

**STATE OF FLORIDA
DEPARTMENT
OF
ENVIRONMENTAL PROTECTION**



Conditions of Certification

**Miami-Dade County Department of Solid Waste Management
Miami-Dade Resources Recovery Facility**

PA77-08F

XXXXXX XX, XXXX

SECTION A: GENERAL CONDITIONS

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Attachment A	Certified Site/Facilities Delineation Map(s)
Attachment B	Surface Water Management System Plan(s)
Attachment C	Mitigation Plan(s)
Attachment D	Monofill Operations Plan
Attachment E	Groundwater Monitoring Plan
Attachment F	Closure Plan

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I. SCOPE

A. Pursuant to the Florida Electrical Power Plant Siting Act (PPSA), Sections 403.501-.518, Florida Statutes (F.S.), and Chapter 62-17, Florida Administrative Code (F.A.C.), this certification is issued to Miami-Dade County Department of Solid Waste Management (MDCDSWM) as owner/operator and Licensee of the Miami-Dade County Resources Recovery Facility (MDCRRF). Subject to the requirements contained in these Conditions of Certification (Conditions), MDCDSWM will demolish the Resources Recovery Facility and associated facilities including four decommissioned municipal waste combustors and two steam turbine electrical generators. The Site shall be maintained in accordance with this License throughout demolition and site closure. This site is located on a 160-acre site at 6990 Northwest 97th Avenue in Miami, Florida. UTM coordinates are: Zone 17, 564.30 km East and 2857.40 km North; and the latitude/longitude coordinates are: 25°50'06" North/80°21'30" West.

B. The certified facility includes but is not limited to the following major associated facilities:

- Stacks (to be demolished)
- Cooling Towers (to be demolished)
- Ash Processing and Storage Buildings (to be demolished)
- Trash/Garbage Receiving and Processing Buildings (to be demolished)
- Powerhouse (Boiler and Turbine Generator Buildings) and Air Quality Control System (to be demolished)
- Tire Building (to be demolished)
- Maintenance Building (to be demolished)
- Surface Water Management System
- Guard House
- Office Trailer
- Water And Sewer Department Pump Station
- Truck Scale
- Ash landfill located at 6990 NW 97th Avenue, and associated groundwater monitoring wells

C. These Conditions, unless specifically amended or modified, are binding upon the Licensee and shall apply to the construction, operation, maintenance, and closure of the certified facilities. If a conflict should occur between the design criteria of this certified facility and the Conditions, the Conditions shall prevail unless amended or modified. In any conflict between any of these Conditions, the more specific condition governs.

D. Within 120 days following approval of a change to Site boundaries, the Licensee shall submit to the Department an updated land survey (or legal description) and aerial photograph delineating the new boundaries of the Site. The survey and aerial photograph shall be identified as "Site Delineation" and attached hereto as part of Attachment A. Absent the above description/delineation of the Site, the Department will consider the perimeter fence line of the property on which the Certified Facilities are located to be the boundaries of the Site.

[Sections 403.511, F.S.; Rule 62-17.205(2), F.A.C.]

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II. APPLICABLE DEPARTMENT RULES

The construction, operation, maintenance, and closure of the certified facility shall be in accordance with all applicable non-procedural provisions of Florida Statutes and Florida Administrative Code, including, but not limited to, the applicable non-procedural portions of the following Department regulations, except to the extent a variance, exception, exemption, or other relief is granted in the final order of certification or in a subsequent modification to the Conditions, or under a federal permit, or as otherwise provided under Chapter 403, F.S.:

Florida Administrative Code:

18-2 (Management of Uplands Vested in the Board of Trustees)
18-14 (Administrative Fines for Damaging State Lands)
18-20 (Florida Aquatic Preserves)
18-21 (Sovereignty Submerged Lands Management)
62-4 (Permits)
62-17 (Electrical Power Plant Siting)
62-40 (Water Resource Implementation Rule)
62-150 (Hazardous Substance Release Notification)
62-160 (Quality Assurance)
62-204 (Air Pollution Control-General Provisions)
62-210 (Stationary Sources-General Requirements)
62-212 (Stationary Sources-Preconstruction Review)
62-213 (Operation Permits for Major Sources of Air Pollution)
62-256 (Open Burning)
62-296 (Stationary Sources-Emission Standards)
62-297 (Stationary Sources-Emission Monitoring)
62-302 (Surface Water Quality Standards)
62-303 (Identification of Impaired Surface Waters)
62-304 (Total Maximum Daily Loads)
62-330 (Environmental Resource Permitting)
62-340 (Delineation of the Landward Extent of Wetlands and Surface Waters)
62-342 (Mitigation Banks)
62-345 (Uniform Mitigation Assessment Method)
62-520 (Ground Water Classes, Standards, and Exemptions)
62-528 (Underground Injection Control)
62-531 (Water Well Contractor Licensing Requirements)
62-532 (Water Well Permitting and Construction Requirements)
62-550 (Drinking Water Standards, Monitoring, and Reporting)
62-555 (Permitting, Construction, Operation, and Maintenance of Public Water Systems)
62-560 (Requirements for Public Water Systems That Are Out of Compliance)
62-600 (Domestic Wastewater Facilities)
62-604 (Collection Systems and Transmission Facilities)
62-610 (Reuse of Reclaimed Water and Land Application)
62-620 (Wastewater Facilities and Activities Permitting)
62-621 (Generic Permits)
62-650 (Water Quality Based Effluent Limitations)
62-660 (Industrial Wastewater Facilities)

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62-699 (Treatment Plant Classification and Staffing)
62-701 (Solid Waste Management Facilities)
62-709 (Criteria for Organics Processing and Recycling Facilities)
62-710 (Used Oil Management)
62-730 (Hazardous Waste)
62-737 (The Management of Spent Mercury-Containing Lamps and Devices Destined for Recycling)
62-740 (Petroleum Contact Water)
62-761 (Underground Storage Tank Systems)
62-762 (Aboveground Storage Tank Systems)
62-777 (Contaminant Cleanup Target Levels)
62-780 (Contaminated Site Cleanup Criteria)
62-814 (Electric and Magnetic Fields)

III. REVISIONS TO DEPARTMENT STATUTES AND RULES

A. The Licensee shall comply with rules adopted by the Department subsequent to the issuance of the Certification under the PPSA which prescribe new or stricter criteria, to the extent that the rules are applicable to electrical power plants. Except when a variance, exception, exemption, or other relief has been granted, subsequently adopted Department rules which prescribe new or stricter criteria shall operate as automatic modifications to this Certification.

B. Upon written notification to the Department, the Licensee may choose to operate the certified electrical power plant in compliance with any rule subsequently adopted by the Department which prescribes criteria more lenient than the criteria required by the terms and conditions in the Certification which are not site-specific.

[Sections 403.511(5)(a) and (b), F.S.; Rule 62-4.160(10), F.A.C.]

IV. DEFINITIONS

Unless otherwise indicated herein, the meaning of terms used herein shall be governed by the applicable definitions contained in Chapters 253, 373, 379, and 403, F.S., and any regulation adopted pursuant thereto. In the event of any dispute over the meaning of a term used in these Conditions which is not defined in such statutes or regulations, such dispute shall be resolved by reference to the most relevant definitions contained in any other state or federal statute or regulation, or in the alternative, by the use of the commonly accepted meaning. As used herein, the following shall apply:

A. “Application” or “SCA” is defined in Section 403.503(6), F.S. For purposes of this license, “Application” shall also include materials submitted for post-certification amendments and petitions for modification to the Conditions of , as well as supplemental applications.

B. “Associated facility” or “associated facilities” as defined by Section 403.503(7), F.S.

C. “Certified facility” or “certified facilities” means the certified electrical power generation facilities and all certified on- or off-site associated facilities and structures identified or described in the Application, in the final order of certification, or in a post-certification amendment or modification.

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- D. “DEM” shall mean the Florida Division of Emergency Management.
- E. “DEP” or “Department” means the Florida Department of Environmental Protection.
- F. “DHR” means the Florida Department of State, Division of Historical Resources.
- G. “DOC” means the Florida Department of Commerce.
- H. “DOT” means the Florida Department of Transportation.
- I. “Emergency conditions” or “Emergency reporting” means urgent circumstances involving potential adverse consequences to human life or property as a result of weather conditions or other calamity.
- J. “Feasible” or “Practicable” means reasonably achievable considering a balance of land use impacts, environmental impacts, engineering constraints, and costs.
- K. “FWC” means the Florida Fish and Wildlife Conservation Commission.
- L. “Licensee” means an applicant that has obtained a certification order for the subject project.
- M. “Post-certification submittal” shall mean a submittal made by the Licensee pursuant to a Condition of certification.
- N. “RER” means Miami-Dade County Department of Regulatory and Economic Resources
- N. “Right-of-Way” or “ROW” is defined in Section 403.503(27), F.S.
- O. “SCA” means the Site certification Application (i.e., the Application)
- P. “SCO” means the Department’s Siting Coordination Office.
- Q. “SED” shall mean the Southeast DEP district office
- R. “Site” is defined in Section 403.503(28), F.S.
- S. “SFWMD” means the South Florida Water Management District.
- T. “State Water Quality Standards” shall mean the numerical and narrative criteria applied to specific water uses or classifications set forth in Chapters 62-302 and 62-520, F.A.C.
- U. “Surface Water Management System”, “SWMS”, or “System” means a stormwater management system, dam, impoundment, reservoir, appurtenant work, or works, or any combination thereof. The terms “surface water management system”, “SWMS”, or “system” include areas of dredging or filling, as those terms are defined in Sections 373.403(13) and (14), F.S.
- V. “Wetlands” shall mean those areas meeting the definition set forth in Section 373.019(27), F.S., as delineated pursuant to Chapter 62-340, F.A.C.

V. FEDERALLY DELEGATED OR APPROVED PERMIT PROGRAMS

Subject to the Conditions set forth herein, this certification shall constitute the sole license of the state and any agency as to the approval of the location of the site and any

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Associated facility and the construction and operation of the electrical power plant, except for the issuance of Department Licenses required under any federally delegated or approved permit program. This certification is not a waiver of any other Department approval that may be required under federally delegated or approved programs. In the event of a conflict between the certification process and federally required procedures, the applicable federal requirements shall control.

[Sections 403.5055, 403.508(8), and 403.511(1), F.S.]

VI. DESIGN AND PERFORMANCE CRITERIA

Certification, including these conditions, is predicated upon preliminary designs, concepts, and performance criteria described in the SCA or in testimony and exhibits in support of certification. The final engineering design of the certified facilities will be consistent and in substantial compliance with the preliminary information described in the SCA or as explained at the certification hearing (if any). Conformance to those criteria, unless specifically modified in accordance with Sections 403.516, F.S., and Rule 62-17.211, F.A.C., is binding upon the Licensee in the design, construction, operation, maintenance, and closure of the certified facility.

[Sections 403.511(2)(a), 403.516, F.S.; Rules 62-4.160(2), 62-17.211, F.A.C.]

VII. NOTIFICATION

A. If, for any reason, the Licensee does not comply with or will be unable to comply with any condition or limitation specified in this License, the Licensee shall provide the DEP District Office 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. The Licensee 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 certification.
3. All notifications which are made in writing shall additionally be provided to the SCO via email to SCO@dep.state.fl.us.

[Rule 62-4.160(8), F.A.C.]

B. The Licensee shall promptly notify the SCO in writing (email acceptable) of any previously submitted information concerning the certified facility that is later discovered to be inaccurate.

[Rule 62-4.160(15), F.A.C.]

C. Any owner or operator of a facility who has knowledge of any incident reportable to the State Watch Office regarding a certified facility shall notify the State Watch Office at (800) 320-0519 as soon as possible, but not later than 24 hours after discovery of the incident.

D. Any owner or operator of a facility who has knowledge of any reportable pollution release shall submit a Public Notice of Pollution by following the instructions at

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<https://prodenv.dep.state.fl.us/DepPNP/user/pnpRequest>, as soon as possible, but not later than 24 hours after discovery of the release.

[Section 403.077, F.S.]

VIII. EMERGENCY CONDITION NOTIFICATION AND RESTORATION

If the Licensee is temporarily unable to comply with any of the conditions of the License due to breakdown of equipment or destruction by hazard of fire, wind, or other cause, such as an emergency as defined by Sections 252.34(4), (7), (8), or (10), F.S., the Licensee 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 Licensee from any liability for failure to comply with Department rules. Any exceedances and/or violations recorded during emergency conditions shall be reported as such, but the Department acknowledges that it intends to use its enforcement discretion during this timeframe. This acknowledgement by the Department does not constitute a waiver or variance from any requirements of any federal permit. Relief from any federal agency must be separately sought.

[Rule 62-4.130, F.A.C.]

IX. CONSTRUCTION PRACTICES

A. Local Building Codes

Subject to the conditions set forth herein, this certification constitutes the sole license of the state and any agency as to the approval of the location of the site and any Associated facility and the construction and operation of any certified facility. The Licensee is not required to obtain building permits for certified facilities. However, this certification shall not affect in any way the right of any local government to charge appropriate fees or require that construction of structures used by the electrical power plant that are not an integral part of a generating plant, substation, or control center (such as office buildings, warehouses, garages, machine shops, and recreational buildings) be in compliance with applicable building construction codes.

[Section 403.511(4), F.S.]

B. Existing Underground Utilities

The Licensee must follow all applicable portions of the Underground Facility Damage Prevention and Safety Act, Chapter 556, F.S. The Licensee shall provide the affected local government and the SCO with copies of valid tickets obtained from Sunshine State One Call of Florida upon request. Tickets shall be available for request until the underground work is completed for the affected area.

[Chapter 556, F.S.]

C. Existing Wells

Any existing wells to be impacted in the path of construction of certified facilities that will no longer be used shall be abandoned by a licensed well contractor. All abandoned wells shall be filled and sealed in accordance with Rule 62-532.500(5), F.A.C., or with the rules of the authorizing agency, or consistent with these Conditions.

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[Rules 62-532.400 and 62-532.500(5), F.A.C.]

D. Sanitary Wastes

Disposal of sanitary wastes from construction toilet facilities shall be in accordance with applicable regulations of the Department.

[Rule 62-6.0101, F.A.C.]

X. RIGHT OF ENTRY

A. Upon presentation of credentials or other documents as may be required by law, the Licensee shall allow authorized representatives of the Department or other agencies with jurisdiction over a portion of the certified facility, any authorized off-site mitigation/compensation area or Associated facility:

1. At reasonable times, to enter upon the certified facility in order to monitor activities within their respective jurisdictions for purposes of assessing compliance with this certification; or

2. During business hours, to enter the Licensee's premises in which records are required to be kept under this certification; and to have access to and copy any records required to be kept under this certification.

B. When requested by the Department, on its own behalf or on behalf of another agency with regulatory jurisdiction, the Licensee shall within 10 working days, or such longer period as may be mutually agreed upon by the Department and the Licensee, furnish any information required by law, which is needed to determine compliance with the certification.

[Rules 62-4.160(7)(a) and 62-4.160(15), F.A.C.]

XI. DISPUTE RESOLUTION

A. General

If a situation arises in which mutual agreement cannot be reached between the Department and the Licensee, and/or, an agency with substantive regulatory jurisdiction over a matter, the Department may act as a facilitator in an attempt to resolve the issue. If the dispute is not resolved informally in this manner, Licensee may request one or more meetings in which both Licensee and the agency with substantive regulatory jurisdiction over the matter can participate and attempt to resolve the issue informally. If, after such meetings, a mutual agreement cannot be reached between the parties, then the matter shall be referred to the Division of Administrative Hearings (DOAH) for disposition in accordance with the provisions of Chapter 120, F.S. The Licensee or the Department may request DOAH to establish an expedited schedule for processing the dispute. Any filing with DOAH shall state with particularity the specific project and geographic location to which the dispute relates. Work unrelated to the specific project and in areas other than the location to which the dispute relates will not be affected by the dispute.

B. Modifications

If written objections are filed regarding a requested modification, and the objections address only a portion of a requested modification, the Department shall issue a final order approving the portion of the modification to which no objections were filed, unless that

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portion of the requested modification is substantially related to or necessary to implement the portion to which written objections are filed.

C. Post-certification Submittals

If it is determined, after assessment of a post-certification submittal, that compliance with the Conditions will not be achieved for a particular portion of a submittal, the Department may make a separate assessment of other portions of the submittal, unless those portions of the submittal are substantially related to or necessary to implement that portion for which it has been determined that compliance with the Conditions will not be achieved.

[Section 120.57, F.S.; Rule 62-17.211, F.A.C.]

XII. SEVERABILITY

The provisions of this certification are severable, and if any provision of this certification or the application of any provision of this certification to any circumstance is held invalid, the remainder of the certification or the application of such provision to other circumstances shall not be affected thereby.

XIII. ENFORCEMENT

A. The terms, conditions, requirements, limitations, and restrictions set forth in these Conditions are binding and enforceable pursuant to Sections 403.141, 403.161, 403.514, 403.727, and 403.859 through 403.861, F.S., as applicable. Any noncompliance by the Licensee with these Conditions constitutes a violation of Chapter 403, F.S., and is grounds for enforcement action, which may result in license termination, license revocation, or license revision. The Licensee is placed on notice that the Department may review this certification periodically and may initiate enforcement action for any violation of these Conditions.

B. All records, notes, monitoring data, and other information relating to the construction or operation of the certified facility which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the certified facility and arising under the Florida Statutes or Department rules, subject to the restrictions in Sections 403.111 and 403.73, F.S. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

[Sections 403.121, 403.131, 403.141, 403.151, 403.161, 403.514, F.S.; Rules 62-4.160(1) and (9), F.A.C.]

XIV. REVOCATION OR SUSPENSION

This certification shall be final unless revised, revoked or suspended pursuant to law. This certification may be suspended or revoked pursuant to Sections 403.512, F.S. This certification is valid only for the specific processes and operations identified in the SCA and approved in the final order of certification or indicated in the testimony and exhibits in support of certification or approved in a subsequent amendment or modification of the certification. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this approval may constitute grounds for revocation and enforcement action by the Department. Any enforcement action, including suspension and revocation, shall only affect the portion(s) of the

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certified facility that are the cause of such action, and other portions of the certified facility shall remain unaffected by such action.

[Sections 403.512, F.S.; Rule 62-4.160(2), F.A.C.]

XV. REGULATORY COMPLIANCE

As provided in Sections 403.087(7) and 403.722(5), F.S., except as specifically provided in the final order of certification, a subsequent modification or amendment, or these Conditions, the issuance of this License 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 License is not a waiver of or approval of any other Department license or permit that may be required for other aspects of the certified facility that are not addressed in this License. This license does not relieve the Licensee from liability for harm or injury to human health or welfare, animal, or plant life, or public or private property caused by the construction or operation of the certified facility, or from penalties therefore.

[Rules 62-4.160(3) and (5), F.A.C.]

XVI. CIVIL AND CRIMINAL LIABILITY

Except to the extent a variance, exception, exemption, or other relief is granted in a final order of certification, in a subsequent modification to these Conditions, or as otherwise provided under Chapter 403, F.S., this certification does not relieve the Licensee from civil or criminal penalties for noncompliance with any Condition, applicable rules or regulations of the Department, or any other state statutes or regulations which may apply.

[Sections 403.141, 403.161, 403.511, F.S.]

XVII. USE OF STATE LANDS

A. Except as specifically provided in the final order of certification or these Conditions, the issuance of this License conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless 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.

B. If any portion of the certified facility is located on sovereign submerged lands, state-owned uplands, or within an aquatic preserve, then the Licensee must comply with the applicable portions of Chapters 18-2, 18-20, and 18-21, F.A.C., and Chapters 253 and 258, F.S., except as specifically provided in the final order of certification or these Conditions. If any portion of the certified facility is located on sovereign submerged lands, the Licensee must submit section F of Form 62-330.060(1), *Application for Individual and Conceptual Approval Environmental Resource Permit* (State 404 Program Permit) and *Authorization to Use State-Owned Submerged Lands* to the Department prior to construction. If any portion of the certified facility is located on state-owned uplands, the Licensee must submit an Upland Easement Application to the Department prior to construction.

C. If a portion of the certified facility is located on sovereign submerged lands or state-owned uplands owned by the Board of Trustees of the Internal Improvement Trust Fund, pursuant to Article X, Section 11 of the Florida Constitution, then the proposed activity on such

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lands requires a proprietary authorization. Under such circumstances, the proposed activity is not exempt from the need to obtain a proprietary authorization. Unless otherwise provided in the final order of certification or these Conditions, the Department has the responsibility to review and take action on requests for proprietary authorization in accordance with Rule 18-2.018 or 18-21.0051, F.A.C.

D. The Licensee is hereby advised that Florida law states: “A person may not commence any excavation, construction, or other activity involving the use of sovereign or other lands of the state, the title to which is vested in the Board of Trustees of the Internal Improvement Trust Fund under this chapter, until the person has received the required lease, license, easement, or other form of consent authorizing the proposed use.” Pursuant to Chapter 18-14, F.A.C., if such work is done without consent, or if a person otherwise damages state land or products of state land, the Board of Trustees may levy administrative fines of up to \$10,000 per offense.

E. The terms, conditions, and provisions of any required lease or easement issued by the State shall be met. Any construction activity associated with the certified facility shall not commence on sovereign submerged lands or state-owned uplands, title to which is held by the Board of Trustees of the Internal Improvement Trust Fund, until all required lease or easement documents have been executed.

[Chapters 253 and 258, F.S.; Chapters 18-2, 18-14, 18-21, 62-340, and Rules 62-330.060(1) and 62-4.160(4), F.A.C.]

XVIII. PROCEDURAL RIGHTS

Except as specified in Chapter 403, F.S., or Chapter 62-17, F.A.C., no term or condition of certification shall be interpreted to preclude the post-certification exercise by any party of whatever procedural rights it may have under Chapter 120, F.S., including those related to rule-making proceedings.

[Sections 403.511(5)(c), F.S.]

