcement

TO: Regional Air Enforcement Division Directors, Regions 1-10
Regional Air Enforcement Branch Chiefs, Regions 1-10
Regional Counsels, Regions 1-10

CC: Environmental Council of States
National Association of Clean Air Agencies
Association of Air Pollution Control Agencies

Attached is the revision to the U.S. Environmental Protection Agency's (EPA) enforcement response policy for High Priority Violations of the Clean Air Act (CAA) - *Timely and Appropriate Enforcement Response to High Priority Violations- Revised 2014*. This revision supersedes *The Timely and Appropriate (T&A) Enforcement Response to High Priority Violations (HPVs)* issued in 1998. This revision reflects what the EPA has learned and how enforcement decisions have changed over the past 15 years.

The EPA considers all violations important. HPVs, however, are a subset of violations of regulations authorized by the CAA that warrant additional scrutiny to ensure that state, local, territorial and tribal agencies (referred to collectively as enforcement agencies) respond to such violations in an appropriate manner and, if needed, have access to federal assistance.

This policy revision reflects two substantial changes from the 1998 policy that the EPA determined is appropriate after consultation and input from our enforcement partners. First and

foremost, we have refined the criteria of what constitutes an HPV to sharpen our focus on CAA violations that experience shows are the most likely to be significant for human health and the environment or for maintenance of strong CAA programs. The EPA has reduced the general categories of violations that are designated as HPVs from ten to six, and has eliminated the matrix criteria for emission limitation violations.

Second, this revision recognizes the simple fact that even though a violation falls within a category of HPVs, not every such violation warrants additional tracking and attention at a national level. Identification of potential violations as HPVs should not be restrained by concerns that every such identification imposes an inalterable duty to bring a formal enforcement action. If it is later determined that such a violation does not warrant additional tracking and attention, enforcement agencies should be able to re-prioritize their efforts. Thus, this policy revision provides explicit mechanisms to remove those qualifying matters from HPV oversight.

These two major changes are intended to align the EPA's expectations for enforcement agencies with the reality of enforcement decisions to construct an approach that (1) enhances the EPA's ability to meaningfully monitor progress in an important group of enforcement matters, and (2) fosters a cooperative approach to case management with a focus on protection of public health.

Successful implementation of this policy depends on the ongoing communication and cooperation between the enforcement agencies and the EPA Regions. This revision continues to require regular regional consultation, which should now occur on a quarterly basis, with our enforcement partners to discuss HPVs and the appropriate response. Regions are expected to keep specific records regarding these consultations. Enforcement agencies are also responsible for keeping records on HPVs they identify and for reporting specific information about the HPV as required by the current Information Collection Request (ICR) and any subsequent revisions.¹ The ICR contains the minimum requirements that enforcement agencies must report into the EPA's national compliance database. Enforcement agencies should regularly consult the *Clarification Regarding Federally-Reportable Violations for Clean Air Act Stationary Sources*, March 22, 2010, and any subsequent revisions,² regarding reporting requirements for violations at CAA stationary sources. Because HPVs are a subset of federally enforceable violations, enforcement agencies should be familiar with both policies to ensure that the policies are consistently implemented and that information shared with the public about pollution and violations that affect their communities is as accurate as possible.

In order to ease the transition to this revised policy and the revised Air Module in the EPA's Integrated Compliance Information System or ICIS- Air, EPA expects enforcement agencies to implement this revision beginning October 1, 2014, the beginning of EPA's fiscal year. ICIS-Air is expected to be available for data entry by the end of October. The EPA Regional offices are asked to ensure that this policy is promptly transmitted to all affected enforcement agencies in their regions.

¹ Source Compliance and State Action Reporting (Renewal), EPA ICR Number 0107.10, OMB Control Number 2060-0096, EPA-HQ-OECA-2010-0777. EPA has begun the process for renewing the ICR and expects the first Federal Register notice to be published in August 2014.

² EPA anticipates a revision to the policy regarding federally reportable violations in 2014.

