

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?