XIX. AGENCY ADDRESSES FOR POST-CERTIFICATION SUBMITTALS AND NOTICES

Where a Condition requires post-certification submittals and/or notices to be sent to a specific agency, the following agency addresses shall be used unless the Conditions specify otherwise or unless the Licensee and the Department are notified in writing of an agency’s change in address for such submittals and notices:

Florida Department of Environmental Protection
Siting Coordination Office, MS 3500
2600 Blair Stone Road
Tallahassee, Florida 32399-3000
SCO@dep.state.fl.us

Florida Department of Environmental Protection
Southeast District Office
3301 Gun Club Rd
MSC 7210-1
West Palm Beach, Florida 33406

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Florida Fish & Wildlife Conservation Commission
Conservation Planning Services
620 South Meridian Street, MS 5B5
Tallahassee, Florida 32399-1600
ConservationPlanningServices@myfwc.com

Florida Department of Transportation
District Administration
605 Suwannee Street
Tallahassee, Florida 32399-0450

Florida Department of Agriculture and Consumer Services
Office of General Counsel
407 South Calhoun Street
Tallahassee, Florida 32399-0800

South Florida Water Management District
Office of General Counsel
3301 Gun Club Rd
West Palm Beach, Florida 33406

Florida Department of State
Division of Historical Resources
500 South Bronough Street
Tallahassee, Florida 32399-0250
compliancepermits@dos.myflorida.com

Miami-Dade County
Department of Regulatory and Economic Resources
701 NW 1st Court 7th Floor
Miami, Florida 33136-3912
DERMPCD@miamidade.gov

[Section 403.511, F.S.]

XX. PROFESSIONAL CERTIFICATION

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. Where required by Chapter 471 or 492, F.S., applicable portions of amendment requests, petitions for modifications, post certification submittals, 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.

[Rule 62-4.050, F.A.C.]

XXI. PROCEDURES FOR POST-CERTIFICATION SUBMITTALS

A. Purpose of Submittals

Conditions which provide for the post-certification submittal of information to DEP or other agencies by the Licensee are for the purpose of facilitating the agencies' monitoring of the effects arising from the location of the certified facility and the construction and maintenance of the certified facility. This monitoring is for DEP to assure, in consultation with other agencies with applicable regulatory jurisdiction, continued compliance with these Conditions, without further agency action. A submittal of information or determination of compliance pursuant to a post-certification submittal under this Condition does not provide a point of entry for a third party.

B. Filings

All post-certification submittals of information by Licensee are to be filed with the agency or office that requires the submittal pursuant to these Conditions. The SCO shall be copied on all post-certification submittals in electronic .pdf format (unless other formats are requested), via email to SCO@dep.state.fl.us. Each submittal shall clearly identify the Certified facility name, PA#, and the Condition number(s) (i.e. Section X, Condition XX.y.(z)) requiring the submittal. As required by Section 403.5113(2), F.S., each post-certification submittal will be reviewed by each agency with regulatory authority over the matters addressed in the submittal on an expedited and priority basis.

[Section 403.5113, F.S.; Rule 62-17.191(3), F.A.C.]

C. Completeness

DEP shall review each post-certification submittal for completeness. This review may include consultation with the other agency(ies) receiving the post-certification submittal with regulatory jurisdiction over the matter addressed in the submittal. DEP's finding of completeness shall specify the area of the certified facility affected and shall not delay further processing of the post-certification submittal for non-affected areas.

If any portion of a post-certification submittal is found to be incomplete, the Licensee shall be so notified. Failure to issue such a notice within 30 days after filing of the submittal shall constitute a finding of completeness. Subsequent findings of incompleteness, if any, shall address only the newly filed information.

[Rule 62-17.191(1)(c)2., F.A.C.]

D. Interagency Meetings

DEP may conduct an interagency meeting with other agencies that received a post-certification submittal. The purpose of such an interagency meeting shall be for the agencies with regulatory jurisdiction over the matters addressed in the post-certification submittal to discuss whether compliance with these Conditions has been provided. Failure of DEP to conduct an interagency meeting or failure of any agency to attend an interagency meeting shall not be grounds for DEP to withhold a determination of compliance with these Conditions nor to delay the timeframes for review established by these Conditions. At DEP's

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request, a field inspection shall be conducted with the Licensee and the agency representative in conjunction with the interagency meeting.

E. Determination of Compliance

DEP shall give written notification within 90 days, to the Licensee and the other agency(ies) to which the post-certification information was submitted of DEP's determination of whether there is demonstration of compliance with these Conditions. If it is determined that compliance with the Conditions has not been provided, the Licensee shall be notified with particularity of the deficiencies and possible corrective measures suggested. Failure to notify Licensee in writing within 90 days of receipt of a complete post-certification submittal shall constitute a determination of compliance. A post-certification compliance review may be the basis for initiating modifications to the relevant Condition or to other related Conditions.

F. Commencement of Construction

If DEP does not object within the time period specified in paragraph E., above, Licensee may begin construction pursuant to the terms of these Conditions and the subsequently submitted construction details.

G. Revisions to Design Previously Reviewed for Compliance

If revisions to site-specific designs occur after submittal, the Licensee shall submit revised plans prior to construction for review in accordance with the post-certification process specified in this Condition.

[Sections 120.569, 373.413, 373.416, 403.511, F.S.; Rules 62-17.191 and 62-17.205, F.A.C.]

XXII. POST-CERTIFICATION SUBMITTAL REQUIREMENTS SUMMARY

Within 90 days after certification, and within 90 days after any subsequent modification or certification, the Licensee shall provide the SCO a complete summary of those post-certification submittals that are identified in these Conditions when due-dates for the information required of the Licensee have been identified. A summary shall be provided as a separate document for each transmission line, if any. Such submittals shall include, but are not limited to, monitoring reports, management plans, wildlife surveys, etc. The summary shall be provided to the SCO, in a sortable spreadsheet, electronically, in the format shown below or equivalent. For subsequent modifications and certifications, a "Post-Certification Submittal Requirements Summary" shall be required only for new or altered post-certification requirements.

Condition Number	Requirement and Timeframe	Due Date	Name of Agency or Agency Subunit to whom the submittal is required to be provided

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[Section 403.5113, F.S.; Rule 62-17.191(3), F.A.C.]

XXIII. POST-CERTIFICATION AMENDMENTS

If, subsequent to certification, the Licensee proposes any material change to the SCA and revisions or amendments thereto, as certified, the Licensee shall submit a written request for amendment and a description of the proposed change to the SCA to the Department. Within 30 days after the receipt of a complete request for an amendment, the Department shall determine whether the proposed change to the SCA requires a modification to the Conditions.

A. If the Department concludes that the change would not require a modification to the Conditions, the Department shall provide written notification of the approval of the proposed amendment to the Licensee, all agencies, and all other parties to the certification.

B. If the Department concludes that the change would require a modification to the Conditions, the Department shall provide written notification to the Licensee that the proposed change to the SCA requires a request for modification pursuant to Section 403.516, F.S.

[Section 403.5113, F.S.]

XXIV. MODIFICATION OF CERTIFICATION

A. Pursuant to Sections 403.516(1)(a), F.S., and Rule 62-17.211, F.A.C., the Siting Board hereby delegates the authority to the Department to modify any Condition which would not otherwise require approval by the Siting Board, after notice and receipt of no objection by a party to the certification within 45 days after notice by mail to the party's last address of record, and if no other person whose substantial interests will be affected by the modification objects in writing within 30 days of public notice.

B. The Department may modify Conditions, in accordance with Section 403.516(1)(b), F.S., which are inconsistent with the terms of any subsequent and separately issued DEP permits, permit amendments, permit modifications, or permit renewals under a federally delegated or federally approved permit program. Such modification may be made without further notice if the matter has been previously noticed under the requirements for any federally delegated or approved permit program.

C. In accordance with Section 403.516(1)(c), F.S., the Licensee may file a petition for modification with the Department, or the Department may initiate the modification upon its own initiative.

D. Any anticipated facility expansions, production increases, or process modifications which may result in new, different or increased discharge or emission of pollutants, change in fuel, or expansion in generating capacity must be reported by submission of an appropriate request for an amendment, modification, or certification.

E. Any anticipated facility change that results in a change to the Site Delineation Map, attached hereto as part of Attachment A, may be considered a modification, and must be accompanied by a map or aerial photograph showing the proposed new boundaries of the site. Within 120 days after completion of construction of the approved facility change, the Licensee

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shall provide the information required by Section A. General Conditions, Condition I. Scope, paragraphs D, E, F, G, H, or I, as appropriate.

[Section 403.516, F.S.; Rule 62-17.211, F.A.C.]

XXV. COASTAL ZONE CONSISTENCY

Pursuant to Sections 373.428 and 403.511, F.S., certification of the facility constitutes the State's concurrence that the licensed activity or use is consistent with the federally approved program under the Florida Coastal Management Act.

[Sections 373.428, 380.23, and 403.511(7), F.S.]

XXVI. WATER QUALITY CERTIFICATION

Pursuant to the Operating Agreement between the Florida Department of Environmental Protection (Department), United States Army Corps of Engineers (USACE) and water management districts, the written final order granting certification under the Florida Electrical Power Plant Siting Act, sections 403.501-.518, F.S., also constitutes certification of compliance with state water quality standards pursuant to section 401 of the Clean Water Act, 33 U.S.C.

[2012 Operating Agreement, Jacksonville District USACOE, DEP and Water Management Districts, Section II.A.1.(f)]

XXVII. TRANSFER OF CERTIFICATION

A. This certification is transferable in whole or in part, upon Department approval, to an entity determined to be able to comply with these Conditions. A transfer of certification of all or part of the certified facility may be initiated by the Licensee's filing of a Notice of Intent to Transfer Certification with the Department's SCO. The notice of intent shall: identify the intended new certification holder or Licensee; identify the current and the new entity responsible for compliance with the certification; and include a written agreement from the intended new Licensee/Transferee to abide by all Conditions, applicable laws and regulations. Upon receiving a complete notice of intent, the transfer shall be approved by the Department unless the Department objects to the transfer on the grounds that the new Licensee will be unable to comply with the Conditions, specifies in writing its reasons for its objections, and gives notice and an opportunity to petition for an administrative hearing pursuant to Section 120.57, F.S. Upon approval, the Department will initiate a modification to the Conditions to reflect the change in ownership in accordance with Rule 62-17.211, F.A.C.

B. In the event of the dissolution of the Licensee, the Department may transfer certification to successor entities which are determined to be competent to construct, operate, and maintain the certified facility in accordance with the Conditions and which are proper applicants as defined by the PPSA. Upon determination that such a successor entity complies with the requirements for transfer of certification, the Department will initiate a modification to the Conditions to reflect the change in ownership in accordance with Rule 62-17.211, F.A.C.

[Chapter 120, F.S.; Rule 62-17.211, F.A.C.]

XXVIII. FINANCIAL RESPONSIBILITY

The Department may require the Licensee to submit proof of financial responsibility and may require the Licensee to post an appropriate bond in those instances where the

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Department is authorized to require proof of financial responsibility or a bond pursuant to a law or Department rule that is applicable to the certified facility.

[Rule 62-701.630, F.A.C.]

XXIX. LABORATORIES AND QUALITY ASSURANCE

Chemical, physical, biological, microbiological, and toxicological data collected as a requirement of these Conditions must be reliable and collected and analyzed by scientifically sound procedures. Unless otherwise specified in these Conditions, the Licensee shall adhere to the minimum field and laboratory quality assurance, methodological and reporting requirements of the Department as set forth in Chapter 62-160, F.A.C.

[Chapter 62-160, F.A.C.]

XXX. ENVIRONMENTAL RESOURCES

A. General

1. Submittals for Construction Activities

a. Prior to the commencement of construction of new facilities and/or new Associated facilities the Licensee shall provide to the DEP Southeast District for review, all information necessary for a complete *Application for Individual and Conceptual Approval Environmental Resource Permit and Authorization to Use State-Owned Lands* (ERP), DEP Form 62-330.060(1), F.A.C., or other applicable ERP authorization form. A copy of the submittal shall also be provided to the SCO.

This form may: a) be submitted concurrently with a SCA; b) be submitted as part of an amendment request or a petition for modification; or c) be submitted as a post-certification submittal following approval of a Project through certification, modification, or amendment. Such ERP submittals, once received, shall be reviewed in accordance with the non-procedural standards and criteria for issuance of an ERP, including all the provisions related to reduction and elimination of impacts, conditions for issuance, additional conditions for issuance, and mitigation contained in Chapter 62-330, F.A.C., as applicable, unless otherwise stated in these Conditions. While the information is provided for review via submittal of the ERP form, consistent with Section 403.511, F.S., a separate ERP is not required for certified facilities, and therefore, a separate ERP will not be issued.

Those forms submitted as part of a SCA, an amendment, or modification, shall be processed concurrently with the respective SCA, amendment, or modification, in compliance with the applicable PPSA procedures. Those forms submitted as a post-certification submittal (after certification, modification, or amendment and prior to construction) shall be processed in accordance with Section A. General Conditions, Condition XXI., Procedures for Post-Certification Submittals. Post-certification submittal information may be submitted for discrete portions of the certified facilities for a determination of compliance with these Conditions.

No construction shall commence on a project feature, or in a particular segment of a linear facility, until the Department has determined that there is a demonstration of compliance with these Conditions. For post-certification submittal reviews, the Department's determination is governed by Section A, General Conditions, Condition XXI, Procedures for Post-Certification Submittals.

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b. Concurrent with submittal of the DEP form required in subparagraph A.1.a., above, the Licensee shall submit, as applicable, a survey of wetland and surface water areas as delineated in accordance with Chapter 62-340, F.A.C., and verified by appropriate agency staff for Department compliance review. Available DEP-approved wetland and surface water delineations within the boundaries of a certified site or a portion thereof may be used and reproduced for this delineation submittal and verification. Formal DEP-approved wetland and surface water delineations are valid only for a period of five years.

[Section 373.416, F.S.; Chapters 62-330 and 62-340, F.A.C.]

2. Construction, operation, and maintenance of the proposed project (including any access roads and structures constructed within wetlands and other surface waters, and/or Associated facilities) shall satisfy any applicable non-procedural requirements in the Department rules.

[Section 373.414(1)(a), F.S.]

3. Any delineation of the extent of a wetland or other surface water submitted as part of the DEP ERP Application Form required by subparagraph A.1.a., above, including plans or other supporting documentation, shall not be considered binding on the Department unless a specific condition of this certification or a formal wetlands jurisdictional determination under Section 373.421(2), F.S., provides otherwise.

[Sections 373.421, 403.504, F.S.]

4. Silt screens, hay bales, turbidity screens/barriers or other such sediment control measures shall be utilized during construction. The selected sediment control measure shall be installed landward of all protected wetlands and other surface waters and shall be properly "trenched" etc. All areas shall be stabilized and vegetated immediately after construction to prevent erosion into wetlands and other surface waters.

[Chapter 62-330, F.A.C.]

B. Surface Water Management Systems

1. Information regarding surface water management systems (SWMS) will be reviewed for consistency with the applicable non-procedural requirements under Part IV of Chapter 373, F.S., following submittal of Form 62-330.060(1), F.A.C., to the DEP District.

2. All construction, operation, and maintenance of the SWMS(s) for the certified facilities shall be as set forth in the plans, specifications, and performance criteria contained in the SCA and other materials presented during the certification proceeding, post-certification submittals, and as otherwise approved. If specific requirements are necessary for construction, operation, and/or maintenance of an approved SWMS, those requirements shall be incorporated into a SWMS Operation and Maintenance Requirements for that system and included in Attachment B (Surface Water Management System Requirements). Any alteration or modification to the SWMS Plan or the SWMS as certified requires prior approval from the Department.

3. To allow for stabilization of all disturbed areas, prior to construction, during construction of the SWMS, and for a period of time after construction of the SWMS, the Licensee shall implement and maintain erosion and sediment control best management practices, such as silt fences, erosion control blankets, mulch, sediment traps, polyacrylamide (PAM), temporary grass seed, permanent sod, and floating turbidity screens to retain sediment on-site

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and to prevent violations of state water quality standards. These devices shall be installed, used, and maintained at all locations where the possibility exists of transferring suspended solids into the receiving waterbody due to the licensed work, and shall remain in place at all locations until construction in that location is completed and soils are permanently stabilized. All best management practices shall be in accordance with the guidelines and specifications described in the *State of Florida Erosion and Sediment Control Designer and Reviewer Manual* (Florida Department of Transportation and Florida Department of Environmental Protection, by HydroDynamics Incorporated in cooperation with Stormwater Management Academy, June 2007) unless a project-specific erosion and sediment control plan is approved as part of this License. If project-specific Conditions require additional measures during any phase of construction or operation to prevent erosion or control sediments beyond those specified in the approved erosion and sediment control plan, the Licensee shall implement additional best management practices as necessary, in accordance with the guidelines and specifications in the *State of Florida Erosion and Sediment Control Designer and Reviewer Manual*. The Licensee shall correct any erosion or shoaling that causes adverse impacts to the water resources as soon as feasible. Once project construction is complete in an area, including the re-stabilization of all side slopes, embankments, and other disturbed areas, and before conversion to the operation and maintenance phase, all silt screens and fences, temporary baffles, and other materials that are no longer required for erosion and sediment control shall be removed.

4. The Licensee shall complete construction of all aspects of the SWMS described in the ERP Application Form, submitted as part of a post-certification submittal, amendment, modification, or SCA including water quality treatment features, and discharge control facilities prior to use of the portion of the certified facility being served by the SWMS.

5. At least 48 hours prior to beginning the authorized activities, the Licensee shall submit to the DEP District a fully executed Form 62-330.350(1), "Construction Commencement Notice," (October 1, 2013), (<http://www.flrules.org/Gateway/reference.asp?No=Ref-02505>), indicating the expected start and completion dates. A copy of this form may be obtained from the Department, as described in subsection 62-330.010(5), F.A.C., and shall be submitted electronically. However, for activities involving more than one acre of construction that also require a NPDES stormwater construction general permit, submittal of the Notice of Intent to Use Generic Permit for Stormwater Discharge from Large and Small Construction Activities, DEP Form 62-621.300(4)(b), shall also serve as notice of commencement of construction and, in such a case, submittal of Form 62-330.350(1) is not required.

6. Each phase or independent portion of the approved system must be completed in accordance with the submitted DEP Form prior to the operation of the portion of the certified facility being served by that portion or phase of the system.

7. Within 30 days, or such other date as agreed to by DEP and the Licensee, after completion of construction of any new portions of the SWMS, the Licensee shall submit to the DEP District, and copy the SCO, a written statement of completion and certification by a registered professional engineer (P.E.), or other appropriate registered professional, as authorized by law, utilizing the required "As-Built Certification and Request for Conversion to Operation Phase" (DEP Form 62-330.310(1), F.A.C.). Additionally, if deviations from the approved drawings are discovered, the As-Built Certification must be accompanied by a copy of the approved drawings with deviations noted.

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8. Any substantial deviation from the approved drawings, exhibits, specifications, or Conditions, may constitute grounds for revocation or enforcement action by the Department.

9. The operation phase of any new SWMS approved by the Department shall not become effective until the Licensee has complied with the requirements of the conditions herein, the Department determines the system to be in compliance with the approved plans, and the entity approved by the Department accepts responsibility for operation and maintenance of the system.

10. The DEP District must be notified in advance of any proposed construction dewatering. If the dewatering activity is likely to result in off-site discharge or sediment transport into wetlands or surface waters, a written dewatering plan must be submitted to and approved by the Department prior to the dewatering event.

[Section 373.414, F.S.; Chapters 62-302, 62-330, and Rule 62-4.242, F.A.C.]

C. Wetland and Other Surface Water Impacts

1. All certified facilities shall be constructed in a manner which will eliminate or reduce adverse impacts to on-site and/or adjacent wetlands or other surface waters to the extent practicable or otherwise comply with the Department's substantive criteria for elimination or reduction of such impacts. When impacts to wetlands will occur as a result of a future amendment, modification, or certification, and cannot be practicably eliminated or reduced, the Licensee may propose, and the Department or Board shall consider, mitigation to offset otherwise such impacts under the ERP review process pursuant to subparagraph A.1., above.

2. Proposed mitigation requirements/plans submitted with the DEP ERP Application forms required in subparagraph A.1.a., above, or submitted as part of an amendment, modification, or certification, and that are deemed acceptable by DEP, shall include applicable construction conditions, success criteria, monitoring plans, and remedial actions (if applicable), and shall be incorporated into these Conditions as Attachment C (Wetland Mitigation Requirements/Plans).

[Sections 373.413, 373.414, 373.4145, 403.511, and 403.814(6), F.S.; Chapters 62-312, 62-330, 62-340, 62-342, and 62-345, F.A.C.]

XXXI. THIRD PARTY IMPACTS

The Licensee is responsible for maintaining compliance with these Conditions even when third party activities authorized by the Licensee occur in or on the certified site.

[Sections 403.506(1), F.S.]

XXXII. FACILITY OPERATION

A. The Licensee shall properly operate, maintain, and close the certified facility and systems of treatment and control (and related appurtenances) that are installed and used by the Licensee to achieve compliance with these Conditions, as required by the final order of certification, these Conditions, or a post-certification amendment or modification. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the final order of certification, these Conditions, or a post-

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certification amendment or modification. Further, the Licensee shall take all reasonable steps to minimize any adverse impact resulting from noncompliance with any limitation specified in this certification, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying event.

[Rule 62-4.160(6), F.A.C.]

XXXIII. RECORDS MAINTAINED AT THE FACILITY

A. These Conditions or a copy thereof shall be kept at the site or at 2525, NW 62nd Street, Miami, FL 33147.

B. The Licensee shall hold at the site, or at 2525, NW 62nd Street, Miami, FL 33147, records of all monitoring information, including all calibration and maintenance records, and all original strip chart recordings for continuous monitoring instrumentation required by these Conditions, copies of all reports required by these Conditions, and records of all data used to complete the SCA for this approval. These materials shall be retained at least 3 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; and
6. the results of such analyses.

[Rules 62-4.160(12) and (14)(b), F.A.C.]