Timely and Appropriate Enforcement Response to High Priority Violations- Revised 2014

I. INTRODUCTION

This policy is a significant revision of *The Timely and Appropriate (T&A) Enforcement Response to High Priority Violations (HPVs)* issued in 1998 (1998 Policy). The 1998 Policy anticipated the need for revisions based upon experience implementing the policy. This revision reflects what the EPA has learned and how enforcement decisions have changed over the past 15 years. This policy supersedes the previous version issued in 1998. Nothing in this policy is intended to change the underlying applicable requirements or to imply that compliance must be achieved on a less than continuous basis. Furthermore, this policy cannot be used to establish new standards or limits, is not binding on any party and cannot be relied on to create any rights enforceable by any party. The EPA reserves the right to change this policy at any time without public notice.

The EPA designed this policy as a management tool for conducting oversight of the response to six specific categories of violations of certain federally enforceable regulations authorized by the Clean Air Act (CAA).¹ These specific six categories of violations are called High Priority Violations (HPVs). This policy applies only if an HPV occurs at either a major source² as defined in CAA § 501(2) or a minor stationary source (*i.e.*, a source that is not a major source) that is subject to a Compliance Monitoring Strategy³ plan for a specific enforcement agency. State, local, territorial and tribal agencies (referred to collectively as enforcement agencies) are responsible for reporting data about these violations into Air module of EPA's national database, Integrated Compliance Information System (ICIS-Air), in compliance with the current Information Collection Request (ICR) and any subsequent revisions.⁴

The EPA considers all CAA violations important. HPVs, however, warrant additional scrutiny to ensure that enforcement agencies respond to such violations in an appropriate manner and have access to federal assistance if need be.

¹ These include not only the regulations implementing the CAA (e.g., 40 C.F.R., Parts 52, 60, 61 and 63), but also state, local, tribal or territorial regulations approved by EPA to implement the requirements of the Clean Air Act. "CAA" is used in this policy to represent collectively the CAA and these federally enforceable regulations.

² A synthetic minor source, *i.e.*, a source that has taken a permit limit to remain a minor source of emissions, is subject to this policy as a major source if the source's violation results in the actual emissions exceeding the major source thresholds.

³ See <http://www.epa.gov/compliance/resources/policies/monitoring/caa/cmsspolicy.pdf>

⁴ The ICR contains the minimum data requirements for (1) determining CAA stationary source compliance and (2) the data required to be reported to the national data system, including specifics about HPVs. Source Compliance and State Action Reporting (Renewal), EPA ICR Number 0107.10, OMB Control Number 2060-0096, EPA-HQ-OECA-2010-0777.

This revision reflects several substantial changes that the EPA determined are appropriate after consultation and input from enforcement agencies and in light of our experience under the 1998 Policy. First and foremost, this revision contains refined criteria of what constitutes an HPV to sharpen our focus on CAA violations that experience shows are the most likely to be significant for human health and the environment or for maintenance of important programs. The EPA considers an HPV a violation of a federally enforceable CAA requirement that is (1) likely to result in impacts that pose a significant risk to human health and/or the environment from direct or indirect release of air pollutants or (2) may harm the ability to implement CAA programs.

Second, this revision recognizes the simple fact that even though a violation falls within a category of HPVs, not every such violation warrants additional tracking and attention at a national level. Identification of potential violations should not be restrained by concerns that every such identification imposes an inalterable duty to bring a formal enforcement action. This policy seeks to encourage enforcement agencies to (1) quickly identify which violations are likely HPVs, (2) report them into ICIS-Air as soon as possible after the HPV designation is made, and (3) promptly engage sources thought to be in violation. The EPA considers prompt identification and communication to the source as key elements in resolving a violation. If it is later determined that a violation previously designated as an HPV does not warrant the additional tracking and attention outlined in this policy, enforcement agencies should be able to re-prioritize their efforts. Thus, this policy revision provides explicit mechanisms to remove those qualifying matters from HPV oversight.

These two major changes are intended to align the EPA's expectations for enforcement staff with the reality of enforcement decisions. The essence of enforcement decisions is the element of judgement applied to a particular set of laws and facts, in light of competing demands for enforcement resources. This policy recognizes this basic truth and seeks to construct an approach to oversight that (1) enhances the EPA's ability to meaningfully monitor progress in an important group of enforcement matters and (2) fosters a cooperative approach to case management decisions that focuses more energy on protection of public health.

The EPA expects enforcement agencies responsible for enforcing the CAA to address all violations of air pollution requirements regardless of whether they are designated as an HPV. The EPA further expects enforcement agencies to address HPVs consistent with this policy in order to resolve the violations and collect the appropriate penalties. This revision outlines expected responses to HPVs and, where appropriate, timelines for such responses. Enforcement agencies should design their activities with these expectations in mind. Although this policy outlines how agencies should respond to HPVs, the EPA recognizes that some agencies may need assistance from time to time. The HPV policy provides a process to identify those violations that may require assistance from the EPA so that HPVs can be promptly and properly identified and addressed as expeditiously as possible.

As a final matter, the EPA recognizes that the rapid pace of development of real-time monitoring capabilities and a growing use of electronic reporting of compliance-related data by facilities is likely to have a significant impact on enforcement practices in the coming years. This data flow holds the potential for improvement of enforcement targeting practices, public transparency and assessment of compliance trends and issues. The EPA expects that this policy may likely be revised in future years to reflect experiences and evolution of CAA enforcement, including accounting for new real-time monitoring capacities.

II. HIGH PRIORITY VIOLATION CRITERIA

When an enforcement agency detects a violation of the CAA, it should compare the violation's characteristics with the following criteria to determine if the violation is an HPV.⁵ The criteria below apply only to a violation that occurs at (1) a major source as defined in CAA Sec. 501(2) (Title V Major Source) or (2) a non-Title V Major Source, otherwise known as a minor or area source, with a CMS plan. It is not appropriate to apply the criteria to violations that the EPA is not authorized to enforce, *i.e.*, violations of requirements that are not federally enforceable.

Criterion 1 – Failure to obtain a New Source Review (NSR) permit (for either attainment or non-attainment areas) and/or install Best Available Control Technology (BACT) or Lowest Available Emission Reductions (LAER) (and/or obtain offsets) for any new major stationary source or major modification at a major stationary source. This criterion includes a violation by a synthetic minor stationary source of an emission limit or permit condition such that the source's actual annual emissions exceed (or are expected to exceed) the major stationary source threshold as defined in the applicable NSR regulations.

Criterion 2 – A violation of any federally enforceable emission limitation, emission standard or operating parameter, which is a surrogate for emissions, that was issued pursuant to Title I, Part C or D, of the CAA and the implementing regulations, or the equivalent provision(s) in an EPA-approved implementation plan (state, local, territorial or tribal) where such violation continued (or is expected to continue) for at least seven days. This criterion includes violations that, while not necessarily continuous for 168 hours, recur (or recurred) regularly or intermittently for at least seven days. EPA presumes that the violation is continuing unless the enforcement agency can document sufficient evidence to conclude that the violation is no longer ongoing and is unlikely to recur.

Criterion 3 – A violation of any emission limitation, emission standard or operating parameter, which is a surrogate for emissions, in an applicable Standards of Performance for New Sources (NSPS) (Part 60) or in an analogous regulation adopted by state, local, tribal or territorial

⁵ If, after additional investigation or analysis, the enforcement agency determines that the set of facts that presented a violation, which had previously been designated an HPV, does not meet any of the HPV criteria – the enforcement agency should correct the classification in the national database, ICIS-Air, thereby removing the violation from its list of HPVs, and notify the Region.

authorities and the EPA has granted delegation to enforce such regulations in lieu of the NSPS where such violation continued (or is expected to continue) for at least seven days. This criterion includes violations that, while not necessarily continuous for 168 hours, recur (or recurred) regularly or intermittently for at least seven days. The EPA presumes that the violation is continuing unless the enforcement agency can document sufficient evidence to conclude that the violation is no longer ongoing and is unlikely to recur.