XXXIV. WATER DISCHARGES

A. *Discharges*

1. Except as otherwise authorized by a permit issued by the Department under a federally approved or delegated program or to the extent a variance, exception, exemption or other relief is granted or authorized by these Conditions, the Licensee shall not discharge to surface or ground waters of the State, wastes in concentrations, which, alone or in combinations with other substances or components of discharges (whether thermal or non-thermal), are carcinogenic, mutagenic, or teratogenic to human beings (unless specific criteria are established for such components in Rule 62-520.400, F.A.C.) or are acutely toxic to indigenous species of significance to the aquatic community within surface waters affected by the ground water at the point of contact with surface waters.

2. Except as otherwise authorized by a permit issued by the Department under a federally approved or delegated program or to the extent a variance, exception, exemption, or other relief is granted or authorized by these Conditions, all discharges and activities must be conducted so as to not cause a violation of the water quality standards set forth in Chapters 62-4, 62-302, 62-520, 62-550, and 62-620, F.A.C., including the provisions of Rules 62-4.243, 62-4.244, and 62-4.246, F.A.C., the antidegradation provisions of Rules 62-4.242(1)(a),

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(1)(b), and 62-302.300, F.A.C., and any special standards for Outstanding Florida Waters and Outstanding National Resource Waters set forth in Rules 62-4.242(2) and (3), F.A.C.

3. Except as otherwise authorized by a permit issued by the Department under a federally approved or delegated program or to the extent a variance, exception, exemption, or other relief is granted or authorized by these Conditions, all dewatering discharges must be in compliance with Rule 62-621.300, F.A.C.

[Chapters 62-4, 62-302, 62-520, 62-550, 62-620, and 62-621, F.A.C.]

B. Wastewater Incident Reporting

The Licensee shall report to the Department any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Licensee becomes aware of the circumstances. A written submission shall also be provided within five days of the time the Licensee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; clean up actions taken and status; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. For noncompliance events related to sanitary sewer overflows, bypass events, or unauthorized discharges, these reports must include the data described above (with the exception of time of discovery) as well as the type of event (e.g., sanitary sewer overflow, bypass, unauthorized discharge); type of sanitary sewer overflow structure (e.g., manhole); the discharge location address and latitude/longitude; type of water discharged; discharge volumes and volumes recovered; volume discharged to surface waters and receiving waterbody name; types of human health and environmental impacts of the sanitary sewer overflow, bypass event, or unauthorized discharge (e.g., beach closure); whether the noncompliance was caused by a third party; and whether the noncompliance was related to wet weather. The written submission may be provided electronically using the Department's Business Portal at <http://www.fldeportal.com/go/> (via "Submit" followed by "Report" or "Registration/Notification"). Notice required for public notice of pollution under paragraph (d) may be provided together with the written submission using the Business Portal. All noncompliance events related to sanitary sewer overflows or bypass events submitted after (September 14, 2021), shall be submitted electronically.

1. The following shall be included as information which must be reported within 24 hours under this condition:

- a. Any unanticipated bypass which causes any reclaimed water or the effluent to exceed any permit limitation or results in an unpermitted discharge,
- b. Any upset which causes any reclaimed water or the effluent to exceed any limitation in the permit,
- c. Violation of a maximum daily discharge limitation for any of the pollutants specifically listed in the permit for such notice; and,
- d. Any unauthorized discharge to surface or ground waters, except for discharges to ground water of reclaimed water meeting Part III or Part V treatment standards under Chapter 62-610, F.A.C.

2. Oral reports as required by this subsection shall be provided as follows:

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a. For unauthorized releases or spills of treated or untreated wastewater reported pursuant to subparagraph 1.d. above, that are in excess of 1,000 gallons per incident, or where information indicates that public health or the environment will be endangered, oral reports shall be provided to the Department by calling the State WATCH OFFICE toll free number (800)320-0519, as soon as practicable, but no later than 24 hours from the time the Licensee becomes aware of the discharge. The Licensee, to the extent known, shall provide the following information to the State Watch Office:

- (1) Name, address, and telephone number of person reporting,
- (2) Name, address, and telephone number of Licensee or responsible person for the discharge,
- (3) Date and time of the discharge and status of discharge (ongoing or ceased),
- (4) Characteristics of the wastewater spilled or released (untreated or treated, industrial or domestic wastewater),
- (5) Estimated amount of the discharge,
- (6) Location or address of the discharge,
- (7) Source and cause of the discharge,
- (8) Whether the discharge was contained on-site, and cleanup actions taken to date,
- (9) Description of area affected by the discharge, including name of water body affected, if any; and,
- (10) Other persons or agencies contacted.

b. Oral reports, not otherwise required to be provided pursuant to subparagraph 2.a., above, shall be provided to the Department within 24 hours from the time the Licensee becomes aware of the circumstances.

3. If the oral report has been received within 24 hours, the noncompliance has been corrected, and the noncompliance did not endanger health or the environment, the Department shall waive the written report.

4. In accordance with Section 403.077, F.S., unauthorized releases or spills reportable to the State Watch Office pursuant to subparagraph 2.a. above shall also be reported to the Department within 24 hours from the time the Licensee becomes aware of the discharge. The Licensee shall provide to the Department information reported to the State Watch Office. Notice of unauthorized releases or spills may be provided to the Department through the Department's Public Notice of Pollution web page at <https://floridadep.gov/pollutionnotice> or by reporting electronically using the Department's Business Portal at <http://www.fldeportal.com/go/> (via "Submit" followed by "Report" or "Registration/Notification").

a. If, after providing notice pursuant to paragraph (d) above, the Licensee determines that a reportable unauthorized release or spill did not occur or that an amendment to the notice is warranted, the Licensee may submit a letter to the Department documenting such determination at pollution.notice@floridadep.gov.

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b. If, after providing notice pursuant to paragraph 4. above, the Licensee discovers that a reportable unauthorized release or spill has migrated outside the property boundaries of the installation, the Licensee must provide an additional notice to the Department that the release has migrated outside the property boundaries within 24 hours after its discovery of the migration outside of the property boundaries.

5. Unless discharged to surface waters, a spill, release, discharge, upset or bypass involving reclaimed water meeting Part III or Part V treatment standards under Chapter 62-610, F.A.C., shall not be considered to endanger health or the environment and shall be reported under subsection (21) of Rule 62-610, F.A.C.

[Chapter 403, F.S.; Rule 62-620.610(20), F.A.C.]

C. Bypass Provisions

1. Bypass is prohibited, and the Department may take enforcement action against a Licensee for bypass, unless the Licensee affirmatively demonstrates that:

a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage; and,

b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and,

c. The Licensee submitted notices as required under Condition XXXIV. Water Discharges, paragraph C.2.

2. If the permittee knows in advance of the need for a bypass, it shall submit prior notice to the Department, if possible at least 10 days before the date of the bypass. The permittee shall submit notice of an unanticipated bypass within 24 hours of learning about the bypass as required in Condition XXXIV. Water Discharges, paragraph B, above. A notice shall include a description of the bypass and its cause; the period of the bypass, including exact dates and times; if the bypass has not been corrected, the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent recurrence of the bypass.

3. The Department shall approve an anticipated bypass, after considering its adverse effect, if the Licensee demonstrates that it will meet the three conditions listed in Condition XXXIV. Water Discharges, paragraph C.1., above.

4. A Licensee may allow any bypass to occur which does not cause reclaimed water or effluent limitations to be exceeded if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provision of Condition XXXIV. Water Discharges, paragraph C.1., above.

[Chapter 403, F.S.; Rule 62-620.610(22), F.A.C.]

SECTION A: GENERAL CONDITIONS

D. Upset Provisions

1. A Licensee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

- a. An upset occurred and that the Licensee can identify the cause(s) of the upset,
- b. The certified facility was at the time being properly operated,
- c. The License submitted notice of the upset as required in Condition XXXIV. Water Discharges, paragraph B.; and,
- d. The Licensee complied with any remedial measures required.

2. In any enforcement proceeding, the burden of proof for establishing the occurrence of an upset rests with the Licensee.

3. Before an enforcement proceeding is instituted, no representation made during the Department review of a claim that noncompliance was caused by an upset is final agency action subject to judicial review.

[Chapter 403, F.S.; Rule 62-620.610(23), F.A.C.]

XXXV. SOLID AND HAZARDOUS WASTE

A. Solid Waste

The Licensee shall comply with all applicable non-procedural provisions of Chapter 62-701, F.A.C., for any solid waste generated within the certified facility during construction, operation, maintenance, demolition, and site closure.

[Chapter 62-701, F.A.C.]

B. Hazardous Waste, Used Oil, Petroleum Contact Water, and Spent Mercury

The Licensee shall comply with all applicable non-procedural provisions of Chapter 62-730, F.A.C., for any hazardous waste generated within the certified facility. An EPA identification number must be obtained before beginning hazardous waste activities unless the facility is a Very Small Quantity Generator (VSQG). VSQGs generate no more than 100 kg (220 lbs) of hazardous waste in any month.

The Licensee shall comply with all applicable non-procedural provisions of Chapter 62-710, F.A.C., for any used oil and used oil filters generated within the certified facility.

The Licensee shall comply with all applicable non-procedural provisions of Chapter 62-737, F.A.C., for any spent mercury-containing lamps and devices generated within the certified facility.

The Licensee shall comply with all applicable provisions of Chapter 62-740, F.A.C., for any petroleum contact water located within the certified facility.

[Chapters 62-710, 62-730, 62-737, and 62-740, F.A.C.]

SECTION A: GENERAL CONDITIONS

C. Hazardous Substance Release Notification

1. Any owner or operator of a facility who has knowledge of any release of a hazardous substance from a certified facility in a quantity equal to or exceeding the reportable quantity in any 24-hour period shall notify the Department by calling the State Watch Office, (800) 320-0519, as soon as possible, but not later than one working day of discovery of the release.
2. Any owner or operator of a facility who has knowledge of any release of a hazardous substance from a certified facility in a quantity equal to or exceeding the reportable quantity in any 24-hour period shall notify the public by submitting a Public Notice of Pollution, <https://prodenv.dep.state.fl.us/DepPNP/user/pnpRequest>, as soon as possible, but not later than 24 hours after discovery of the release.
3. Releases of mixtures and solutions are subject to these notification requirements only where a component hazardous substance of the mixture or solution is released in a quantity equal to or greater than its reportable quantity.
4. Notification of the release of a reportable quantity of solid particles of antimony, arsenic, beryllium, cadmium, chromium, copper, lead, nickel, selenium, silver, thallium, or zinc is not required if the mean diameter of the particles released is larger than 100 micrometers (0.004 inches).

[Chapter 62-150, F.A.C.]

D. Contaminated Site Cleanup

The Licensee shall comply with all applicable non-procedural provisions of Chapter 62-780, F.A.C., for any violations of relevant provisions of Chapters 376 or 403, F.S., that result in legal responsibility for site rehabilitation pursuant to those chapters. This responsibility for site rehabilitation does not affect any activity or discharge permitted or exempted pursuant to Chapters 376 or 403, F.S., or rules promulgated pursuant to Chapters 376 or 403, F.S.

[Chapter 62-780, F.A.C.]

E. Water Quality Reporting Requirements for the Solid Waste Program

All solid and/or hazardous wastewater quality monitoring reports and all solid and/or hazardous waste ground water, surface water and leachate analytical results shall be submitted electronically. Water quality monitoring reports shall be submitted in a .pdf format. The water quality data Electronic Data Deliverable (EDD) shall be provided to the Department in an electronic format consistent with requirements for importing the data into the Department's databases. Water quality monitoring reports shall be signed and sealed by a Florida registered professional geologist or professional engineer with experience in hydrogeological investigations and shall include the following:

1. Cover letter;
2. Summary of exceedances and recommendations;
3. Ground water contour maps;
4. Chain of custody forms;

SECTION A: GENERAL CONDITIONS

5. Water levels, water elevation table;
6. Ground Water Monitoring Report Certification, using the appropriate Department form;
7. Appropriate sampling information on Form FD 9000-24 (DEP-SOP-001/01); and,
8. Laboratory and Field EDDs and error logs, as applicable.

All submittals in response to this specific condition shall be sent both to:

Florida Department of Environmental Protection
Solid Waste Section
2600 Blair Stone Road, MS 4565
Tallahassee, Florida, 32399-2400

And to:

Florida Department of Environmental Protection
Siting Coordination Office
SCO@dep.state.fl.us

[Rules 62-160.110, 62-160.240, 62-160.340, 62-701.510(9)(a), 62-710, 62-730.225 62-737, 62-740, and 62-780, F.A.C.]

XXXVI. STORAGE TANK SYSTEMS

Registration, construction, installation, operation, maintenance, repair, closure, and disposal of storage tank systems within a certified site that store regulated substances shall be in accordance with Chapters 62-761 and 62-762, F.A.C., in order to minimize the occurrence and environmental risks of releases and discharges. Mineral acid storage tank systems are subject only to Rule 62-762.891, F.A.C.

A. Incident Notification Requirements.

Notification of any condition or situation indicating that a release or discharge may have occurred from a storage tank system or system component shall be made to the County in writing or electronic format on Form 62-761.900(6), Incident Notification Form (INF), within 72 hours of discovery or before the close of the County's next business day.

B. Discharge Reporting Requirements

Notification of the discovery of a discharge of a regulated substance shall be made to the county in writing or electronic format on Form 62-761.900(1), Discharge Report Form (DRF) within 24 hours of the discovery or before the close of the County's next business day, unless the discovery is a non-petroleum, de minimis discharge referenced in Rule 62-780.550, F.A.C., or a petroleum or petroleum product de minimis discharge referenced in Rule 62-780.580(1), F.A.C. A de minimis discharge is exempt from the notification requirements as long as discharge is removed and properly treated or properly disposed, or otherwise remediated pursuant to the applicable provisions of Chapter 62-780, F.A.C.

C. Discharge Cleanup

If a discharge of a regulated substance occurs at the certified facility, actions shall be taken immediately to contain, remove, and abate the discharge under all applicable

SECTION A: GENERAL CONDITIONS

Department rules. The Licensee is advised that other federal, state, or local requirements may apply to these activities. If the contamination present is subject to the provisions of Chapter 62-780, F.A.C., corrective action, including free product recovery, shall be performed in accordance with that Chapter.

D. Out of Service and Closure Requirements

Storage tank systems shall be taken out-of-service and/or closed as necessary in accordance with Rules 62-761.800 and 62-762.801, F.A.C., as applicable.

[Chapters 62-761, 62-762, and 62-780, F.A.C.]

SECTION B. SPECIFIC CONDITIONS**I. DEPARTMENT OF ENVIRONMENTAL PROTECTION****A. *Site Closure and Demolition***

1. MDCDSWM shall demolish the Miami-Dade County Resources Recovery Facility and associated facilities as listed in Conditions I. Scope, and complete closure activities in accordance with the approved Closure Plan, attached hereto and incorporated as Attachment F. Sampling shall be conducted as described in the Closure Plan. Revisions or updates to the closure plan shall be submitted to the Department's Siting Coordination Office for review in accordance with Section A, Condition XXI. Procedures for Post-Certification Submittals. The Department may determine that a modification is necessary if changes to the closure plan are reasonably expected to lead to an increase in environmental impacts or if the changes require additional conditions to authorize.

2. MDCDSWM shall notify the Department upon completion of demolition and final grading of the site.

B. *Ash Monofill*

The ash disposal area consists of 20 cells, totaling approximately 80 acres. Cells 1 through 16 occupy 26.5 acres and are located in the northwest corner of the RRF. This portion of the landfill has a maximum elevation of approximately 80 feet and was closed in 1995 after being in operation for approximately 20 years. Cells 17 and 18 are each approximately 11.8 acres and were closed together in 2011. Operations at the 10-acre Cell 19 began in 2004. Cell 19 was closed in 2017. Cell 20 is approximately 10 acres in size and has been active since the construction was completed in June 2013.

1. Any ash residue generated by the Licensee at the certified facility shall be disposed of, and/or managed, at a permitted solid waste facility in accordance with Chapter 62-701, F.A.C. Alternatively, the Licensee may request approval for recycling and reuse of the ash residue or treated ash residue in accordance with Section 403.7045(5), F.S. Such request shall be reviewed by the Department on a case-by-case basis and may require a modification, pursuant to Section 403.516, F.S., to the Conditions of Certification.

2. The ash monofill shall be operated in accordance with all applicable requirements of Chapters 62-4, 62-302, 62-330, 62-520, 62-550, and 62-701, F.A.C., and Attachment D – MDCRRF Operations Plan. A violation of the requirements for the Operations Plan shall be a violation of these Conditions. Any revisions to the MDCRRF Operations Plan shall be reviewed by the Department and a determination made of whether such revision will be processed as a post-certification submittal, an amendment, or a modification. Projects which involve any changes which are reasonably expected to lead to substantially different environmental impacts, including but not limited to vertical expansion, horizontal expansion, and/or base grade elevation changes shall be considered a modification to these Conditions and shall be processed in accordance with Section 403.516(1)(c), F.S., and Rule 62-17.211, F.A.C. as applicable.

3. In the 80-acre landfill, no solid waste shall be placed in water at any time, nor shall any solid waste be placed within 4.2 feet of the maximum anticipated groundwater level.

SECTION B: SPECIFIC CONDITIONS

4. This facility is to be operated in such a manner that the maximum level of efficiency is maintained at all times so as to cause a minimum adverse effect on the environment. This includes, but is not limited to, causing noxious or objectionable odors, contaminated storm water run-off, or ground waters.

5. Prior to initiating closure of a solid waste disposal unit, or part of a solid waste disposal unit, the Licensee must submit all information inclusive of Form 62-701.900(1), F.A.C., which includes a closure plan. Such information may be processed as an amendment, modification, or post-certification submittal depending on the substantive changes submitted in the closure plan. The closure plan must include sufficient detail to provide reasonable assurance of compliance with the provisions contained in Rule 62-701.600(2) through (8), F.A.C.

6. The Licensee shall furnish two (2) copies (one copy to the Southeast Florida District Office of the Department and one copy to Miami-Dade County RER) of the monthly report on the operation of the facility including volume, type and frequencies of waste being received. Reports for a month shall be submitted no later than the fifteenth (15th) day of the succeeding month.

7. Within 90 days of certifying the closure of the ash monofill, MDCDSWM shall apply for a long-term care permit from the Department's Solid Waste Section to cover the ongoing monitoring requirements associated with the closed ash monofill.

[Chapters 62-520, 62-620, and 62-701, F.A.C.]

C. Water Quality Monitoring of the Ash Monofill

1. Pursuant to Rule 62-701.510, F.A.C., the Licensee shall provide the Department with an updated groundwater quality monitoring plan for the ash monofill within 60 days of issuance of final order for Modification F. This plan is to be reviewed in accordance with Section A. Condition XXI. Procedures for Post-Certification Submittals and once approved shall be attached and titled Attachment E – MDCRRF Groundwater Monitoring Plan.

2. The groundwater monitoring plan includes ten monitoring wells identified as follows:

Well ID	Designation
RR1	Upgradient
RR2	Upgradient
RR3	Detection
RR4	Detection
RR5	Detection
RR16	Compliance
RR19	Compliance
RE10	Compliance
NW18	Upgradient
NW46	Background

SECTION B: SPECIFIC CONDITIONS

3. Any new or replacement monitoring wells shall be constructed in accordance with Rule 62-701.510, F.A.C and be reviewed by the Department through the post-certification submittal process identified in Section A. Condition XXI. Procedures for Post-Certification Submittals.

4. Any monitoring wells which are abandoned, or which will be covered due to lateral expansions of a landfill or the construction of new solid waste disposal units, shall be plugged as necessary so that they do not act as a conduit for any leachate release to the ground water. The Department shall be notified in writing before any monitoring wells are abandoned or plugged.

5. All monitoring wells shall be sampled and analyzed semi-annually (during the months of January and July) for the following parameters:

Field Parameters	Laboratory parameters
Static water level in wells before purging	Total ammonia – N
Specific conductivity	Chlorides
pH	Iron
Dissolved oxygen	Mercury
Turbidity	Nitrate
Temperature	Sodium
Colors and sheens	Total dissolved solids (TDS)
(by observation)	Nitrite (NO ₂)
	Total Coliform Bacteria
	Those parameters listed in 40 C.F.R. Part 258 Appendix I
Surface water monitoring parameters:	
Field parameters	Laboratory parameters
Specific conductivity	Unionized ammonia
pH	Total hardness (as mg/L CaCO ₃)
Dissolved oxygen	Biochemical oxygen demand (BOD ₅)
Turbidity	Iron
Temperature	Mercury
Colors, sheens (by observation)	Nitrate
	Total dissolved solids (TDS)
	Total organic carbon (TOC)
	Fecal coliform

SECTION B: SPECIFIC CONDITIONS

	Total phosphorus (as mg/L P)
	Chlorophyll A
	Total nitrogen
	Chemical oxygen demand (COD)
	Total suspended solids (TSS)
	Those parameters listed in 40 C.F.R. Part 258 Appendix I

6. Groundwater level elevations shall be measured within 1/100th of a foot in reference to NGVD for all wells along with elevation references for top of casing (TOC), to the Department along with the Semi-annual data

7. The Licensee shall submit all representative water quality monitoring results to the Department within 60 days from completion of laboratory analyses, unless a different due date is specified in the Conditions. In accordance with subsections 62-160.240(3) and 62-160.340(4), F.A.C., water quality data shall be provided to the Department in an electronic format consistent with requirements for importing into Department databases, unless an alternate form of submittal is specified. The Licensee shall include Form 62-701.900(31), Water Quality Monitoring Certification, effective date January 6, 2010, hereby adopted and incorporated by reference, with each report certifying that the laboratory results have been reviewed and approved by the Licensee. The operator of the landfill shall notify the Department at least 14 days before the sampling is scheduled to occur so that the Department may collect split samples. The report shall include at least the following:

- a. The facility name and identification number, sample collection dates, and analysis dates,
- b. All analytical results, including all peaks even if below maximum contaminant levels,
- c. Identification number and designation of all surface water and ground water monitoring points,
- d. Applicable water quality standards,
- e. Quality assurance, quality control notations,
- f. Method detection limits,
- g. STORET code numbers for all parameters,
- h. Water levels recorded prior to evaluating wells or sample collection. Elevation reference shall include the top of the well casing and land surface at each well site at a precision of plus or minus 0.01 foot (using a consistent, nationally recognized datum),
- i. An updated ground water table contour map signed and sealed by a professional geologist or professional engineer with experience in hydrogeologic investigations, with contours at no greater than one-foot intervals unless site-specific conditions dictate otherwise, which indicates ground water elevations and flow direction; and,

SECTION B: SPECIFIC CONDITIONS

j. A summary of any water quality standards or criteria that are exceeded.

8. A technical report, signed and sealed by a professional geologist or professional engineer with experience in hydrogeologic investigations, shall be submitted to the Department every two and one-half years during the active life of the facility, and every five years during the long-term care period. However, the Licensee may elect to submit this required information annually in the second semi-annual report of each year, provided that the technical report includes at least the last two and half years of water quality data. The report shall summarize and interpret the water quality and water level measurements collected during the past two and one-half years or five years for facilities in long-term care. The report shall contain, at a minimum, the following:

- a. Tabular displays of any data which shows that a monitoring parameter has been detected, and graphical displays of any leachate key indicator parameters detected (such as pH, specific conductance, TDS, TOC, sulfate, chloride, sodium and iron), including hydrographes for all monitor wells,
- b. Trend analyses of any monitoring parameters consistently detected,
- c. Comparisons among shallow, middle, and deep zone wells if multiple zones are monitored,
- d. Comparisons between background water quality and the water quality in detection and compliance wells,
- e. Correlations between related parameters such as total dissolved solids and specific conductance,
- f. Discussion of erratic and/or poorly correlated data,
- g. An interpretation of the ground water contour maps, including an evaluation of ground water flow rates; and,
- h. An evaluation of the adequacy of the water quality monitoring frequency and sampling locations based upon site conditions.

9. All field and laboratory records specified in Rules 62-160.600-.630, F.A.C., shall be made available to the Department and be retained for the design period of the landfill.

10. If monitoring parameters are detected in detection wells in concentrations that are significantly above background water quality, or that are at levels above the Department's water quality standards or criteria specified in Chapter 62-520, F.A.C., the Licensee shall follow the requirements outlined in Rule 62-701.510(6), F.A.C.

11. A collection and treatment system for the landfill site (i.e., an impervious layer directed to a sump with treatment, an under drain with treatment or a recirculation system) shall be utilized.

[Chapters 62-160 and 62-520; Rules 62-701.500, and 62-701.510 F.A.C.]

SECTION B: SPECIFIC CONDITIONS

D. Zone of Discharge

The zone of discharge for this site shall be in accordance with the requirements of the Settlement Agreement (#92-0993) and Chapter 62-522, F.A.C., extending horizontally shown on Exhibit A and vertically to the first continuous confining layer.

E. Leachate

1. There shall be no discharge to surface waters of the State of Florida. Any groundwater contaminated by leachate shall be confined within the boundaries of the facility.
2. Landfill leachate shall be collected and managed in accordance with 62-701.500(8), F.A.C.
3. If the detection wells of the groundwater monitoring system indicate an exceedance of the applicable groundwater quality standards of Chapter 62-520, F.A.C.:
 - a. Applicable provisions of Chapter 62-780, F.A.C., will be taken to assure the Department that no violation of the groundwater standards will occur beyond the boundary of the zone of discharge.
 - b. Corrective action will be taken to resolve any violation in accordance with the applicable provisions of Rules 62-701.510 and 62-780, F.A.C.

F. Odor Control

The facility shall be operated to control objectionable odors in accordance with the requirements of Rule 62-296.320(2), F.A.C. After being notified by the Department that objectionable odors have been confirmed beyond the landfill property boundary, the owner or operator shall:

1. Immediately take steps to reduce the objectionable odors. Such steps may include applying or increasing initial cover, reducing the size of the working face, and ceasing operations in the areas where odors have been detected.
2. Submit to the Department for approval an odor remediation plan for the gas releases. The plan shall describe the nature and extent of the problem and the proposed long-term remedy. The remedy shall be initiated within 30 days of approval.
3. Implement a routine odor monitoring program to determine the timing and extent of any off-site odors, and to evaluate the effectiveness of the odor remediation plan.

[Chapters 62-520, 62-522, 62-550, 62-600, 62-625, 62-701 and 62-780; Rules 62-296.320, F.A.C.]

II. SOUTH FLORIDA WATER MANAGEMENT DISTRICT

A. Existing Wells

Any existing wells to be impacted during the closing of Certified Facilities that will no longer be used shall be abandoned by a licensed well contractor. All abandoned wells shall be filled and sealed in accordance with subsection 40E-3.531, F.A.C., or with the rules of the authorizing agency, or consistent with these Conditions.

[Rules 40E3.531 and 62-532.400(5), F.A.C.]

SECTION B: SPECIFIC CONDITIONS

III. FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION

A. *Listed Species Surveys*

Prior to any clearing, construction, or ground disturbance within a Certified facility(ies) area, the Licensee shall conduct an assessment for all listed species and shall note all habitat, occurrence, or evidence of listed species. The Licensee shall follow the current survey protocols for all listed species that may occur within the Certified facility area to be impacted, as well as accessible appropriate buffers within the Licensee property or rights-of-way as defined by the listed species survey protocols, prior to conducting detailed surveys. Guidance related to general and species-specific survey protocols can be found in the appropriate species permitting guidelines or management plan (<https://myfwc.com/wildlifehabitats/wildlife/plan>) or in FWC's Florida Wildlife Conservation Guide (FWCG) at <http://myfwc.com/conservation/value/fwcg/>. Wildlife surveys shall be conducted during the reproductive or "Active" season for each species that falls before the projected clearing activity schedule unless otherwise approved by the FWC. For species that are difficult to detect, the Licensee may make the assumption that the species is present and plan appropriate avoidance/mitigation measures for FWC post-Certification review and approval at least 60 days prior to commencing clearing or construction activities within the surveyed area. The surveys required by these Conditions of Certification may also be conducted prior to issuance of the final order of certification, in which case this Condition would be considered satisfied.

1. Surveys shall be conducted in accordance with FWC guidelines and methodologies by a person or firm that is knowledgeable and experienced in conducting flora and fauna surveys for each potentially occurring listed species prior to any clearing, construction, or ground disturbance. FWC's survey protocols may be downloaded from <https://myfwc.com/wildlifehabitats/wildlife/species-guidelines/>. FWC's permitting guidelines for the gopher tortoise (*Gopherus polyphemus*, State Threatened) contain appropriate survey protocols for the species and may be downloaded from <https://myfwc.com/media/11854/gt-permitting-guidelines.pdf>.

2. Survey results shall be provided to the FWC in a report and coordination shall occur with the FWC on appropriate impact avoidance, minimization, or mitigation methodologies. This survey shall identify locations of breeding locations, nests, and burrows for listed wildlife species. Nests and burrows shall be recorded with GPS coordinates, identified on an aerial photograph, and submitted with the final listed species report. Reports may be sent to: ConservationPlanningServices@MyFWC.com.

3. Surveys shall identify locations of breeding sites, nests, and burrows for listed wildlife species. Nests and burrows shall be recorded with global positioning system (GPS) coordinates, identified on an aerial photograph, and submitted with the final listed species report. Locations should be physically marked so that clearing and construction shall avoid impacting them.

4. These surveys shall include an estimate of the acreage and percent cover of each existing vegetation community that is contained within the Certified Site area to be impacted prior to land clearing and construction activities using a geographic information system (GIS). Examples of such wildlife-based habitat classification schemes include Florida's State Wildlife Action Plan¹ (FWC 2019) or the Natural Communities Guide² (Florida Natural Areas Inventory 2010).

SECTION B: SPECIFIC CONDITIONS

[Article IV, Section 9, Florida Constitution; Sections 379.2291, 403.507, F.S.; Chapters 68A-4, 68A-16, 68A-27 and Rule 62-17.191, F.A.C.]

¹ Florida Fish and Wildlife Conservation Commission (FWC). 2019. *Florida's Wildlife Legacy Initiative: Florida's State Wildlife Action Plan*. Tallahassee, Florida.

² Florida Natural Areas Inventory. 2010. *Guide to the Natural Communities of Florida: 2010 edition*. Florida Natural Areas Inventory, Tallahassee, Florida.

B. Listed Species Locations

1. Prior to any clearing, construction, or ground disturbance where any suitable habitat or evidence is found of the presence of listed species within the Certified Site to be impacted, the Licensee shall report those locations to, and confer with, the FWC to determine whether additional surveys are warranted and to identify potential avoidance, minimization, or mitigation recommendations. If additional surveys are required, they shall occur in the reproductive season prior to the anticipated date for the start of construction within the Certified Site to be impacted. The Licensee shall not construct in areas where evidence of listed species was identified during the initial survey until the particular listed species issues have been resolved.

2. If listed wildlife species are found, their presence shall be reported to the DEP Siting Coordination Office and the FWC's Office of Conservation Planning Services.

3. If avoidance is not feasible, the Licensee shall consult with DEP and FWC for listed wildlife species to determine the steps appropriate for the species involved which are to be taken to avoid, minimize, mitigate, or otherwise appropriately address impacts within FWC's respective jurisdiction.

[Article IV, Section 9, Florida Constitution; Section 379.2291, F.S.; Chapter 68A-27 and Rule 62-17.191, F.A.C.]

IV. DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES

Only herbicides registered by the U.S. Environmental Protection Agency and the Florida Department of Agriculture and Consumer Services shall be used at certified facilities. Herbicide applications will be in accordance with label directions and will be carried out by a licensed applicator, in compliance with all federal, state and local regulations. Herbicide applications shall be selectively applied to targeted vegetation. Broadcast application of herbicide shall not be used unless effects on non-targeted vegetation are minimized.

[Chapter 487, F.S.]

V. MIAMI-DADE COUNTY

A. General

Construction, operation, and demolition of the certified facilities shall be in accordance with all applicable nonprocedural requirements of the laws and ordinances of Miami Dade County in effect on January 30, 2026, as amended including, but not limited to, the Miami Dade Comprehensive Development Master Plan and Chapters 8, 11C, 14, 18A, 24, and 33 of the Code of Miami Dade County, Florida, and all applicable stipulations.

1. Pursuant to section 24-15 of the Miami-Dade County Code, all construction and demolition plans, inclusive of plans to remove or relocate drainage structures,

SECTION B: SPECIFIC CONDITIONS

shall require review and notification of compliance provided by the Environmental Resources Management Division (EMRD) of RER, as it relates to environmental contamination issues.

2. Pursuant to section 24-48.1.1(e) of the Miami-Dade County Code, Class V permits are required for any dewatering of groundwater, surface water, or water which has entered into an underground facility, excavation, or trench, including but not limited to dewatering activities associated with demolition activities and cleaning of stormwater infrastructure, and notification of compliance provided by DERM as it relates to environmental contamination issues.

B. Solid Waste

1. Waste derived from Class I solid waste, and non-processable putrescible solid waste (garbage) shall be transported to and disposed of at a permitted lined Class I landfill. Non-processable trash shall be transported to and disposed of at a Class I or Class III landfill.

2. Shredded tires shall be disposed of at a Class I or Class III landfill. Non-motor vehicle tires shall be disposed of at the North Dade Landfill.

3. The soil like materials "primary and secondary soils/fines" generated at the facility shall not be reused without RER's prior approval. Such materials intended for reuse shall be characterized for reuse in accordance with RER's Soil Reuse Guidance for Miami-Dade County dated March 22, 2004.

4. Facility shall have the ability to contain and collect any spill and properly dispose of contaminated materials. Accidental spills shall be immediately reported to DEP per Section A. Conditions VII. Notifications and XXXVI. Solid and Hazardous Waste, paragraph C, as well as to the RER at (305) 372-6789 (24 hours), in accordance with Section 24-20, MDCEPO.

5. Waste oil, transmission fluids, brake fluids, solvents, sludges, chemicals, and all other wastes from facility operations must be collected and stored in a secure location. These materials shall be disposed of in an approved manner by licensed haulers only. Disposal records and receipts must be kept for three years and made available for review.

6. Receipts from all industrial waste and/or wastewater disposal must be maintained at the business and be available for inspection by RER personnel. Receipts shall contain clear information as to the name of the hauler, type of material transported, and quantity of material picked up. Records shall be kept for a period of three (3) years.

7. Oil/water separators along with associated collection basins shall be maintained, i.e. cleaned out routinely to remain functional.

8. Dust suppression, odor and litter control, and other measures shall be implemented, as applicable, to prevent nuisance conditions as defined in Chapter 24, MDCEPO.

9. A determined nuisance, as defined in Chapter 24, MDCEPO, public health threat condition, or abnormal occurrence (e.g., fires, explosions, spills) may result in orders for immediate corrective action in accordance with Section 24-7(15)(a) of the MDCEPO, possible modification to the operation, revocation of this license and/or closure of the facility. Any abnormal occurrences shall be reported to RER within 24 hours, and records shall be kept pursuant to Section 24-20, MDCEPO.

SECTION B: SPECIFIC CONDITIONS

10. Open burning is not permitted in accordance with Section 24-41.4 of the MDCEPO.

[Chapters 15 and 24, MDC Code]

B. Drainage System

1. The drainage system for the road and parking areas at the RRF shall be maintained in accordance with the applicable non-procedural portions of Chapter 24.

2. Per Section 24-48.1(1)(f), a Class VI permit shall be required for the installation of a drainage system for any project that has known soil or groundwater contamination, or that uses, generates, handles, disposes of, discharges, or stores hazardous materials.

3. Appropriate erosion and sedimentation control measures must be implemented throughout the demolition activities to prevent adverse impacts on adjacent properties, downstream stormwater systems, and other environmentally sensitive areas.

[Chapter 24, MDC Code]

HISTORY

Certification issued 01/09/78; signed by Governor Askew

Modified 5/24/89 (Mod A); signed by Deputy Assistant Secretary Benyon

Modified 10/30/1995 (Mod B); signed by SED Waste Programs Administrator (Settlement Agreement #92-0993)

Modified 03/03/94 (Mod C); signed by Secretary Wetherell

Modified 02/12/02 (Mod D); signed by Deputy Secretary Bedwell

Modified 02/10/06 (Mod E); signed by Siting Administrator Oven

Modified XX/XX/XX (Mod F); signed by Deputy Director Mulkey

ATTACHMENTS

ATTACHMENT A: Maps (To be attached once reviewed and approved by the Department in accordance with Section A. General Conditions, Condition I. Scope, Paragraph D.)

Proposed

ATTACHMENT B: Surface Water Management System Operation and Maintenance Requirements

1. In accordance with Section 373.416(2), F.S., unless revoked or abandoned, all stormwater management systems, dams, impoundments, reservoirs, appurtenant works, or works permitted under Part IV of Chapter 373, F.S., must be operated and maintained in perpetuity. The operation and maintenance shall be in accordance with the designs, plans, calculations, and other specifications that are submitted with any amendment or modification and approved by the Department.
2. A registered professional must perform inspections annually after conversion of the project to the operation and maintenance phase to identify if there are any deficiencies in structural integrity, degradation due to insufficient maintenance, or improper operation of the stormwater management system or other surface water management systems that may endanger public health, safety, or welfare, or the water resources, and to insure that systems are functioning as designed and approved. Within 30 days of the inspection, a report shall be submitted electronically or in writing to the Department using Form 62-330.311(1), "Operation and Maintenance Inspection Certification".
3. All flows stormwater flows shall be conveyed at non-erosive velocities (Section 4.10, Environmental Resource Permit Applicant Handbook Applicant's Handbook Vol II)
4. Leachate shall not enter the stormwater management system (Section 4.10, Environmental Resource Permit Applicant Handbook Applicant's Handbook Vol II).
5. If deficiencies are found, the MDCDSWM will be responsible for correcting the deficiencies so that the project is returned to the operational functions as designed and approved. The corrections must be done a timely manner to prevent compromises to flood protection and water quality.
4. If the operational maintenance and corrective measures are insufficient to enable the systems to meet the performance standards of this chapter, the Miami-Dade Resources Recovery Facility must either replace the systems or construct an alternative design.
5. The Miami-Dade Resources Recovery Facility shall provide for periodic inspections in addition to the annual inspections, especially after heavy rain. It must maintain a record of each inspection, including the date of inspection, the name and contact information of the inspector, whether the system was functioning as designed and approved, and make such record available upon request of the Department. Within 30 days of any failure of any system or deviation from the permit, a report shall be submitted electronically or in writing to the Department using Form 62-330.311(1), "Operation and Maintenance Inspection Certification," describing the remedial actions taken to resolve the failure or deviation.
6. The Miami-Dade Resources Recovery Facility shall immediately notify the Department by telephone whenever a serious problem occurs at this facility. Notification shall be made to the Southeast District Office at (561) 681-6600. Within 7 days of telephone notification, a report shall be submitted electronically or in writing to the Department using Form 62-330.311(1), "Operation and Maintenance Inspection Certification," describing the extent of the problem, its cause, the remedial actions taken to resolve the problem.

ATTACHMENTS

7. The following operational maintenance activities shall be performed on approved systems on a regular basis or as needed:

- (1) Removal of trash and debris from the surface water management systems,
- (2) Inspection of culverts, culvert risers, pipes and screwgates for damage, blockage, excessive leakage or deterioration, if applicable,
- (3) Inspection of stormwater berms, if applicable,
- (4) Inspection of pipes for evidence of lateral seepage,
- (5) Inspection of flapgates for excessive backflow or deterioration, if applicable,
- (6) Removal of sediments when the storage volume or conveyance capacity of the surface water management system is below design levels,
- (7) Stabilization and restoration of eroded areas,
- (8) Inspection of pump stations for structural integrity and leakage of fuel or oil to the ground or surface water, if applicable, and
- (9) Inspection of monitoring equipment, including pump hour meters and staff gauges, for damage and operational status, if applicable.

8. In addition to the practices listed above, specific operational maintenance activities are required, if applicable, depending on the type of approved system, as follows:

- (1) Overland flow systems shall include provisions for:
 - a. Mowing and removal of clippings, and
 - b. Maintenance of spreader swales and overland flow areas to prevent channelization.
- (2) Spray irrigation systems for reuse/disposal shall include provisions for:
 - a. Inspection of the dispersal system, including the sprayheads or perforated pipe for damage or clogging, and
 - b. Maintenance of the sprayfield to prevent channelization.
- (3) Treatment systems which incorporate isolated wetlands shall include provisions for:
 - a. Stabilization and restoration of channelized areas, and
 - b. Removal of sediments which interfere with the function of the wetland or treatment system.

ATTACHMENTS

ATTACHMENT C: Mitigation Requirements/Plans (Not applicable)

Proposed

ATTACHMENTS

ATTACHMENT D: Monofill Operations Plan

Proposed



RESOURCES RECOVERY LANDFILL OPERATION PLAN

Purpose and Scope

The Resources Recovery Landfill Operation Plan meets the guidelines as described in 62-701.500(2). The Resources Recovery Landfill Operation shall serve as a guide for day-to-day operations and set forth a contingency plan for emergencies that may arise.

Hours of Operation

The Resources Recovery Landfill is open for ash disposal from 7:00 am to 5:30 pm, Monday- Friday.

Ash disposal is available on all holidays except the following:

- a. Martin Luther King's Birthday
- b. Independence Day
- c. Christmas Day

Deviation from Regular Hours

The Chief of the Landfill Division will notify site personnel of any deviation from the regular landfill operating hours or revisions to the schedule.

Responsible Personnel

The primary contacts for this site are:

Frank Gomez

Chief of Landfill Division

Department of Solid Waste Management

2525 N.W. 62nd Street

Miami, Florida 33147

Office: (786) 878-6467 or (305) 514-6656

Cell: (786)473-4594

Email: fgomez@miamidade.gov



RESOURCES RECOVERY LANDFILL OPERATION PLAN

Leslie Aldama

Waste Operations Clerk
Assistant to Chief of Landfill Division
Department of Solid Waste Management
8785 NW 58 Street (Trailer B)
Doral, FL 33178
Office: (786) 878-6469
Cell: (305)-502-4004
Email: adalmaal@miamidade.gov

The individual responsible for site operation and maintenance are:

Jeremiah Reed

Landfill Superintendent
Department of Solid Waste Management
6990 NW 97 Avenue
Doral, Florida 33178
Office: (786) 878-6468
Cell: (305) 951-5031
Email: jeremiah.reed@miamidade.gov

Weighing/Measuring Incoming Waste

All incoming vehicles containing ash from the Resources Recovery Facility are weighed at the scales located onsite at the facility. Net weights are calculated automatically by deducting tare weights, stored in the scale system. Vehicle tare weights are periodically verified by weighing vehicles after unloading to assure precise net weights. The scales are tested and certified by the State of Florida Department of Agriculture.



RESOURCES RECOVERY LANDFILL OPERATION PLAN

Speed Limit

Speed limit on the scale shall not to exceed 2 mph. Speeds shall not exceed 10 mph on landfill. Sudden stops and starts on the scale will not be tolerated, as this may cause scale damage. Any party who causes damage to the scale will be responsible for the repair.

Vehicle Control

Vehicle access to the site is from the northwest property boundary. Approach roads to the active landfill areas are along the southern border of the site. Traffic patterns on the landfill site are controlled through the usage of signs and spotters indicating the location of the active landfill and working face.

Method and Sequence

Truck loads of ash are directed to the active working face. The ash loads are discharged from the trucks, moved and leveled by dozers. The landfill is a high rise, area-type operation with ash placed in layers at progressively higher elevations until the maximum elevation is reached. Landfill side slopes are constructed and maintained at 3:1 (Horizontal – Vertical) slopes.

Storm Water Control-

The Resources Recovery Landfill is equipped with a perimeter storm water system.

Groundwater Monitoring (FDEP PERMIT: PA 77-08E)

An approved Groundwater Monitoring Plan is in place. Groundwater Monitoring is conducted semi-annually in accordance with FDEP. All chemical analyses are performed by a State of Florida certified laboratory.