Criterion 4 – A violation of any emission limitation, standard or surrogate parameter (emission or operating) of an applicable National Emission Standards for Hazardous Air Pollutants (NESHAP) (Parts 61 and 63) or in an analogous regulation adopted by state, local, tribal or territorial authorities and EPA has granted delegation to enforce such regulations in lieu of the NESHAP where such violation continued (or is expected to continue) for at least seven days. This criterion includes violations that, while not necessarily continuous for 168 hours, recur (or recurred) regularly or intermittently for at least seven days. The EPA presumes that the violation is continuing unless the enforcement agency can document sufficient evidence to conclude that the violation is no longer ongoing and is unlikely to recur.

Criterion 5 – A violation that involves federally enforceable work practices, testing requirements, monitoring requirements, recordkeeping or reporting that substantially interferes with enforcement of a requirement or a determination of the source's compliance. The determination of what is substantial shall be part of a case-by-case analysis/discussion between the EPA Region and the enforcement agency.

Criterion 6 – Any other violations specifically identified and communicated to enforcement agencies from time to time by the Director, Air Enforcement Division (AED), U.S. EPA (general applicability) or as mutually agreed upon between the enforcement agency and corresponding EPA Region (case-by-case). For example, an enforcement agency believes an emission violation warrants designation as an HPV even though the violation lasted (or will last) for less than seven days.

III. INITIAL HPV IDENTIFICATION- DAY ZERO

Once an enforcement agency identifies a potential violation of a federal requirement, prompt determination whether the violation meets the HPV criteria is critical to achieving the goals of this policy. When an enforcement agency first receives information that indicates a potential violation (*e.g.*, through a compliance evaluation, stack test results, continuous emission monitoring system report, etc.), the agency is to determine whether the potential violation meets any of the HPV criteria. The enforcement agency should take prompt steps to gather any additional information needed to determine whether the violation is an HPV.

HPV identification should occur as soon as possible after the enforcement agency receives information sufficient to determine whether a potential violation meets the HPV criteria. The date of the initial identification of a violation as an HPV is called Day Zero for purposes of

evaluating timeliness of actions in accordance with this policy. Day Zero will be deemed to have occurred on the earlier of either (1) the date the agency has sufficient information to determine that a violation occurred that appears to meet at least one HPV criterion or (2) 90 days after the compliance monitoring activity that first provides information reasonably indicating a violation of a federally enforceable requirement. Stated differently, the EPA expects that the enforcement agency will act expeditiously to determine whether information in its possession indicates a violation is an HPV as defined in this policy. Timeliness of the enforcement response is measured from the Day Zero.

In accordance with the ICR, the enforcement agency must record all HPVs for a source into ICIS-Air, including which of the six criterion each violation meets. In addition to designating the HPV criterion in the database, the enforcement agency must also record the Day Zero, the pollutant, where appropriate, and the applicable CAA program for each HPV. The enforcement agency must also indicate in ICIS-Air which compliance monitoring activity (or activities) relate to the HPV, which is referred to as the Discovery Action.

The enforcement agency should discuss newly identified HPVs with the Region in regular consultations and resolve any issues concerning the HPV designation during the consultation. Such questions may include whether the violation meets the HPV criterion, which agency will lead the enforcement efforts, or if there are any viable defenses to the violation such that pursuing the violation is not warranted (*e.g.*, exceedance of an NSPS limit that resulted from a malfunction).

The EPA recognizes that after additional investigation, the enforcement agency may determine that even though a violation meets an HPV criterion, it may not warrant the additional oversight envisioned for HPVs. If the enforcement agency makes such a determination, even after reporting the HPV into ICIS-Air, it may confer with the Region about removing the violation from its list of HPVs. Reasons for removing an HPV from an enforcement agency's list are:

- A. Further development of the evidence leads to a conclusion that even with additional efforts, it is unlikely that enough evidence can be developed to support or prevail on the claim that would constitute an HPV; or
- B. The HPV does not involve (1) on-going violations or an identifiable threat to the public and (2) expenditure of resources on oversight of the enforcement agency's handling of the violation is not in the public interest.