RESOURCES RECOVERY LANDFILL OPERATION PLAN

All-Weather Access Roads

A heavy equipment access road parallels an all weather access road along the northern property boundary. The limerock access road to the active portion of the landfill area along the western property boundary is maintained by grading.

Effective Barrier

Access to the site is controlled by an existing fence line in place along the property boundaries. Site entrances are guarded and entrance gates are locked when the landfill is not in operation. There is a security guard present at the site during work hours and when the facility is closed from 5:00pm to 7:00am, 7 days a week and on 24 hours shifts during observed holidays:

- a. Martin Luther King's Birthday
- b. Independence Day
- c. Christmas Day

Signs, Traffic, Operation

Signs are located at main entrance gates and along the access roads. Traffic flow is directed by the usage of signs.

Dust Control

A 5,000-gallon water tanker is currently assigned to the site to control dust as needed 7 days a week.



RESOURCES RECOVERY LANDFILL OPERATION PLAN

Personnel

The total number of personnel assigned at the site, are listed by classification below:

- 1 - Waste Equipment Operators
- 1 - Superintendent
- 3 - Waste Attendants
- 1 - Water Truck Drivers
- 5 - Scale house Operators
- 1 - Landfill Mechanic

Equipment

Equipment – types and numbers of active units used are listed below:

- 2 - Bulldozers
- 1 - Backhoe
- 1- Deck mower and tractor
- 1- Zero turn lawnmower
- 1 - 5000 Gallon Capacity Water Tanker
- 1 - 12 Cubic Yard Dump Truck

All equipment is actively used. If additional equipment is required for site operation, it will be obtained from another County Landfill facility. Additionally, the DSWM has a contract in place to obtain equipment from the local heavy equipment rental agencies should the need arise.



RESOURCES RECOVERY LANDFILL OPERATION PLAN

Non-Emergency or Non-Life Threatening Injuries

Nearest Medical Centers: Baptist Urgent Care
9915 NW 41 Street
Doral, FL 33178
(786) 596-3830

ATTACHMENTS

ATTACHMENT E: Groundwater Monitoring Plan (To be attached once reviewed and approved by Department in accordance with Section B. Specific Conditions, Condition II. Department of Environmental Protection, Paragraph C. Water Quality Monitoring of the Ash Monofill)

Proposed

ATTACHMENTS

ATTACHMENT F: Closure Plan

Proposed



Miami-Dade County

Department of Solid Waste Management

Closure Plan

Miami-Dade County Resources Recovery Facility

September 25, 2025

Closure Plan

Miami-Dade County Resources Recovery Facility

September 25, 2025

Prepared By:

Arcadis U.S., Inc.
2811 Ponce De Leon Blvd
Suite 200
Coral Gables
Florida 33134
Phone: 786 268 3200

Prepared For:

Miami-Dade County
Department of Solid Waste Management
2525 NW 62nd Street, 5th Floor
Miami, FL 33147

Our Ref:

30189215



Christopher C. Tilman, PE, BCEE
Arcadis U.S., Inc.
Project Manager
Florida PE No. 61903



Kushala Gowda, PE
Arcadis U.S., Inc.
Senior Consultant

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- A Regulated Materials Survey
- B Miami-Dade Resources Recovery Facility Building Materials Sampling and Analysis Plan
- C Miami-Dade County, FL - Code of Ordinances: Chapter 24

1 Introduction

This Closure Plan (Plan) has been prepared for Miami-Dade County, Department of Solid Waste Management (County) to outline closure activities to be completed at the County's Resources Recovery Facility (RRF) located at 6990 NW 97th Avenue in Doral, Florida (Site) (**Figure 1**).



Figure 1 – Site Location Map

1.1 Background

The RRF is located at 6990 NW 97th Avenue in Miami, Florida and consists of various buildings with an approximate total footprint of 378,113 square feet, located on approximately 157 acres (**Figure 2**) according to the Miami Dade County Property Appraiser website. The RRF occupies approximately 40 acres of the 157-acre

site, while the remainder of the property is comprised of the Class I ash landfill, stormwater retention pond and stormwater swales.



Figure 2 – Parcel Map

The RRF began operation in 1982 and by 1990 had been converted to the present Refuse-Derived Fuel (RDF) design. The RRF is owned by the County and was contract operated by Covanta.

The Facility accepted and processed non-hazardous municipal solid waste (MSW or Garbage) and waste collected as part of trash or bulky waste collection service (Trash) into RDF, combusted the RDF to generate electricity, and recovered saleable recyclables.

On February 12, 2023, a fire began in the G-Gallery conveyor system and spread to multiple connected buildings including the Gallery Building, Fuel Storage, Garbage Receiving, Garbage Pit, Garbage Processing, Office Building, and others. The Garbage Receiving building and portions of the Garbage Processing building were

heavily damaged by the fire and were demolished as part of the firefighting efforts. The facility ceased all operations after the fire except for tire shredding and limited ongoing maintenance and cleanup operations.

Since the fire, the County and Covanta have been conducting Hazardous Building Materials (HBM) Survey(s) (see Attachment A) and doing additional work to maintain the site and prepare for closure and demolition. The County intends to demolish all unnecessary buildings and structures and wishes to permanently close the Ash Monofill. The infrastructure for the Water and Sewer Department (WASD) pump station and a few site buildings such as the guard house at the main entrance, the truck scale (Nos. 1 and 2) east of the Recyclable Trash Improvements (RTI) Building, and office trailer north of the RRF will remain, along with necessary electrical, potable water, and sanitary sewer utilities.

1.2 Site Description

The Site consists of several structures varying in size and use. The three major areas of the RRF included Garbage Processing (GP), RTI, and the Powerhouse (PH) and are described as follows:

- Garbage Processing (GP) - The GP area received, screened, and shredded MSW into RDF on two process lines and included the Garbage Receiving floor, Garbage Pit, and Garbage Processing (including conveyors, trommels, hammermill shredders) and Fuel Storage. The GP System processed up to 700,000 tons of garbage annually to be used as refuse derived fuel.
- Recyclable Trash Improvements (RTI) - The RTI area received, shredded, and screened Trash into biomass fuel on three processing lines and included the RTI Receiving floor, RTI Pit, RTI Shredders, RTI Dust Control, numerous conveyors, and other appurtenances. The RTI system processed up to 400,000 tons/year of yard trash and organic bulky waste into biomass fuel.
- Powerhouse (PH) – The PH area is where the RDF was combusted in a controlled process to generate steam and consisted of four municipal waste combustors (MWC), two turbine generators, a cooling tower, and ancillary equipment. Each MWC could process up to 27 tons per hour of RDF and had a maximum continuous rating of 198,000 pounds per hour (lb./hour) of steam. The four units combined produced enough steam to generate approximately 77 megawatts (MW) of electricity. Emissions from each unit were controlled by an Air Pollution Control (APC) system consisting of the following:
 - A selective non-catalytic reduction (SNCR) system for nitrogen oxides (NO_x)
 - A spray dryer absorber (SDA) with lime slurry injection for control of acid gases such as sulfur dioxide (SO₂) and hydrogen chloride (HCl) and activated carbon injection (ACI) system for control of mercury (Hg) and other metal hazardous air pollutants (HAP) and dioxin/furans (D/F)
 - A fabric filter (baghouse) for control of particulate matter (PM)

The Powerhouse also included two 250-foot stacks. MWC Units 1 and 2 shared a common stack, each with its own flue. The same stack/flue configuration was used for MWC Units 3 and 4.

Other buildings and facilities at the RRF site include the following:

- Maintenance Building
- WASD Pump Station
- Compressor Building
- Chemical Storage
- Ash Conditioning

- Ash Processing
- Ash Building
- Tire Building
- Cooling Tower
- Pump House
- Water Treatment
- Trailers / Office Trailers
- Office and Storage
- Vehicle Maintenance
- Truck Scales
- Guard House
- Ash Monofill

Section 9 summarizes which buildings and facilities will be demolished or retained. Current features at the Site are depicted in **Figure 3**.

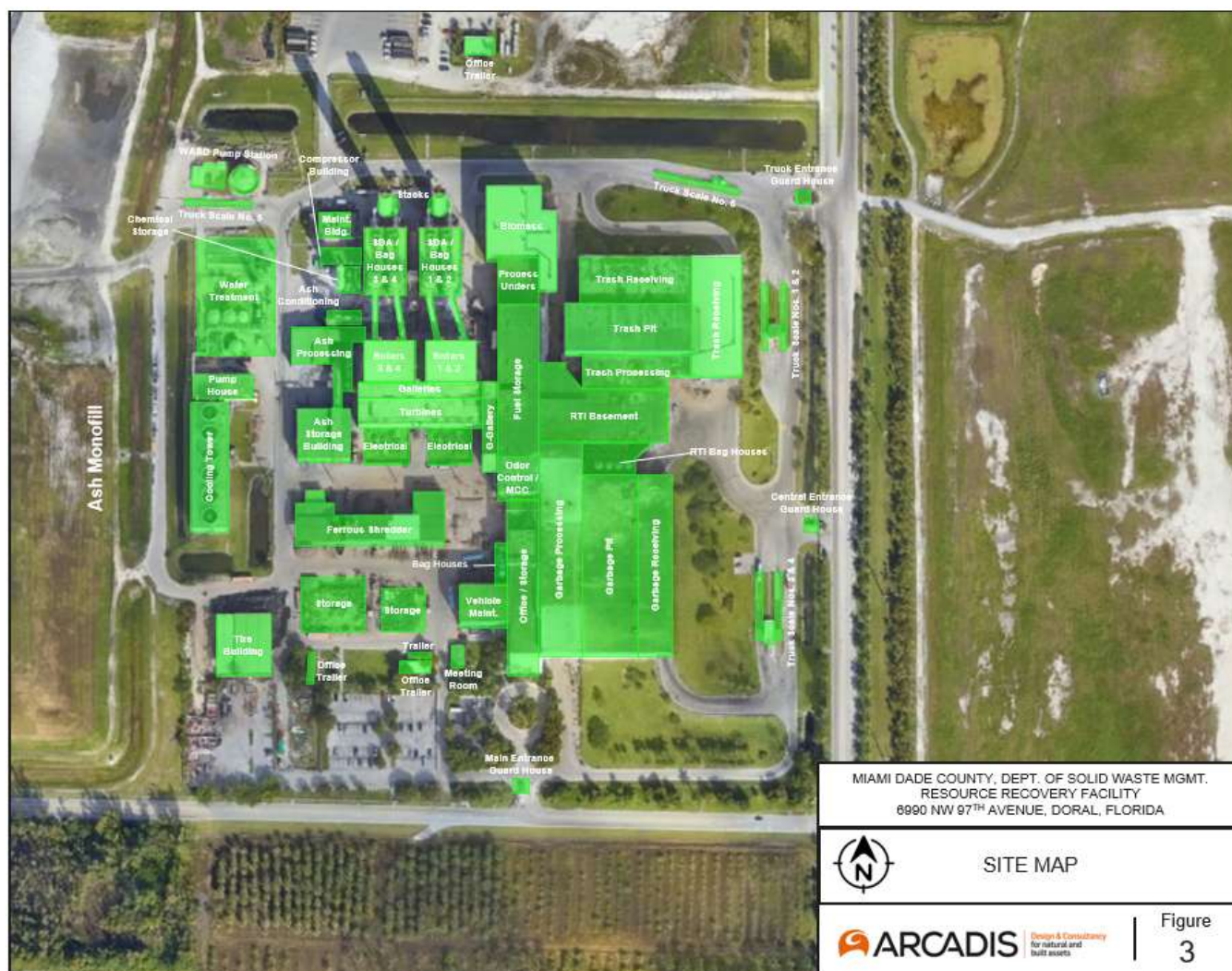


Figure 3 – Site Map

1.3 Site Investigation

Investigation activities to characterize and quantify hazardous building materials, residual chemicals, wastes, and ash will be conducted as necessary to supplement existing characterization information. Groundwater investigation activities are not currently proposed as part of this closure plan, as the existing groundwater monitoring well network for the RRF site will provide sufficient data to determine the presence and extent of groundwater contamination, if any exists. Requirements from 62-780 F.A.C. shall be referred to for site investigation.

1.3.1 Sampling Plan

1.3.1.1 Sampling Objectives

The field sampling activities are designed to characterize conditions in soil, sediments and remaining building structures at the RRF site to determine the presence and extent of potential contamination from non-hazardous ash and process chemicals from prior RRF operations as well as potential universal wastes from paints, caulks, and other materials in the remaining structures. As mentioned previously, groundwater characterization will be determined through the analyses of the existing monitoring well network for the RRF site.

1.3.1.2 Sampling Plan Details

The sampling and analysis plan for building materials at the RRF site is provided in Attachment B. The building materials sampling and analysis plan includes the materials of interest, sampling objectives, existing data (Attachment A, Regulated Materials Survey data) and proposed sampling including approximate number of samples, and laboratory analytical parameter and methods.

Soil sampling at the RRF site will be performed as described in this section. The first two samples (designated CS-1 and CS-2) will be collected from the stormwater swale adjacent to the cooling tower (see **Figure 4**), one from the top of bank and another from the bottom of the swale, which is expected to represent the most potential contamination at the site, if any. Soil sampling at CS-1 will begin at the ground surface and continue at one-foot increments to a depth of at least 6 feet. Soil sampling at CS-2 will begin at the bottom of the swale and continue at one-foot increments to a depth of approximately 3 feet. The CS-1 and CS-2 sampling will be performed for all parameters that can be analyzed that are listed in Table 2 – Soil Clean-up Target Levels, Section 24-44 of Chapter 24 Miami-Dade County, Florida Code of Ordinances (see Attachment C). The CS-1 and CS-2 soil sampling results will indicate contaminants of concern and depth of contamination.

In addition to CS-1 and CS-2, collection and testing of soil samples from 26 other pervious locations (such as grass and swales) and 18 impervious locations (facility interior roads and paved areas) across the rest of the RRF site (as shown on **Figure 4**) will be performed. Based on the CS-1 and CS-2 sampling results, the rest of the samples will be collected at one-foot increments to a depth one foot below the depth where parameters were detected in the first two samples and will only be tested for those parameters that were detected in the CS-1 and CS-2 samples. Evaluation of the sampling results and depth of contamination at each sampling location will determine the extent of source removal that will be performed to remove the contaminated soil.

Groundwater monitoring results from the semi-annual groundwater sampling events will be reviewed to check for the presence of any groundwater contaminants.

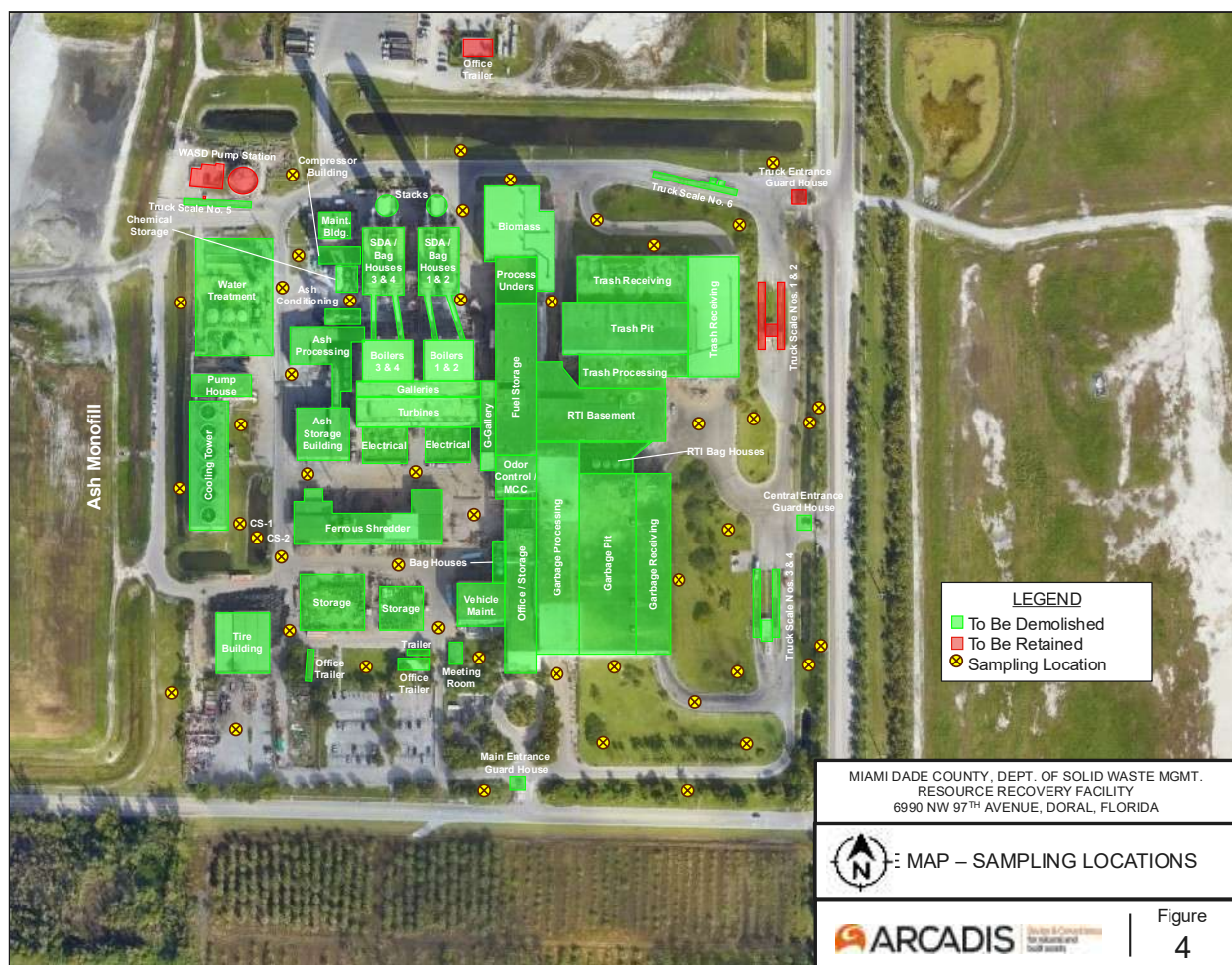


Figure 4 – Soil Sampling Locations

2 Permits, Notifications, And Licenses

The proposed closure is based on regulatory notification and permitting requirements as outlined in this Plan and applicable Laws and Regulations including those governing the removal, storage, handling, transportation, and disposal of waste.

The County or their designated contractor(s) will submit all notifications and obtain applicable regulatory permits and approvals prior to beginning work at the Site. During implementation of the work, the County will ensure all contractor(s) and subcontractors comply with all demolition-related clauses in applicable permits and approvals.

The County will ensure that all applicable Laws and Regulations are followed, and all permit, notification, and license requirements are met during the execution of the field work. The County or their designated contractor(s) will work with each regulatory authority to understand the timing for each permit or notification, scheduling field work, and coordinating regulatory inspections (if necessary) accordingly to prevent delays.

2.1 Existing Permits

The facility is permitted in accordance with the Florida Power Plant Siting Act (PPSA) Conditions of Certification PA 77-08E. The Conditions of Certification, along with the following permits, remain effective for the closure scope of work with provisions that will be adhered to during the implementation of closure activities:

- Department of Regulatory and Economic Resources (RER)-issued Industrial Waste Pretreatment Annual Operating Permit to the County and Covanta for wastewater discharges from the Facility to Miami-Dade County's sanitary sewer system, as required by the Miami-Dade Pollution Control Ordinance. This permit, which must be renewed every year, authorizes Covanta to operate a demineralization water system, well water treatment system, wastewater treatment system, and an Air Quality Control System (AQCS). Permit number IWP-00337-2025/2026 was renewed in 2025 and is valid from July 1, 2025 through June 30, 2026.

2.2 Anticipated Permits

According to section 102.2 of the Florida Building Code (FBC) structures or facilities of electric utilities, as defined in Section 366.02, Florida Statutes, which are directly involved in the generation, transmission, or distribution of electricity are exempt from the FBC as provided by law. Other than the modification of the PPSA Conditions of Certification PA 77-08E, demolition permits from RER and the Miami-Dade Building Department may be required. Other additional local or state permits are not anticipated for the closure of the RRF Site.

3 Health and Safety

The County considers Health and Safety and environmental protection the number one priority for all projects. To ensure health and safety of personnel onsite, health and safety documentation will be prepared, and workers will be confirmed to possess relevant training necessary for the anticipated scope of work.

Before starting any work, a Site-specific health and safety orientation will be provided to all project personnel by the Contractor. The orientation will ensure that Site personnel understand the project hazards and the administrative and/or engineered controls implemented to control them.

At the start of each workday, a tailgate safety meeting will be conducted to review the upcoming tasks and associated safety process. The meeting will be attended by all Contractor and subcontract personnel working on the Site. The health and safety meetings are effective in reinforcing the concepts presented in health and safety documentation and helping personnel stay focused on implementing safe work practices.

3.1 Health and Safety Documentation

Prior to conducting any work, a Site-specific Health and Safety Plan (HASP) will be prepared by the Contractor for the scope of work to be completed. The Site-specific HASP will comply with the Occupational Safety and Health Administration (OSHA) requirements as specified in Title 29 Code of Federal Regulations (CFR) Part 1910.120 and include site specific safety procedures (as applicable). The HASP will also cover emergency procedures at a minimum for medical emergencies and inclement weather.

Safety documentation will include the following as part of the HASP or as separate documentation:

- Removal and management of Asbestos
- Removal and management of hazardous building materials (fly ash, universal waste, PCB caulk, other regulated materials)
- Disturbance and/or removal of materials that have the potential to contain silica (block, concrete, etc.) and mold (if applicable)
- Injury and Illness Prevention Program (IIPP)
- Air Monitoring Plan for worker protection and public safety
- High risk tasks (energy isolation, elevated work, crane lifts, hot work, confined space entry)

3.2 Training

The HASP will include relevant and necessary training requirements for personnel hired by the Contractor. Contractor and any Subcontractors will possess valid training certificates issued by appropriate issuing agencies for specific tasks that Site personnel are engaged in. Copies of certificates and evidence of satisfactory training will be maintained on Site and be available for review by authorities as needed. Training requirements for this project will be based on tasks to be performed and may include, but not be limited to:

- Hazardous Waste Operations and Emergency Response (HAZWOPER) 40 hour
- HAZWOPER current 8-hour refresher
- Asbestos supervisor, worker, and asbestos awareness training
- Lead awareness
- Medical surveillance (as required)
- First aid/cardiopulmonary resuscitation (CPR)
- Equipment operator certifications
- Confined space operations (as required)
- Flagger certification (as required)

4 Mobilization and Site Preparation

Various mobilization and site preparation activities will be completed before starting work at the Site. These activities aid in preparing a safe Site and are paramount to the successful completion of any project. These activities will include, but are not limited to:

- Review training certificates of proposed personnel (including subcontractor personnel).
- Complete a final demolition work plan to detail means and methods for major tasks incorporating any regulatory comments.
- If needed, mobilize a Site construction trailer to be used by onsite representatives throughout the duration of the project.
- Mobilize equipment and personnel necessary for the anticipated scope of work.
- Conduct a pre-construction meeting at the Site to be attended by all Site personnel prior to beginning work.

- Delineate work zones, including posting necessary and required signs, warning tape, barricades, etc.
- Set up staging areas for equipment.
- Provide temporary facilities and handwashing stations at the Sites based on the size of the work crew.
- Install the necessary storm water management and erosion and sedimentation controls as required by best management practices and Miami-Dade County.
- Install temporary chain link fencing and appropriate signage at required intervals.
- Install security measures (as applicable).
- Provide first aid kits, fire extinguishers, and eye wash stations at readily accessible locations for each work crew during all work activities.

4.1 Sediment and Erosion Controls

Erosion and sediment controls, storm drain and run-off protection, and sanitary sewer protection initiatives will be installed to prevent migration of debris from the Site and as required by best management practices and local requirements. This will include stormwater inlet / drain protections, a method to ensure that trucks do not track site debris and dirt outside the property boundary, compliance with Miami-Dade County requirements (as applicable). Installed initiatives will be routinely inspected and promptly repaired if damage or defective controls are observed throughout project execution. These controls will be removed after completion of field work and stabilization of restored surfaces.

4.2 Spill Prevention

Spill prevention controls will be installed and maintained to help prevent unwanted releases in all areas associated with completion of work areas associated with this proposed project site. A spill control plan will be prepared prior to mobilization. The spill control plan will include proposed spill kit locations, emergency contact information, and contingency actions to be taken if a spill occurs. Spills that occur on the Site will be reported to applicable regulatory authorities as required by local, state, and federal regulations. A spill log will be maintained throughout the project duration.

4.3 Site Security

The site will be secured in a manner to protect the public from harm and to prevent acts of vandalism, theft, and trespassing. The County will be responsible for safeguarding all equipment, materials, and stored wastes until transported offsite. Proposed security measures may include fencing, security personnel, additional lighting, or remote construction site security systems.

4.4 Temporary Chain Link Fencing and Barricades

The Site is enclosed by fencing where not occupied by site structures, and gates within the fence provide access to the interior of the site. Prior to beginning demolition, the County will install temporary chain link fencing at select locations within the site to facilitate various activities and secure the site during performance of the work. Temporary fencing may be used in conjunction with existing perimeter fencing. Existing perimeter and installed

temporary fence will have required Local, State and Federal signage displayed in required intervals. Signs will be posted to deter trespassers from entering the Site and access to the Site will be controlled at all times.

5 Pedestrians and Vehicular Traffic Controls

A Traffic Control Plan (TCP) will be prepared that outlines sidewalk closures, road closures, travel routes to and from the Site for delivery of heavy equipment, and travel routes for transportation of wastes and scrap metals. This plan will also propose areas to be used for parking, equipment staging, waste storage, site trailer location(s) and travel paths to/from the work area(s).

All local and state requirements for sidewalk and road closures needed to complete the scope of work will be satisfied. All permits, planning, submittals, equipment, and labor associated with any closures will be completed prior to implementation.

6 Utilities

Utility clearance through the Florida One Call (Sunshine 811) system will be requested for the entire property located at 6990 NW 97th Avenue in Doral, Florida. Site plans, survey drawings, as-built drawings, field observations, and Site historical knowledge regarding utility locations will also be reviewed.

In addition, a private utility locating company will locate and field mark utilities and other subsurface features around the perimeter of each structure slated for demolition and all areas expected to be disturbed during execution of this closure plan. The private utility locator will use ground penetrating radar, electromagnetic locating equipment and other industry standard utility locating means to locate subsurface utilities. All utilities identified during the private utility mark out will be recorded by GPS and presented on utility maps. The Florida One Call and private utility locate will also be utilized to identify utilities at or near the property boundaries which will not be decommissioned. Utility markings will be protected and refreshed (as necessary) throughout the project.

Electrical, potable water and sanitary sewer service will be retained for select remaining onsite buildings and the WASD system components. The existing high voltage electrical service for the facility will be disconnected and replaced with 480 volt, three phase power to provide continuing service for the site buildings and systems that remain. The County will directly coordinate with service providers to disconnect utilities that are no longer necessary for continued site operations which will be pared back to the feeder locations as applicable. Disconnects will be field verified by visual observation of physical disconnection points. Disconnected utilities will be tested and verified to ensure stored or residual energy is released or dissipated from the disconnected equipment prior to closure of any structure.

7 Environmental Removals

Prior to structural closure activities, the County will ensure potentially hazardous building materials are removed and other environmental conditions are made safe for closure activities to commence.

7.1 Biohazardous Substances

The disturbance or dislocation of pigeon / bird feces or contaminated debris may cause particulates containing *Histoplasma Capsulatum* to be released, thereby creating a potential health hazard to workers or others. Biohazardous substances including carcasses, bird feces, and general animal wastes were observed within the structures slated for closure. Biological hazards will be managed appropriately and adequate personal protective equipment will be used by the workers prior to initiating closure activities.

7.2 Asbestos Abatement

A pre-demolition HBM survey including a survey for Asbestos Containing Material (ACM) will be completed to identify the type, location, and quantity of ACMs. Information presented in the pre-demolition survey will be used by the County to determine type, condition, and general location of the ACMs that require abatement. ACM abatement activities will be completed in accordance with local, state, and federal laws and regulations.

Asbestos removal will be performed by a Florida licensed / accredited asbestos abatement contractor in accordance with applicable United States Environmental Protection Agency (USEPA), OSHA, and Florida regulations. Notification to FDEP, Division of Air Resource Management will be made at least 10 business days prior to any closure activities, as required.

If suspect ACMs not previously identified are encountered, abatement will stop, and appropriate regulatory authorities will be notified.

7.3 Universal Waste and Other Regulated Wastes

Visible universal wastes and other regulated wastes will be identified, removed, handled, sized, containerized, labeled, stored, transported and disposed of prior to commencement of closure activities at the Site. As the closure activities progress, universal wastes and other regulated wastes will be identified, removed, handled, sized, containerized, labeled, stored, transported, and disposed at approved disposal / recycling facilities as outlined in the waste management section of this plan.

8 Air Monitoring

Personal exposure air monitoring required by local, state, and federal regulations to ensure the health and safety of all onsite personnel will be performed. This includes, but is not limited to personal asbestos air monitoring, monitoring related to potential silica exposure, and atmospheric monitoring for potential confined space entry (if applicable).

Closure activities will be continuously monitored for visible dusts and real time ambient air monitoring for particulates will be conducted. Real time ambient air monitoring data will be recorded at least hourly.

Asbestos pre-abatement, perimeter, and post-abatement clearance air monitoring, if required, will be performed by an approved air monitoring contractor.

9 Closure

The County will perform the complete removal of all RRF site features described in Section 1.2 except those listed below. All demolition activities will be accomplished using controlled means and methods to prevent unwanted collapse during field work. The following structures and features will be identified and protected from damage during implementation of this scope of work:

- WASD Pump Station
- Guard House
- Ash Monofill
- Miami-Dade Office Trailer
- Truck scales (Nos. 1 and 2) near 97th Avenue east of RTI Building
- Surface water retention pond
- Selected parking areas
- Perimeter fence
- Selected site roads
- Selected utilities

A summary of buildings and facilities to be demolished or retained are depicted below in **Table 1**.

Table 1 – Summary of Proposed Buildings and Facilities Status

Building/Facility	Demolish	Retain
Guard House (Truck Entrance)		X
Guard House (Central Entrance)	X	
Guard House (Main Entrance)	X	
Stacks	X	
Maintenance Building	X	
WASD Pump Station		X
Truck Scale (No. 5) Adjacent to the WASD Pump Station	X	
Office Trailer (North of the Stacks)		X
Ash Monofill		X
Garbage Processing	X	
RTI Area	X	
Powerhouse	X	
Maintenance Building	X	
Compressor Building	X	

Building/Facility	Demolish	Retain
Chemical Storage	X	
Ash Processing	X	
Ash Conditioning	X	
Ash Storage Building	X	
Tire Building	X	
Cooling Tower	X	
Pump House	X	
Water Treatment	X	
Trailers / Office Trailers	X	
Office and Storage	X	
Vehicle Maintenance	X	
Truck Scales (Nos. 1 and 2) near 97 th Avenue (east of RTI Building)		X
Truck Scales (Nos. 3 and 4) near 97 th Avenue (east of GP Building)	X	
Truck Scale (No. 6, north of the RTI Building)	X	
Biomass Building	X	
Water Treatment	X	
Ferrous Shredder	X	
Bag Houses	X	
Stormwater Management System (Inlets, Pipes, Swales, Pond, and Appurtenances)		X

Proposed buildings and facilities to be demolished or retained are depicted below in **Figure 5**. All site pavement areas within the green dashed line are proposed to be removed, with only a perimeter road and select parking areas remaining.

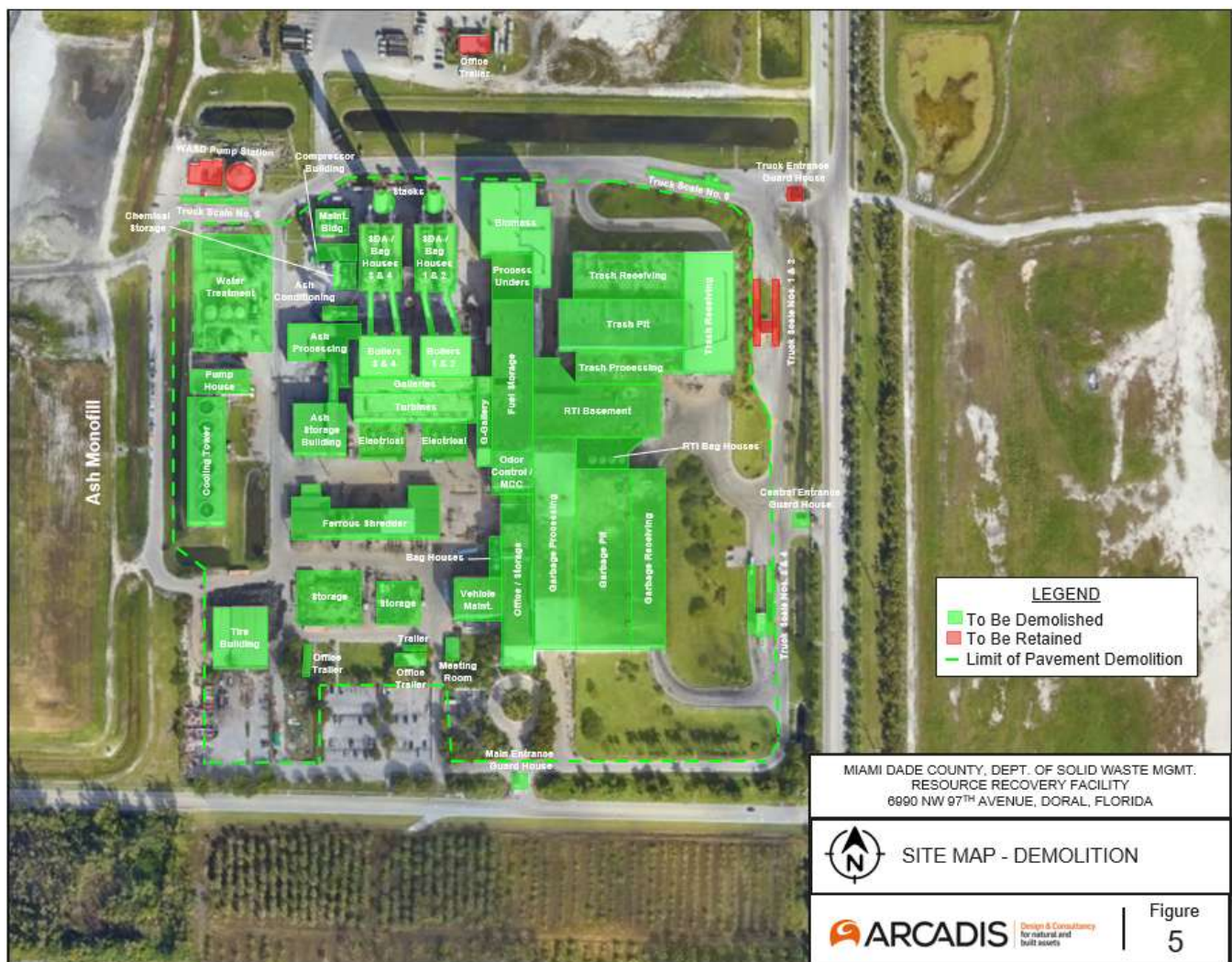


Figure 5 – Site Map of Proposed Buildings and Facilities to be Demolished or Retained

All demolition work will be conducted per OSHA 29 CFR 1926 Subpart T – Demolition. Structures will be removed in a bay-to-bay approach, top down, while maintaining stability throughout the process. Steel columns, rebar, and concrete pads must be removed flush with surrounding floors to prevent tripping hazards. Concrete pillars, posts, or curbs will be removed. All structure foundations and pits and all underground utilities except for selected stormwater inlets and piping will be removed.

The Site will be left in a safe condition at the end of each shift to prevent unwanted collapse of structures and migration of debris offsite (from wind, rain, etc.). This will include good housekeeping practices, securing debris to prevent migration offsite, and securing the work area to prevent unwanted access.

Hard fill (concrete, brick, and block) created from demolition tasks may be recycled for use as backfill onsite, provided that it is uncontaminated and meets the definition of clean debris as per 62-701.200(15) F.A.C. Building materials including hardfill not used as backfill onsite will be down-sized according to selected transport or

disposal facility location requirements. Wastes will be removed, containerized, transported, and disposed / recycled in accordance with the Waste Disposal section of this closure plan.

The specific means and methods for implementing this Plan will be proposed by selected demolition Contractors, however, it should be noted that significant dust generating demolition methods, such as the use of wrecking ball or explosives are not anticipated to be used at the Site.

A pre-demolition readiness checklist will be completed which will verify utility disconnects are complete, no residual materials or elevated Lower Explosive Limits (LELs) of flammable vapors or gas are present in pipes or structures slated for demolition, Lock Out/Tag Out is complete, perimeter controls are in place, regulated materials are removed, and the structure is ready for demolition. The pre-demolition readiness checklist must be reviewed and approved by onsite management and County representatives prior to beginning demolition.

9.1 Dewatering

Water is present at various surface water retention features. Residual water may be pumped to adjacent inlets to be processed through the onsite wastewater system or the WASD sanitary sewer system. The County will coordinate directly with WASD to procure a discharge permit (if applicable), make the appropriate notifications, complete reporting, and correspond with any other relevant local agencies prior to discharge(s).

If sediment, sheen, sludge, or other evidence is observed during dewatering, discharges will be stopped, and notification will be made to appropriate authorities. If additional waste characterization data is required to support proper characterization, profiling, and/or disposition of water or sediment, additional waste characterization samples will be collected and sent for laboratory analyses.

9.2 Tank, Pipe, and Equipment Inspection and Cleaning

Each tank, pipe, and piece of process equipment will be verified free of residual materials and hazardous atmospheric conditions prior to closure. Each tank, vessel, storage container, and piece of equipment will be opened at accessible ports to inspect for the presence of residual materials including liquids, solids, sludges, or ash. Residual liquids or solids will be removed if necessary to meet disposal or recycling requirements in accordance with the waste management section of this plan.

The LEL will be monitored at each opening prior to tank or pipe removal activities to confirm it is safe for removal. A reading of less than 10% LEL, and no free-flowing residual liquids present will be considered acceptable for removal. Specific means and methods for inspection, spill prevention measures during removal, and the collection of residual liquids or solids if encountered will be developed by selected demolition Contractor.

10 Waste Management

Under this Closure Plan, the existing Ash Monofill is proposed to be permanently closed. In order to optimize use of the remaining landfill airspace, the disposal of all demolition waste materials and contaminated soils are proposed to be disposed in the on-site Ash Monofill. Waste generated during the closure activities will be removed, segregated, and containerized into appropriate waste streams to consolidate waste materials with similar waste characteristics. A Waste Management Plan (WMP) that provides a comprehensive summary of anticipated waste streams, methods of handling and storing waste on site, waste tracking, transportation methods

and routes, and any monitoring and auditing processes used will be developed and provided before any waste generation occurs. Requirements from 62-780, F.A.C. will be referred to should any contaminated soils be encountered during closure activities.

Waste materials generated during the closure activities will be either directly loaded into appropriate waste containers and / or placed at a temporary onsite staging area(s) to facilitate consolidation and containerization of similar waste materials and to promote efficient transportation and disposition of the materials.

Each waste stream will be classified for management and disposal based on available information from site visual observations and analytical results from samples of wastes collected prior to disposal. This information will be used to determine appropriate waste management characterization based on applicable waste management regulations. The County will perform required sampling for waste characterization and will prepare all waste disposal profiles.

The following waste streams are anticipated to be generated or have the potential to be generated during the performance of this work:

- Combustor fly ash and bottom ash
- Non-hazardous construction and demolition debris (C&D) – wood, drywall, flooring, etc.
- Non-hazardous hardfill – brick, block, concrete, asphalt, etc.
- Paint Chips containing RCRA metals
- Friable and non-friable ACMs
- Universal wastes and other regulated wastes
- Recyclable metals

To the extent acceptable to the approved disposal facilities, data collected as part of the previous survey events conducted at the Site may be used for waste characterization purposes. For materials in which additional information is needed for waste characterization, the County or the County's Contractor will collect additional waste characterization samples and submit the samples for subsequent laboratory analyses.

Structural and reinforcing steel will, as much as possible, be transported offsite for recycling. Concrete, brick, and block will be down-sized to 6-inches minus and used to backfill subsurface voids including the garbage pit and trash pit, provided that it is uncontaminated and meets the definition of clean debris as per 62-701.200(15), F.A.C. All remaining wastes will be transported to the Ash Monofill for disposal.

10.1 Recyclable Metals and Equipment Salvage

Recyclable metals and concrete will be sorted and downsized as necessary in accordance with the receiving facility's requirements. Recyclable materials will be loaded and transported to a County approved recycling facility. All cutting of recyclable metals will be done using industry best management practices for means and methods as well as worker protection.

Any process equipment remaining at mobilization may be salvaged in lieu of demolition and/or recycling. Equipment proposed for salvage will be inspected for residual solids, liquids or a hazardous atmosphere. Additional decontamination of equipment proposed for salvage may be required depending on previous use, current equipment condition or results of inspections.

11 Ash Monofill Permanent Closure

This section describes the regulatory requirements for permanent closure of the Ash Monofil, including a final cover system.

11.1 Regulatory Requirements

The Ash Monofill is regulated under FDEP Solid Waste Regulations (Chapters 62-701 through 62-722, F.A.C.); requirements for landfill final closure are provided in 62-701.600, F.A.C. Prior to closing a landfill, an application for a closure permit will be submitted to the FDEP using Form 62-701.900(1), F.A.C. including an updated closure plan. The closure plan will consist of the following:

1. A closure design plan,
2. A closure operation plan,
3. A plan for long-term care; and
4. A demonstration that proof of financial assurance for long-term care will be provided.

11.2 Final Cover

Soil cover requirements are provided in 62-701.600(3)(g), F.A.C. The proposed final cover system for the remaining unclosed portions of the Ash Monofill will be similar to the final cover system shown in the Cell 19 closure plan, prepared by Kimley-Horn.

The final cover system will consist of 6 inches of foundation soil overlain with a 40-mil LLDPE geomembrane liner, a geocomposite drainage net, 18 inches of protective soil, 6 inches of topsoil and vegetative layer. Any changes to the final cover system will be identified as part of the application for a closure permit.

The final side slope shall not be steeper than three horizontal feet per one foot of vertical rise and will have down slope drainage ways with water flow energy dissipaters. Access for maintenance equipment will be provided.

11.3 Groundwater Monitoring Requirements

All existing infrastructure associated with groundwater monitoring will remain in place and fully functional. All monitoring and regulatory compliance will continue in accordance with permit requirements.

11.4 Leachate Treatment Requirements

All existing infrastructure associated with the leachate treatment system will remain in place and fully functional. All monitoring and regulatory compliance will continue in accordance with permit requirements.

11.5 Reporting Requirements

Upon completion of final closure, a certificate of closure construction completion will be submitted to the FDEP using Form 62-701.900(2), F.A.C. indicating that the closure is complete and was performed in accordance with the plans submitted to the Department except where minor deviation was necessary and deviations, if any, will be

described in detail. A final survey will be performed by a Florida Licensed Professional Surveyor and Mapper and a copy of the survey will be included with the certification of closure construction completion. Long-term care and other required reporting will be done in accordance with permit requirements.

12 Site Restoration

Following closure tasks, restoration activities including backfill of subsurface voids, compaction, grading, and surface restoration will be completed.

All general demolition debris will be removed from subsurface voids prior to any backfill activities. Subsurface voids will be backfilled with acceptable downsized hardfill generated from demolition activities. If downsized hardfill materials are not sufficient to complete backfill, additional backfill may be imported from an offsite source. Offsite backfill will be from a certified virgin source.