A case-specific consultation must occur between the enforcement agency and the EPA, and both agencies (*e.g.*, the State and the Region) must agree that it is appropriate to no longer pursue the violation in accordance with this policy. The Region must record this decision in a document that is preserved as an agency record. At a minimum, this record must (1) identify the source, (2) list the violation that had been identified as an HPV, (3) contain a statement that identifies one of the above reasons for changing the designation, and (4) identify the persons that concurred in the

decision. A violation may be removed from an enforcement agency's list of HPVs at any time (*e.g.*, even after the violation has been addressed) so long as the consultation and concurrence process described above has occurred. The enforcement agency records the removal of violation from its list of HPVs by entering the HPV Designation Removal Basis and the Removal Basis Date under the Air Violations link in the ICIS-Air Case File module.

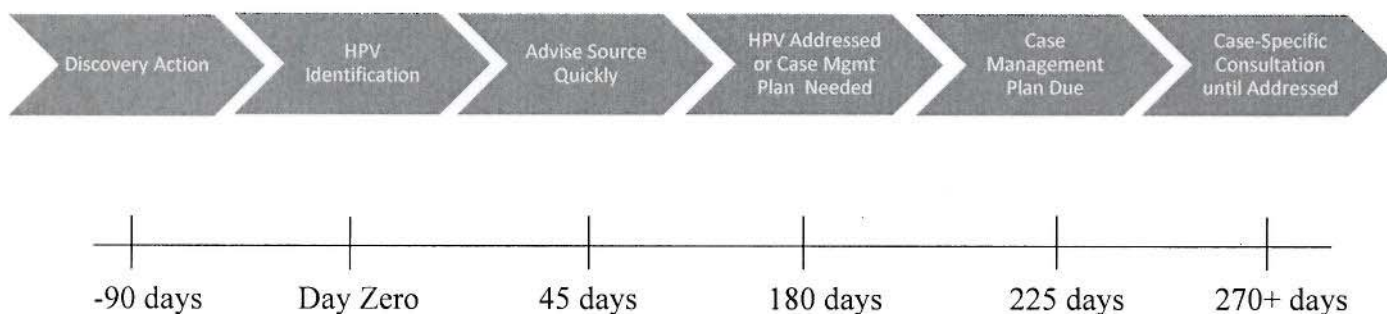
Removing a violation from an agency's list of HPVs only means that federal and non-federal enforcement agencies have concluded that the matter should no longer be subject to additional oversight under this policy. The EPA still expects the violation to be addressed, as appropriate.

IV. INTER-AGENCY COMMUNICATION REGARDING HPVS

Unless specifically agreed to by the Director, AED, Regions are expected to have regular consultations with the enforcement agencies to discuss HPVs. These consultations are to occur at least quarterly.⁶ EPA Regions are also expected to maintain records of dates of the regular consultations for at least five years. These regular consultations are intended to facilitate:

- Maintenance of a common, agreed upon list of HPVs for each enforcement agency;
- Monitoring of actions designed to address HPVs consistent with Section V. *Appropriate Enforcement Response for HPVs*; and
- Accuracy of records indicating compliance with the policy (*e.g.*, identifying, addressing and resolving HPVs).

V. APPROPRIATE ENFORCEMENT RESPONSE FOR HPVS



1. Not more than 45 days after Day Zero, the enforcement agency must advise⁷ the source that the violation has been identified. The enforcement agency must document the form and date of this initial communication in its enforcement records. This initial communication includes issuance of any notice of violation required under Section 113 of the CAA or corresponding state

⁶ EPA is aware that some of the Regions may need a different schedule due to large numbers of state, local, territorial, or tribal enforcement agencies. Regions desiring an alternative schedule should request a written concurrence from the Director, AED.

⁷ This notification is not intended to address what is required by statute for jurisdictional purposes. Agencies should make their own determinations as to what is sufficient to meet the statutory jurisdictional requirements.

or tribal implementation plan as well as other written notices, meetings, teleconferences and electronic correspondence. This requirement is intended to ensure that the enforcement agency informs the source as soon as possible of the agency's findings so that the source is on notice of the need to promptly correct conditions giving rise to the violation(s) or potential violation(s). A source's return to compliance does not relieve a source from liability for violations, or automatically remove the need for further enforcement response. Prompt action, however, is necessary for public protection.