Backfill materials will be placed in loose lifts not exceeding 2 feet and compacted with onsite equipment. No compaction testing will be completed on completed backfilled areas. Subsurface voids will be filled to surrounding elevation and graded to drain. A topographical survey will be completed to document the completed backfill activities and to confirm acceptable drainage.

Leading edges exceeding 48" will be protected by installing guardrails meeting or exceeding requirements of OSHA 1910.29(b) or by installing fill materials at a slope of 2:1.

Disturbed vegetated areas will be restored by machine grading existing soils, placing an acceptable seed mix appropriate to southeast Florida, and placement of straw at seeded areas to prevent erosion.

13 Demobilization

Upon completion of the project activities and County approval, equipment, facilities, and personnel will be demobilized from the Site. Equipment and tools will be dry decontaminated as necessary prior to leaving the Site. The Site must be left free of general trash or debris.

14 Project Management / Construction Management

To manage day-to-day operations, a Site Superintendent (SS) will be onsite during all work activities. The primary purpose of the SS will be to coordinate and manage the project activities performed during the execution of this closure plan and implement the required Health and Safety protocols. The SS will provide both daily inspections and supervision, and direct coordination and communications with the project manager and addressing scheduling issues with contractors.

15 Reporting

A report documenting the work activities performed will be prepared and distributed to project stakeholders. The report will include at a minimum the work completed, work projected, health and safety items, progress pictures, and waste tracking information.

Following the completion of the project, a copy of all project documentation and records will be compiled into a closure completion report. The closure completion report will include health and safety documentation, notifications, permits, regulatory correspondences, laboratory analytical data reports, waste profiles, waste manifests, waste volumes, items salvaged, air monitoring data, bills of lading, certificates of destruction/recycling, project photographs, and any other pertinent project information.

16 Submittals

The County will prepare and submit all required documentation required by federal, state, and local regulatory authorities governing this Plan including permits, notifications, licenses, safety, erosion controls, security, traffic, utilities, environmental removals, air monitoring, demolition, Ash Monofill permanent closure, storage and management of wastes, and restoration.

Appendix A

Regulated Materials Survey



Regulated Materials Survey

*Miami-Dade County Resource Recovery Facility
Doral, Florida*

Submitted to:

Covanta Dade Renewable Energy

6990 NW 97th Avenue
Doral, FL 33178

Submitted by:

WSP USA, Inc.

15851 S. US 27, Suite 50
Lansing, MI 48906

January 2024

Project No. 31407377.000



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APPENDICES

APPENDIX A

Laboratory Data Reports

1.0 INTRODUCTION

1.1 Background

WSP USA Inc. (WSP, formerly Golder Associates) was retained by Covanta Dade Renewable Energy (Covanta) to complete a regulated materials survey (RMS) at the Miami-Dade County Resource Recovery Facility in Doral, Florida (MDCRRF or Site). This report summarizes the information obtained in November 2023 and is intended to provide a factual account of the project findings, as well as reference information for future decommissioning and demolition contractors, as needed. Therefore, the presentation of the data has been formatted accordingly.

Note: This report does not include information regarding suspect or confirmed asbestos-containing materials (ACM). Covanta retained a different firm to complete an ACM survey in 2023, the findings for which are provided as a separate report.

The MDCRRF is located at 6990 NW 97th Avenue in Doral, Florida and consists of four individual boiler units which feed two turbine/generator systems for a 77 megawatt electric generation capacity. Construction of the facility commenced in 1979-80 and operations began circa 1985. The facility is owned by Miami-Dade County and operated by Covanta.

Associated structures include the garbage and biomass off-loading and processing areas, exhaust-side and ash handling systems, two concrete stacks with steel liners, metal separation systems, material storage silos, cooling tower, and other support structures (Figure 1). Ash generated from waste combustion is deposited in an adjacent ash monofill, also owned by Miami-Dade County.

A fire at the facility in February 2023 damaged the garbage processing systems and the facility has ceased power generating operations. As part of the fire fighting process, two structures were demolished to base slab level: The Garbage Receiving Building and the Garbage Pit Building (Figure 1).

Site structures identified on Figure 1 were included as part of this study with the following exceptions:

- Sanitary Sewer Pump Building and related attenuation tank
- Wastewater settling basins
- Office trailers located in the parking lot north of the facility (not shown on Figure 1)
- Structures and systems related to the ash monofil (not shown on Figure 1).

1.2 Scope of Services

The objective of the RMS was to identify and generally categorize regulated materials currently present in and/or adjacent to the Site structures (with the exception of asbestos). This work included conducting a visual survey of the Site structures followed by sampling and analysis, as necessary, to determine preliminary waste classifications and/or verify chemical content of specific materials identified. This information can be used for the following purposes:

- In the event of future decommissioning or demolition activities, as a record of materials that must be removed and/or properly managed in accordance with local, state, and/or federal regulations
- To determine where follow-up sampling and analysis may be necessary to confirm regulated materials and/or future waste disposal classifications

- To evaluate potential suitability for onsite reuse of masonry materials as fill
- If the buildings are to be maintained or re-occupied in the future, as a record of materials where operations and maintenance programs are required (e.g., asbestos)
- For disclosure to future contractors, as necessary.

1.3 Applicable Federal, State and Local Regulations and Notices

In the event that the buildings will be decommissioned and/or demolished, if renovations are to be carried out, or disturbances/maintenance of certain materials are necessary, then the typical federal and state regulations governing management and disposal of waste materials may apply, such as:

- Applicable federal and state Occupational Safety and Health regulations,
- Title 40, Code of Federal Regulations, Part 261 - Identification and Listing of Hazardous Waste,
- Title 40, Code of Federal Regulations, Part 262 - Standards Applicable to Generators of Hazardous Waste,
- Title 40, Code of Federal Regulations, Part 264 - Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities,
- Title 40, Code of Federal Regulations, Part 265 - Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities,
- Title 49, Code of Federal Regulations, Parts 100-199 - Transportation of Hazardous Materials,
- Title 40, Code of Federal Regulations, Part 268 - Land Disposal Restrictions,
- Title 40, Code of Federal Regulations, Part 761 - Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions,
- Applicable State of Florida regulations governing the handling, classifications, transport, reuse, and disposal of wastes, and
- National Emissions Standards for Hazardous Air Pollutants (NESHAP).

1.4 Limitations of the Survey

This report was prepared on behalf of Covanta and Miami-Dade County and is based on data and information obtained from station records (where available), site observations, and sampling and analysis of building materials and other potential waste streams. It is assumed that reference materials reviewed as part of this study are factual and accurate as stated. Any use which a third party makes of this report, or any reliance on or decisions made based on it, is the responsibility of such third parties.

During the facility survey, certain areas were inaccessible due to lack of obvious and safe entry points, including confined spaces, pits with standing liquids, etc. Specific areas and features that could not be physically accessed include:

- Interiors of sealed process equipment and vessels (e.g., boilers, turbine / generators, ducts, hoppers, silos, and other vessels)

- Electrical wiring and the interiors of powered electrical equipment
- Certain elevated areas subject to previous structural damage.

This survey was intended to identify and inventory materials and potential waste streams that may require special management and handling as part of future decommissioning and/or demolition work. The findings presented herein are not intended as the basis for future waste characterization and disposal approval purposes, although relevant data may be used to support such purposes.

1.5 Sample Analysis Protocols

Sample collection and handling methods were consistent with applicable United States Environmental Protection Agency (USEPA) guidelines and maintained under custody as appropriate for the nature of the samples. Samples were submitted to Eurofins Laboratory in Barberton, Ohio (Eurofins). Laboratory analytical reports are included as Appendix A. The following analytical methods were used for sample analyses, where requested:

- Total PCBs using USEPA test Method 8082
- Total metals, Resource Conservation and Recovery Act (RCRA) scan (arsenic, barium, cadmium, chromium, lead, selenium, silver, and mercury) using USEPA test Methods 6010B and 7471A
- Total volatile organic compounds (VOCs) using USEPA test Method 8260D
- Toxicity Characteristic Leaching Procedure (TCLP) using USEPA method 1311.

2.0 REGULATED MATERIALS SURVEY FINDINGS

WSP completed the RMS field work in November 2023, during which an initial visual survey was performed for inventory and quantification purposes. Based on the results of the visual survey, information from facility representatives, available records, and professional experience, WSP executed a sampling and analysis plan designed to determine if certain building materials may require special handling and management during future decommissioning or demolition work. A summary of the findings of the RMS efforts are presented in the following sections.

After the retirement of the facility, certain post-operational decommissioning programs have been (or planned to be) implemented by Covanta, including:

- Removal of bulk ash from hoppers and silos
- Removal of bags from bag filters systems
- Draining of oil from the turbine oil lubrication systems
- Staging of miscellaneous small-volume chemical containers for future removal
- Pumping of water accumulations from pits, basins, and lower floors
- Removal of bulk fluids from vessels, including aboveground fuel storage tanks and water treatment tanks.

For organization purposes, the facility was divided into areas based on buildings and other obvious boundaries (e.g., Boilers 1-4, Turbine Hall, RTI Buildings, etc.). Where possible, floor levels were noted as presented in the findings tables.

2.1 General Inventory of Common Regulated Building Materials

Several different regulated building materials were identified at the facility that are commonly utilized to maintain operation and occupancy of processes and buildings, such as:

- Fluorescent bulbs and other high-intensity lighting (potentially mercury or halide containing)
- Fluorescent and high intensity light ballasts (potentially PCB-containing)
- Elemental mercury in thermostats and switches
- Chemical fire extinguishers
- Smoke detectors and self-illuminating exit signs (potential radioactive sources)
- Regulated batteries (lead-acid, nickel-cadmium, etc.) in emergency lights, battery backup stations, control panels, etc.
- Oil-containing equipment (except for electrical equipment) including oil pump reservoirs, unless previously drained
- Chlorofluorocarbons (CFCs; ozone-depleting refrigerants) in air-conditioners, chillers, air dryers, drinking fountains, refrigeration equipment, control panels, vending machines, etc.

Based on WSP's observations, materials were identified at various locations throughout the station and outbuildings. Table 1 provides estimated quantities and general locations of these items. Miscellaneous small-volume portable chemical containers that did not appear to be staged in an organized manner pending future removal by Covanta were also inventoried, as noted on Table 1.

Materials Not Inventoried: Based on the previous and planned post-operation decommissioning work by Covanta, the following materials were not included as part of this survey:

- Bulk fluids and chemicals in vessels
- Portable chemical containers and chemical fire extinguishers that appeared to be staged pending future removal
- Aboveground storage tanks.

Electronic wastes (devices with circuit boards, computer monitors, etc.) were present throughout the facility; however, such devices were not quantified because: a) computer-based systems may vary in quantity while the facility remains occupied, and b) process-related components (control panels, motor control centers, logic controllers, system computers, etc.) could not be readily accessed in several locations to verify and quantify the content of electronic wastes.

2.2 Asbestos Containing Materials

As noted previously, this report does not include information regarding suspect or confirmed asbestos-containing materials. Covanta retained a different firm to complete an asbestos survey in 2023, the results for which are provided as a separate report.

2.3 Oil-Containing Electrical Transformers

Various oil-containing electrical transformers were identified during the survey, including general step-up [GSU] units and local distribution units. A summary is provided in the following paragraphs; please see Table 2 for an inventory of the oil-containing electrical transformers identified.

It is common that oil-containing electrical equipment manufactured prior to 1980 contains (or had contained) PCBs in excess of regulatory thresholds.¹

As shown on Table 2, a total of 17 oil-filled transformers were in use (energized or not) as of November 2023 specific to the facility; four additional spare transformers were staged in a locked lay-down yard. The transformers vary in size, fluid content, and age of manufacture. Most transformers were affixed with placards or nameplates that indicated post-1980 manufacture dates and/or that no PCBs were present at the time of manufacture. Other units were labeled with stickers indicating "non-PCB" or "PCB content <50 ppm"; however, not all units were placarded or stickered. Further, it is possible that transformers manufactured prior to 1980 have been retrofilled, meaning PCB-containing oil was removed and replaced with a solvent-based fluid. Retrofilled units may contain residual concentrations of PCB or elevated levels of VOCs (from the retrofilling process). Previous sample information on the dielectric fluids was not available.

¹ In 1980, 40 CFR 761 was promulgated, entitled the Toxic Substance Control Act, or "TSCA", which resulted in a federal ban on PCBs in new equipment and set requirements for management of existing equipment containing PCBs greater than 50 milligrams per kilogram (mg/kg), or parts per million (ppm).

During the RMS, WSP collected oil samples from five of the 17 in-use transformers for analysis of PCBs. Sample locations focused on transformers manufactured in 1980 or earlier to provide an indication as to PCB content for all units of that time period.

The results of the fluid samples are presented on Tables 2 and 3. None of the five samples collected exhibited PCB concentrations greater than 50 ppm (threshold for regulation under TSCA), with the highest concentration being 3.2 ppm. Based on these results, and field observations made during the sampling efforts, it does not appear that the transformers pre-dating 1980 were retrofilled. As such, samples were not analyzed for VOCs.

2.4 Surface Paint and Epoxy

Based on the age and construction of the Site structures (circa 1979-90), surface paint and epoxy may contain elevated levels of metals and/or PCBs from the point of manufacture. A formal lead paint survey for occupied buildings was not included as part of this effort; instead, a focused paint sampling program was performed to confirm the presence of lead in paint for demolition planning and method development purposes. In addition, paint samples were also analyzed for PCBs.

A total of 13 paint and epoxy samples of various colors have been collected from building surfaces (walls, floors, columns, stairwells), equipment, and other systems present in November 2023. Sample locations were selected based on relative age and representativeness of materials.

A list and description of the paint samples, as well as results, are provided on Table 4 and summarized below. Sample locations are shown on Figure 2.

- PCBs were detected above laboratory reporting limits in three of the 13 samples collected. However, none of the samples exhibited PCB concentrations approaching 50 ppm, which is the regulatory threshold for designation as PCB Bulk Product Waste per TSCA (40 CFR 761.62). As such, none of the paint coatings represented by the samples collected require special handling under TSCA.
- Each sample analyzed for total lead exhibited positive detections, with concentrations as high as 1,800 milligrams per kilogram (mg/kg). The presence of lead in paint should be disclosed to future contractors involved with demolition activities to facilitate implementation of appropriate worker safety protocols and waste management steps.

2.5 Caulk, Glazing and Joint Material

Window caulk, vertical and horizontal expansion joint compound, and other sealant materials have been found to contain PCBs in vintage (pre-1980) materials from the point of manufacture. WSP identified limited locations of caulking compounds within the site structures.

Two samples of window or door framing caulk materials were collected and submitted to Eurofins for PCB analysis. Table 5 provides a description of the samples collected and laboratory results. As noted on Table 5, neither sample exhibited positive detections of PCBs. As such, the caulking materials represented by the samples collected do not require special handling under TSCA.

2.6 Concrete Sampling for Potential Reuse

Part 15 of Florida Rule 62-701.730 (*Construction and Demolition Debris Disposal and Recycling*) states “Clean debris may be used as fill or raw material in any area, including waters of the State, subject to receipt of an environmental resource permit from the Department where applicable. Clean debris used as fill material is not solid

waste, and such use does not require a solid waste permit under this rule.” The rule also includes concrete in the definition of “debris”. However, the rule does not appear to define the term “clean” with specificity. The Florida Department of Environmental Protection (FDEP) encourages counties to develop debris recycling programs; it is not known if Miami-Dade County’s debris recycling program defines the term “clean” for recycled concrete or has related guidelines in place.

To support future decisions regarding the reuse of concrete as onsite fill during demolition work, WSP has collected a total of six samples of concrete across the Site. Concrete sample locations were selected to provide a general spatial distribution of data and positioned within buildings (see Figure 3). Samples were collected manually (using a chisel); prior to sampling, accumulations of solids, such as dust and debris, were removed manually to simulate concrete conditions prior to demolition. None of the slabs sampled were coated with paint.

Samples were submitted to Eurofins where they were crushed in a controlled setting to facilitate analysis of total metals and PCBs. Please see Table 6 for a description of the samples collected and laboratory results. A summary of the results is provided below.

- PCBs were not detected in the samples at concentrations above the laboratory reporting limit.
- Total metals were detected in each sample (as expected) at generally low concentrations, with one sample (CS-05, within the Ash Building) exhibiting an elevated concentration of lead at 150 mg/kg.

In summary, this data is for future reference in the event it is needed to confirm environmental suitability of concrete for onsite reuse based on state or county regulations or guidelines.

2.7 Residual Accumulations in Subsurface Features

Accessible subsurface features (pits, sumps, trench drains, etc.) were observed by WSP personnel during the RMS to contain residual accumulations. Where present, residual accumulations included wet solids/sludge, dry solids and debris, or a combination of one or more of these materials.

WSP collected two samples of wet solids from trench drains located in the Turbine Hall to identify if the accumulated materials may require special handling during future decommissioning efforts. Samples were analyzed for total metals and PCBs. A description of the samples and corresponding analytical results are provided on Table 7 and summarized below.

- None of the samples exhibited positive detections of PCBs.
- Total metals were detected in each sample, with lead at elevated concentrations in both samples (590 mg/kg and 690 mg/kg) and chromium at 200 mg/kg in one sample (PR-01). These concentrations indicate the potential for characteristically hazardous classification under RCRA. To verify non-hazardous classification, the residual materials represented by these samples will require re-sampling with analysis of TCLP lead and chromium.

2.8 Treated Wood

The onsite cooling tower is constructed using treated wood for internal framing. Treated wood commonly contains elevated levels of metals (e.g., arsenic, chromium, etc.) from the wood treating process prior to use. A composite sample of the cooling tower wood framing was collected by WSP during the RMS. The sample was submitted to Eurofins for analysis of TCLP metals to determine if the treated wood may be classified as RCRA hazardous waste upon decommissioning.

Laboratory results are provided in Table 8. As noted in Table 8, none of the TCLP metals results approach RCRA thresholds for hazardous characteristics.

2.9 Fire Brick and Refractory - Boilers

During the RMS, WSP did not observe fire brick or refractory on or within the four boilers from accessible vantage points. Further inspection of the boilers may be necessary to verify the absence of brick and refractory. If brick and/or refractory are present, these materials may require special handling based on the potential for elevated metals and/or as a naturally-occurring radioactive material (NORM).

2.10 Residual and Bulk Ash

Residual ash may be present within the exhaust-side systems and structures, including ducts, piping, boilers, hoppers, and other vessels. Based on input from Covanta, analytical data of the ash is in place, and the bulk ash is disposed within the onsite monofil. Therefore, samples of bulk ash were not collected as part of this survey.

SIGNATURES

WSP USA Inc.



Andy Lewis
Senior Practice Leader

AJL/rms

Figures



NO.	REVISION	DATE	BY	NO.	REVISION	DATE	BY	Designed by:	 RENEWABLE ENERGY ENERGY FROM WASTE NORTH AMERICA HOME SINK FACILITY
0	REVISED	8/25/09	CT					Drawn by:	
								Checked by:	
								Approved by:	
								DATE: 8-26-09	Scale: NTS
								DRWG. # 20-006	REV. # 1
								DATE: 8-26-09	SCALE: 1"=1'

Tables

Table 1
General Inventory
MDCRRF, Doral, FL

Material	RTI Buildings	Garbage Processing / MCC / Upper Storage	BioMass / Process Unders / Fuel Storage	Admin	Turbines Building	Boilers / Conveyor Gallery	SDAs / Bag Filters / Stacks / Lime Silos / support bldgs	Power House Maint Bldg	Ash Building / Bottom Ash Transfer	Well Water Treatment	Cooling Tower / Cooling Tower Pump House	Ferrous Shredder Area	Vehicle Maintenance / Old Tire Shredder	South Office Trailers	Scale Houses / Guard Shacks	Totals
Lighting																
Fluorescent bulbs	72	270	24	305	190	136	182	235		12	10	66	34	75	50	1661
Fluorescent ballasts	36	138	22	171	99	68	91	126		12	16	41	17	42	28	907
High intensity bulbs	190	58	63	8	37	146	316	2	32	14	28	4	36	1	11	946
High intensity ballasts	190	48	63	8	37	146	316	2	32	14	28	4	36	1	11	936
Common Materials																
Batteries (emergency lights, bulk)	26	40	6	43	381	20	51	8	12	4	4		8	10	8	621
Mercury thermostats/switches/thermometers					4											4
Smoke detectors	5	7		5	14		2	4			1		2		2	42
Exit signs (self-illuminating)					5											5
Fire Extinguishers	25	30	6	10	23	34	70	8	5	2	3	10	10	5	6	247
CFC Containing Items																
Small CFC unit (wall mount A/C, drink fnts, etc.)	1	14		2	2		1	6	1			5	2	3	4	41
Medium HVAC unit or air dryer	4	14	1	12	6	4	8	8		1	1	5	6	5	4	79
Large HVAC (large office area) or chiller unit							2									2
Oil Containing Equipment																
<1 gallon					12	40	10			2	12	1				77
1-5 gallons	4	7	1		2	28	8				5				2	57
5-25 gallons	4	4	2		2		10			1	6		1			30
25-100 gallons	12	4			1		4	1				2	1			25
>100 gallons	6															6
Conveyor gear boxes (<1 gal) total for facility																275
Misc/ Chemical Containers (not staged)																
Aerosol cans	35	8	3	12	1		10					11	1			81
Paint (<1 gal)		1			1							3				5
Paint (1 gal)	2	34			2		2					6				46
Oil (<1 gal)			1													1
Oil (1-5 gal)		2	2		8											12
Anti-freeze (1 gal)													1			1
Gas cylinders				1												1
Lab chemicals (reagents, indicators) (<1 gal)					23											23
Steam line treatment solution (drum)					1											1
Descaler (acid) (1 gal)							2									2
Printer toner cartridge				30			1	20						3		54

Table 2
Oil-Containing Electrical Equipment
MDCRRF, Doral, FL

Location	Facility Name	Manufacturer	Serial No	Manf Date	Volume (gallons)	Transformer Oil		Winding Material (Cu or Al)	Tank Weight (lb.)	Core Weight (lb.)	Oil Weight (lb.)	Total Weight (lb.)
						PCB Label or Designation on Nameplate	Sampled PCB Conc. (ppm)					
GSUs Outside Turbine Hall	No. 2 480V	Sunbelt	PLF0328	2006	434	<2 ppm	--	Cu	3,899	6,271	3,200	13,370
	Boiler 2 Transformer	Alsthom	H66830-04	1979	1,020	<50 ppm	0.54	Not on plate	14,700	16,000	7,300	38,000
	No. 2 Process (67-53-514)	Niagara Transformer	54925	2002	1,684	Non-PCB	--	Unknown	Unknown	Unknown	Unknown	Unknown
	No. 2 Main (68-53-012)	Waukesha	GT00101	1997	9,310	<1 ppm	--	Cu	56,285	78,990	69,825	205,100
	No. 1 480V	Alsthom	G63470.02	1979 Rebuilt 2009	145	<50 ppm	--	Not on plate	4,580	6,090	1,070	11,740
	No. 1 Boiler	Electric Supply Co.	120907-13	2012	1,000	<50 ppm	--	Cu	13,930	18,600	7,450	39,980
	No. 1 Process	Electric Supply Co.	120712-13	2012	1,000	<50 ppm	--	Cu	13,930	18,600	7,450	39,980
	No. 1 Main	General Electric	H66820-0	1979	5,000	Non-PCB	ND	Cu	39,500	70,000	37,500	147,000
Cooling Tower	No. 1 Cooling Tower	Belyea	R-274753A	2009	338	<50 ppm	--	Not on plate	Not on plate	Not on plate	2,406	Not on plate
	No. 2 Cooling Tower	Alsthom	G64380-01	1980	275	<50 ppm	--	Not on plate	1,240	3,370	1,160	5,770
	Unknown	Alsthom	G62510.03	1979	275	<50 ppm	0.50	Not on plate	1,240	3,370	1,160	5,770
Admin	Admin	Alsthom	B63490.01	1979	181	<50 ppm	3.2	Not on plate	2,050	4,480	1,450	7,980
Outside MCC	GP North	Pacific Crest	PUG-0317	2015	349	<2 ppm	--	Cu	3,293	5,950	2,577	11,820
	GP South (T022)	Alsthom	G63480.01	1979	181	<50 ppm	ND	Not on plate	2,700	5,290	1,810	9,800
RTI Processing	RTI South	Westinghouse	PCL 6624-0101	1988	220	Non-PCB	--	Al	2,590	3,811	1,760	8,161
	RTI North (T030X)	Alsthom	G63510-01	1979	181	<50 ppm	--	Not on plate	1,240	3,370	1,160	5,770
RTI Biomass	Biomass	Cooper	966002356	1996	426	<1 ppm	--	Not on plate	2,761	3,336	3,152	9,249
Laydown Yard	<i>Spare transformers (4 total); no information</i>											

NOTES:

ND - Result below laboratory detection limit.