2. The enforcement agency should attempt to address an HPV within 180 days of Day Zero. The enforcement agency can "address" an HPV using one of the following actions: (1) issuing a legally enforceable order that requires immediate action to come into compliance with the requirement violated; (2) issuing a legally enforceable order that imposes penalties, where the source has demonstrated that it is currently complying with the requirement violated; (3) issuing a legally enforceable order that imposes a schedule on the source to comply with the requirement violated and penalties for the violation; or (4) transferring the matter to an organization with authority to initiate a civil or criminal judicial action (also known as a referral). Examples of appropriate addressing actions are:⁸

- Filing a complaint and/or lodging a judicial consent decree;
- Consent Agreement and/or Final Order approved by a judicial officer;
- Referral to the Attorney General (or equivalent) for a state, territorial or tribal enforcement action;
- Order issued pursuant to state, local, territorial or tribal legal authority;
- Proposed SIP or FIP provision;⁹
- EPA referral for civil action to the Department of Justice (DOJ);
- EPA referral for criminal action to DOJ;
- CAA Sec. 113(a) order;
- CAA Sec. 167 order; or
- CAA Sec. 113(d) order.

3. If an HPV is not addressed within 180 days from Day Zero, the enforcement response to the violation will be deemed untimely unless the enforcement agency demonstrates during the next quarterly consultation with the Region that it has a case-specific development and resolution timeline. The purpose of the timeline is to allow the enforcement agency to develop significant milestones towards addressing the violation. The EPA recognizes that this timeline is an initial plan and may need revision as new information comes to light. Never-the-less, the very idea of "timely and appropriate enforcement" requires some benchmarks for evaluation. In this policy,

⁸ For the purpose of this policy, Addressing Action no longer includes "Source Returned to Compliance by EPA or the State." The enforcement agency should choose another action, if appropriate, or use the mechanism for removing the HPV designation in the national database as discussed in this policy.

⁹ A proposed SIP or FIP also resolves a violation.

the EPA acknowledges the legitimate observation that a single target of 180 days from Day Zero is not the only way to evaluate an enforcement agency's response to a violation. This policy, therefore, includes the option for enforcement agencies to provide their own assessment of appropriate benchmarks for addressing and resolving individual HPVs that are not addressed within 180 days so long as the plan is shared with the Regions.¹⁰ The EPA would expect that under normal circumstances, a case development and resolution timeline should be in place within 225 days from Day Zero (an additional 45 days from the 180 day period discussed above).

Case development and resolution timelines need to include: (1) the pollutant(s) at issue; (2) an estimate of the type and amount of any on-going or recurring emissions in excess of the applicable standard; and (3) specific milestones for case resolution. Specific milestones for an enforcement agency's timeline should include, but are not limited to:

- A proposed date for the start of settlement negotiations and a proposed timeline for such negotiations;
- A proposed date for commencing an enforcement action (administrative or judicial); and
- Other steps the enforcement agency chooses that are important for case resolution.

Also, where applicable, the plan should also identify activities where the EPA can assist in the development or prosecution of the case, or otherwise help address the violation. The enforcement agency should have this plan finalized before the initial case-specific consultation with the Region occurs (see next step); however, the enforcement agency is not required to submit a written plan to the EPA.

4. For an HPV that is not or will not be addressed within 180 days of Day Zero, the Region is expected to have an initial case-specific consultation with the enforcement agency no later than the next quarterly consultation (*i.e.*, within 270 days of Day Zero). The Region and the enforcement agency should discuss the case development and resolution timeline in the case-specific consultations. The case-specific consultation can occur during the regular consultations required in Section IV or in a separate meeting, so long as the first one occurs within the 270 days of Day Zero. The Region should record the Consultation Date of the case-specific consultation under the Air Violations link in the Case File.

5. Case-specific consultations should occur at least every three months after the initial case-specific consultation until the HPV is addressed. Subsequent case-specific consultations can

¹⁰ While the EPA understands and appreciates that the complexity of specific multimedia enforcement actions can make it difficult to address violations in a timely manner, going several years without an addressing action is not acceptable. In these cases, the EPA may suggest that the enforcement agency address the CAA violations of these cases separately. This would be especially true when dealing with larger facilities and municipalities, and where overall compliance has not yet been achieved.

occur during the regular quarterly consultations or in a separate meeting. Regions should document the dates of subsequent case-specific consultations. At these consultations, the enforcement agency is expected to discuss (1) case status and development expectations for at least the upcoming three months and (2) whether additional actions are necessary to address the HPV and the additional time required to do so. The enforcement agency will continue to be the lead agency for the enforcement efforts, with the EPA providing assistance as necessary, so long as it is appropriate to do so, taking into consideration the protection of public health and the environment. In limited cases it may be appropriate for the EPA to take the lead for enforcing certain violations.

6. All efforts should be made to resolve the enforcement action addressing the violations as soon as possible; however, there are no timelines for resolving a matter. "Enforcement Action Resolved" means that: (A) in a filed judicial action (state or federal), a court of competent jurisdiction has entered an order adjudicating the case and the order is final (such order may include a compliance schedule or other injunctive relief to be performed after the order becomes final); (B) for violations addressed administratively or through any non-judicial process, all penalties have been collected, all SEPs are completed, and the source is confirmed to be in compliance with respect to all HPVs included in the administrative order or non-judicial agreement¹¹; or (C) an enforcement agency has proposed revision to its implementation plan (e.g., state implementation plan or tribal implementation plan) regarding the violation. In some cases, violations can be addressed and resolved with the same action or at the same time.

7. If an HPV has not been addressed within 24 months from Day Zero, the Region shall notify the Director, AED, of the source and the violation, and provide an assessment of whether direct federal action is warranted. AED will review any HPV identified under this paragraph with the respective Region on no less than a semi-annual basis until it is addressed.

VI. PENALTIES

All civil penalties for HPVs should be sufficient to achieve effective deterrence for the source subject to enforcement and for the regulated community as a whole. The EPA expects all enforcement agencies resolving an HPV to assess penalties that recover economic benefit and contain a component reflecting the gravity (seriousness) of the violation.¹²

¹¹ "Non-judicial process" and "non-judicial agreements" include consensual agreements between the enforcement agency and the source that are not authorized by any legal authority. While these agreements are not addressing actions as defined in this policy, completion of the agreements (*i.e.*, all penalties have been collected, all SEPs are completed, and the source is confirmed to be in compliance with respect to all HPVs included in the agreement), address and resolve the HPVs simultaneously.

¹² For additional discussion of calculating appropriate penalties for CAA violations, see *The Clean Air Act Stationary Source Penalty Policy*.

All penalty calculations must be documented in the enforcement agency's file.¹³ In matters where no penalty is assessed or where a difference exists between the assessed and collected penalty, the enforcement agency should provide an explanation in its file.

VII. REPORTING HPVs INTO ICIS-AIR

Enforcement agencies are required to report all HPVs and the resulting enforcement response into the EPA's national database, ICIS-Air. The EPA considers timely and accurate reporting into ICIS-Air critical to the EPA's oversight role regarding CAA violations. The following discusses how enforcement agencies should report information about HPVs into ICIS-Air.¹⁴

1. Initial HPV Identification

Enforcement agencies will report the initial HPV identification into the Case File module in ICIS-Air. The EPA designed the Case File module to capture data that an enforcement agency normally reports regarding violations of the CAA at a specific source. An enforcement agency will need to add and save a Case File in ICIS-Air when it suspects or knows of a violation or violations at a specific source. A Case File can contain information about more than one violation at a source. The enforcement agency must report the following information concerning each HPV into an ICIS-Air Case File:

- Violation Type - When a violation meets one of the six HPV criterion, the enforcement agency should designate the violation as an HPV by reporting one of the six criterion from the Violation Type dropdown menu or reference table;
- Pollutant - A pollutant must be reported on Criteria 1-5. A pollutant is optional for Criterion 6;
- Program - The enforcement agency must designate the applicable CAA program violated (*e.g.*, NSPS, SIP, NESHAP); and
- HPV Day Zero Date - Each HPV must have a Day Zero. This date is the earliest date that the enforcement agency makes the initial identification of a violation as an HPV (*see* Section III for additional discussion).

2. Discovery Action(s)

After the Case File is added and saved, the enforcement agency must link the Case File to the corresponding Discovery Action or Actions. Generally, the enforcement agency has already entered the Discovery Action into ICIS-Air as a Compliance Monitoring Activity. If not, the

¹³ States that are required by statute to maintain the detailed information on the calculations, assessment and negotiation of final penalties in a different form or file have the discretion to do so. However, such calculations should be made available to EPA on request.

¹⁴ Additional information regarding reporting into ICIS-Air can be found in the ICIS-Air Help Files and Compendium of Business Rules.

enforcement agency will need to enter the compliance monitoring activity into ICIS-Air and then link it to the Case File as the Discovery Action.

3. Date that the Enforcement Agency Advised the Source of HPV Identification

The enforcement agency must record that it advised the source of the violation by entering the Method of Advisement and Date the communication took place in the Air Violations link on the Case File module. If an enforcement agency uses a formal notice of violation, as defined in the policy on federally-reportable CAA violations,¹⁵ the agency should enter the informal enforcement action in the Enforcement Action module.

4. Formal Enforcement Responses to HPVs

Enforcement agencies must report subsequent formal enforcement action(s) taken to address and resolve an HPV in the Enforcement Action module of ICIS-Air. There are two options for reporting enforcement actions into the module: Administrative Formal or Judicial. The enforcement agency will need to choose one of these options depending on the forum for its enforcement action and add an Enforcement Action into ICIS-Air. In order to add an Enforcement Action, the enforcement agency must report the following information in the Enforcement Action module under Basic Info:

- Linked Facility – The enforcement Agency must link the Enforcement Action, either Administrative Formal or Judicial, to a Case File;
- Enforcement Action Type – The specific enforcement tool must be identified (*e.g.*, Administrative Order for an Administrative Formal Enforcement Action); and
- Program Violated (*e.g.*, MACT, NSR).

In ICIS-Air, some information about enforcement responses is recorded under the Milestones link under the Administrative Formal or Judicial Enforcement Action. The enforcement agency must report the following Milestones in an Enforcement Action for an HPV:

- Administrative Formal – Actual Date of the Complaint Filed/Proposed Order; or
- Judicial – Actual Date Referred to a State Attorney General.

The enforcement agency must also report the following information under the Final Order link in an Enforcement Action for an HPV:

- Administrative Formal – The Final Order Issued Date and the date the enforcement response is resolved, *i.e.*, Air Resolved date; or

¹⁵ EPA anticipates a revision to the *Clarification Regarding Federally-Reportable Violations for Clean Air Act Stationary Sources*, March 2010.

- Judicial – The Final Order is Entered Date.

5. Removing a Violation from an Agency's list of HPVs

Enforcement agencies may need to remove a violation from its list of HPVs because it does not intend to or cannot address and/or resolve the violation through an enforcement response, *i.e.*, an action that is not authorized by any statute or regulation. *See supra* Section III. Once it is agreed that the violation should no longer be tracked as an HPV, the enforcement agency should enter the HPV Removal Designation Basis and Removal Basis Date for the Air Violation in the Case File Module.

6. Penalty Assessed

The enforcement agency must report the Penalty Assessed to be Paid in the Penalty section under the Final Order link in an Enforcement Action for an HPV. If multiple agencies are involved in the enforcement action, the enforcement agency must report the penalty amount that each agency is to receive.

7. Lead Change

A lead change may apply to a Case File or to an individual HPV. If the lead change applies to the Case File, the originating agency shall report the lead change on the Case File Pathway Activity under resolving action. The agency taking lead of all the violations in a Case File will need to open a new Case File and add the violations. If an agency takes lead of an individual HPV, the originating agency will indicate a Lead Change as the Addressing Action in the Other field on the Case File's Add/Edit Air Violations page and select Mark for Deletion on the row corresponding to the HPV for which the lead was assumed by another agency. The agency taking lead of an individual HPV will need to either open a new Case File and add the HPV or add the HPV to an existing Case File.