"--" - Not analyzed

< - Detected concentration below corresponding laboratory reporting limit.

Table 3
Analytical Results Summary - Transformer Oil Samples
MDCRRF, Doral, FL

Sample ID	Transformer	Date Sampled	Total PCBs (mg/kg)
MDCRRF-TO-01	GP MCC transformer: S/N G63480.01	11/29/23	ND
MDCRRF-TO-02	West Switchyard transformer: S/N H66830.04	11/29/23	0.54
MDCRRF-TO-03	Cooling Tower transformer: S/N G62510.03	11/29/23	0.50
MDCRRF-TO-04	East Switchyard transformer: S/N H66820-0	11/29/23	ND
MDCRRF-TO-05	Admin transformer: S/N B63490.01	11/30/23	3.2

NOTES:

S/N - Serial Number

ND - Result below laboratory detection limit.

< - Detected concentration below corresponding laboratory reporting limit.

Table 4
Analytical Results Summary - Paint and Epoxy Samples
MDCRRF, Doral, FL

Sample ID	Sample Description	Elev.	Date	Total PCBs (mg/kg)	Total Lead (mg/kg)
MDCRRF-PS-01	White on concrete urea tank containment, east side	Ground	11/29/23	ND	43
MDCRRF-PS-02	Floor epoxy in urea tank containment	Ground	11/29/23	ND	53
MDCRRF-PS-03	White on circulating concrete water pipe, outside cooling tower pump house	Ground	11/29/23	ND	640
MDCRRF-PS-04	Gray on concrete retaining wall adjacent to cooling tower pump house	Ground	11/29/23	ND	79
MDCRRF-PS-05	Black on concrete wall of old tire shredder building, west side	Ground	11/29/23	ND	86
MDCRRF-PS-06	Olive green on north concrete wall of water treatment room on west side of Turbine Hall	Ground	11/29/23	ND	19
MDCRRF-PS-07	Tan floor epoxy on concrete slab of operating floor of Turbine Hall, northeast corner	Ground	11/29/23	ND	220
MDCRRF-PS-08	Blue / white on concrete wall, mid-level of RTI processing, next to shredder #1, north facing	Mid-level	11/29/23	0.97	190
MDCRRF-PS-09	Blue loose paint on ground adjacent to GP bag houses and GP Processing west wall	Mid-level	11/29/23	ND	100
MDCRRF-PS-10	Yellow on concrete bumper south side of RTI Tipping Floor	Ground	11/29/23	ND	1,800
MDCRRF-PS-11	Yellow / white / light blue on concrete wall in GP Processing, ground floor, east facing	Ground	11/29/23	0.49	79
MDCRRF-PS-12	White on steel stairwell leading to second floor, Admin Building exterior, west side	Ground	11/29/23	ND	--
MDCRRF-PS-13	Yellow on steel columns and concrete control room exterior, ferrous shredder area	Ground	11/29/23	1.1	69

Notes:

ND - Result below laboratory detection limit.

"--" - Not analyzed

Table 5
Analytical Results Summary - Caulking Samples
MDCRRF, Doral, FL

Sample ID	Sample Description	Elev.	Bldg	Date	Total PCBs (mg/kg)
MDCRRF-WC-01	Gray flexible window caulk, windows between Admin and GP, east facing at ground level	Ground	Admin / GP	11/29/23	ND
MDCRRF-WC-02	Exterior door caulk, west side of GP north of Admin, typical of doors in area	Ground	GP	11/29/23	ND

Notes:

ND - Result below laboratory detection limit.

< - Detected concentration below laboratory reporting limit.

Table 6
Analytical Results Summary - General Concrete Samples
MDCRRF, Doral, FL

Sample ID	Sample Description	Elev.	Bldg	Date	Total PCBs (mg/kg)	Total Metals (mg/kg)							
						Arsenic	Barium	Cadmium	Chromium	Lead	Selenium	Silver	Mercury
MDCRRF-CS-01	Concrete slab sample, middle of building	Ground	RTI Processing	11/29/23	ND	25	53	<0.38	10	41	ND	ND	<0.11
MDCRRF-CS-02	Concrete slab sample, middle of building	Ground	Fuel Storage	11/29/23	ND	<1.4	<19	<0.47	12	7.1	ND	<0.93	ND
MDCRRF-CS-03	Concrete slab sample, southeast corner at ramp	Ground	GP	11/29/23	ND	35	31	0.77	12	57	ND	<0.88	<0.11
MDCRRF-CS-04	Concrete slab sample, middle of building	Ground	Vehicle Maintenance	11/29/23	ND	2.6	32	<0.32	9.8	11	ND	ND	ND
MDCRRF-CS-05	Concrete wall sample, interior, west wall	Ground	Ash Building	11/29/23	ND	2.9	37	9.1	23	150	ND	<0.77	<0.11
MDCRRF-CS-06	Concrete slab sample, northeast corner of operating floor	Turbine Floor	Turbine Hall	11/29/23	ND	2.7	33	0.95	13	16	ND	ND	0.13

Notes:

ND - Result below laboratory detection limit.

< - Detected concentration below corresponding laboratory reporting limit.

Table 7
Analytical Results Summary - Residuals in Subsurface Features Samples
MDCRRF, Doral, FL

Sample ID	Sample Description	Elev.	Bldg	Date	PCBs (mg/kg)	Total Metals (mg/kg)							
						Arsenic	Barium	Cadmium	Chromium	Lead	Selenium	Silver	Mercury
MDCRRF-PR-01	Brown / black granular sediments in trench drain under west condenser	Ground	Turbine Hall	11/29/23	ND	22	200	14	200	590	ND	1.6	0.39
MDCRRF-PR-02	Black, saturated fine sediments in trench drain under east condenser	Ground	Turbine Hall	11/29/23	ND	10	94	14	22	690	ND	1.2	0.22

Notes:

ND - Result below laboratory detection limit.

< - Detected concentration below corresponding laboratory reporting limit.

Table 8
Analytical Results Summary - Treated Wood Samples
MDCRRF, Doral, FL

Sample ID	Sample Description	Elev.	Date	TCLP Metals (mg/L)							
				Arsenic	Barium	Cadmium	Chromium	Lead	Selenium	Silver	Mercury
RCRA Hazardous Characteristic Threshold				5.0	100	1.0	5.0	5.0	1.0	5.0	0.20
MDCRRF-TW-01	Wood frame interior of the cooling tower	Ground	11/29/23	1.2	<0.50	<0.050	0.42	0.068	ND	ND	ND

Notes:

ND - Result below laboratory detection limit.

< - Detected concentration below corresponding laboratory reporting limit.

APPENDIX A

Laboratory Data Results

ANALYTICAL REPORT

PREPARED FOR

Attn: Andy Lewis
WSP USA Inc
46850 Magellan Drive
Suite 190
Novi, Michigan 48377

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JOB DESCRIPTION

Covanta Energy - MDCRRF

JOB NUMBER

240-196258-1

Eurofins Cleveland

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization



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Authorized for release by
Kris Brooks, Project Manager II
Kris.Brooks@et.eurofinsus.com
(330)966-9790

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Definitions/Glossary

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Job ID: 240-196258-1

Laboratory: Eurofins Cleveland

Narrative

Job Narrative 240-196258-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method. Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 12/1/2023 10:20 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 16.9°C

PCBs

Method 8082A: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: MDCRRF-PS-01 (240-196258-1), MDCRRF-WC-01 (240-196258-19), (240-196186-B-1-A), (240-196186-B-1-B MS) and (240-196186-B-1-C MSD).

Method 8082A: The following sample was diluted due to color: MDCRRF-PS-01 (240-196258-1). Elevated reporting limits (RL) are provided.

Method 8082A: The following sample appears to contain polychlorinated biphenyls (PCBs); however, due to weathering, other environmental processes and/or contributions from the presence of multiple Aroclors, resulting in overlapping PCB patterns, the PCBs in the sample do not directly match any of the laboratory's Aroclor standards used for instrument calibration: MDCRRF-PS-11 (240-196258-11). The sample has been quantified and reported using the best overall Aroclor/standard pattern match relative to the reference standards.

Method 8082A: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: MDCRRF-PS-07 (240-196258-7), MDCRRF-WC-02 (240-196258-20) and MDCRRF-PR-02 (240-196258-28).

Method 8082A: The following samples was diluted due to the nature of the sample matrix: MDCRRF-PS-07 (240-196258-7) and MDCRRF-WC-02 (240-196258-20). Elevated reporting limits (RLs) are provided.

Method 8082A: The following sample appears to contain polychlorinated biphenyls (PCBs); however, due to weathering, other environmental processes and/or contributions from the presence of multiple Aroclors, resulting in overlapping PCB patterns, the PCBs in the sample do not directly match any of the laboratory's Aroclor standards used for instrument calibration: MDCRRF-PS-08 (240-196258-8). The sample has been quantified and reported using the best overall Aroclor/standard pattern match relative to the reference standards.

Method 8082A: The %RPD between the primary and confirmation column exceeded 40% for Aroclor-1242 for the following sample: MDCRRF-PS-11 (240-196258-11). The lower value has been reported and qualified in accordance with the laboratory's SOP.

Method 8082A: The following sample was diluted due to color: MDCRRF-TAR-01 (240-196258-29). Elevated reporting limits (RL) are provided.

Method 8082A: The following sample was diluted due to the nature of the sample matrix: MDCRRF-CS-06 (240-196258-26). Elevated reporting limits (RLs) are provided.

Case Narrative

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Job ID: 240-196258-1 (Continued)

Laboratory: Eurofins Cleveland (Continued)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Metals

Method 6010D: Insufficient sample was provided to perform the leaching procedure with the required 100g for the following sample: MDCRRF-TW-01 (240-196258-14). The volume of leaching fluid was adjusted proportionally to maintain a 20:1 ratio of leaching fluid to weight of sample. Reporting limits (RLs) are not affected.

Method 7470A: Insufficient sample was provided to perform the leaching procedure with the required 100g for the following sample: MDCRRF-TW-01 (240-196258-14). The volume of leaching fluid was adjusted proportionally to maintain a 20:1 ratio of leaching fluid to weight of sample. Reporting limits (RLs) are not affected.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Method Summary

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Method	Method Description	Protocol	Laboratory
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	EET CLE
6010D	Metals (ICP)	SW846	EET CLE
7470A	Mercury (CVAA)	SW846	EET CLE
7471B	Mercury (CVAA)	SW846	EET CLE
Moisture	Percent Moisture	EPA	EET CLE
1311	TCLP Extraction	SW846	EET CLE
3010A	Preparation, Total Metals	SW846	EET CLE
3050B	Preparation, Metals	SW846	EET CLE
3546	Microwave Extraction	SW846	EET CLE
3580A	Waste Dilution	SW846	EET CLE
7470A	Preparation, Mercury	SW846	EET CLE
7471B	Preparation, Mercury	SW846	EET CLE
Part Size Red	Particle Size Reduction Preparation	None	EET CLE
Part Size Red	Particle Size Reduction Preparation	None	EET CLE

Protocol References:

EPA = US Environmental Protection Agency

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Sample Summary

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-196258-1	MDCRRF-PS-01	Solid	11/29/23 08:35	12/01/23 10:20
240-196258-2	MDCRRF-PS-02	Solid	11/29/23 08:40	12/01/23 10:20
240-196258-3	MDCRRF-PS-03	Solid	11/29/23 08:45	12/01/23 10:20
240-196258-4	MDCRRF-PS-04	Solid	11/29/23 08:50	12/01/23 10:20
240-196258-5	MDCRRF-PS-05	Solid	11/29/23 00:00	12/01/23 10:20
240-196258-6	MDCRRF-PS-06	Solid	11/29/23 09:50	12/01/23 10:20
240-196258-7	MDCRRF-PS-07	Solid	11/29/23 10:20	12/01/23 10:20
240-196258-8	MDCRRF-PS-08	Solid	11/29/23 13:15	12/01/23 10:20
240-196258-9	MDCRRF-PS-09	Solid	11/29/23 13:20	12/01/23 10:20
240-196258-10	MDCRRF-PS-10	Solid	11/29/23 13:40	12/01/23 10:20
240-196258-11	MDCRRF-PS-11	Solid	11/29/23 13:50	12/01/23 10:20
240-196258-12	MDCRRF-PS-12	Solid	11/29/23 14:00	12/01/23 10:20
240-196258-13	MDCRRF-PS-13	Solid	11/29/23 09:20	12/01/23 10:20
240-196258-14	MDCRRF-TW-01	Solid	11/29/23 09:10	12/01/23 10:20
240-196258-15	MDCRRF-TO-01	Waste	11/29/23 10:45	12/01/23 10:20
240-196258-16	MDCRRF-TO-02	Waste	11/29/23 11:00	12/01/23 10:20
240-196258-17	MDCRRF-TO-03	Waste	11/29/23 13:00	12/01/23 10:20
240-196258-18	MDCRRF-TO-04	Waste	11/29/23 13:20	12/01/23 10:20
240-196258-19	MDCRRF-WC-01	Solid	11/29/23 11:00	12/01/23 10:20
240-196258-20	MDCRRF-WC-02	Solid	11/29/23 11:15	12/01/23 10:20
240-196258-21	MDCRRF-CS-01	Solid	11/29/23 13:45	12/01/23 10:20
240-196258-22	MDCRRF-CS-02	Solid	11/29/23 14:00	12/01/23 10:20
240-196258-23	MDCRRF-CS-03	Solid	11/29/23 14:15	12/01/23 10:20
240-196258-24	MDCRRF-CS-04	Solid	11/29/23 14:30	12/01/23 10:20
240-196258-25	MDCRRF-CS-05	Solid	11/29/23 14:40	12/01/23 10:20
240-196258-26	MDCRRF-CS-06	Solid	11/29/23 14:50	12/01/23 10:20
240-196258-27	MDCRRF-PR-01	Solid	11/29/23 10:00	12/01/23 10:20
240-196258-28	MDCRRF-PR-02	Solid	11/29/23 10:10	12/01/23 10:20
240-196258-29	MDCRRF-TAR-01	Waste	11/30/23 07:45	12/01/23 10:20
240-196258-30	MDCRRF-TO-05	Waste	11/30/23 09:29	12/01/23 10:20

Detection Summary

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Client Sample ID: MDCRRF-PS-01

Lab Sample ID: 240-196258-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	43		9.1	2.6	mg/Kg	10		6010D	Total/NA

Client Sample ID: MDCRRF-PS-02

Lab Sample ID: 240-196258-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	53		9.9	2.8	mg/Kg	10		6010D	Total/NA

Client Sample ID: MDCRRF-PS-03

Lab Sample ID: 240-196258-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	640		8.8	2.5	mg/Kg	10		6010D	Total/NA

Client Sample ID: MDCRRF-PS-04

Lab Sample ID: 240-196258-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	79		9.8	2.8	mg/Kg	10		6010D	Total/NA

Client Sample ID: MDCRRF-PS-05

Lab Sample ID: 240-196258-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	86		9.3	2.6	mg/Kg	10		6010D	Total/NA

Client Sample ID: MDCRRF-PS-06

Lab Sample ID: 240-196258-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	19		9.0	2.5	mg/Kg	10		6010D	Total/NA

Client Sample ID: MDCRRF-PS-07

Lab Sample ID: 240-196258-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	220		7.4	2.1	mg/Kg	10		6010D	Total/NA

Client Sample ID: MDCRRF-PS-08

Lab Sample ID: 240-196258-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	970		460	160	ug/Kg	1		8082A	Total/NA
Lead	190		8.9	2.5	mg/Kg	10		6010D	Total/NA

Client Sample ID: MDCRRF-PS-09

Lab Sample ID: 240-196258-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	100		10	2.8	mg/Kg	10		6010D	Total/NA

Client Sample ID: MDCRRF-PS-10

Lab Sample ID: 240-196258-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	1800		10	2.8	mg/Kg	10		6010D	Total/NA

Client Sample ID: MDCRRF-PS-11

Lab Sample ID: 240-196258-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	310	J p	460	180	ug/Kg	1		8082A	Total/NA
Aroclor-1254	490		460	190	ug/Kg	1		8082A	Total/NA
Lead	79		9.6	2.7	mg/Kg	10		6010D	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cleveland

Detection Summary

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Client Sample ID: MDCRRF-PS-12

Lab Sample ID: 240-196258-12

No Detections.

Client Sample ID: MDCRRF-PS-13

Lab Sample ID: 240-196258-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	1100		440	170	ug/Kg	1		8082A	Total/NA
Aroclor-1254	310	J	440	190	ug/Kg	1		8082A	Total/NA
Lead	69		9.7	2.7	mg/Kg	10		6010D	Total/NA

Client Sample ID: MDCRRF-TW-01

Lab Sample ID: 240-196258-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	1.2		0.050	0.0041	mg/L	1		6010D	TCLP
Barium	0.16	J	0.50	0.0030	mg/L	1		6010D	TCLP
Cadmium	0.030	J	0.050	0.00045	mg/L	1		6010D	TCLP
Chromium	0.42	B	0.050	0.00076	mg/L	1		6010D	TCLP
Lead	0.068		0.050	0.0028	mg/L	1		6010D	TCLP

Client Sample ID: MDCRRF-TO-01

Lab Sample ID: 240-196258-15

No Detections.

Client Sample ID: MDCRRF-TO-02

Lab Sample ID: 240-196258-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1260	540		490	220	ug/Kg	1		8082A	Total/NA

Client Sample ID: MDCRRF-TO-03

Lab Sample ID: 240-196258-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1260	500		490	220	ug/Kg	1		8082A	Total/NA

Client Sample ID: MDCRRF-TO-04

Lab Sample ID: 240-196258-18

No Detections.

Client Sample ID: MDCRRF-WC-01

Lab Sample ID: 240-196258-19

No Detections.

Client Sample ID: MDCRRF-WC-02

Lab Sample ID: 240-196258-20

No Detections.

Client Sample ID: MDCRRF-CS-01

Lab Sample ID: 240-196258-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	53		21	0.38	mg/Kg	1	✱	6010D	Total/NA
Cadmium	0.38	J	0.52	0.050	mg/Kg	1	✱	6010D	Total/NA
Chromium	10		1.0	0.36	mg/Kg	1	✱	6010D	Total/NA
Arsenic	25		1.6	0.33	mg/Kg	1	✱	6010D	Total/NA
Lead	41		1.0	0.29	mg/Kg	1	✱	6010D	Total/NA
Mercury	0.035	J	0.11	0.020	mg/Kg	1	✱	7471B	Total/NA

Client Sample ID: MDCRRF-CS-02

Lab Sample ID: 240-196258-22

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	13	J	19	0.34	mg/Kg	1	✱	6010D	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cleveland

Detection Summary

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Client Sample ID: MDCRRF-CS-02 (Continued)

Lab Sample ID: 240-196258-22

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cadmium	0.15	J	0.47	0.045	mg/Kg	1	✱	6010D	Total/NA
Chromium	12		0.93	0.32	mg/Kg	1	✱	6010D	Total/NA
Silver	0.12	J	0.93	0.075	mg/Kg	1	✱	6010D	Total/NA
Arsenic	1.3	J	1.4	0.29	mg/Kg	1	✱	6010D	Total/NA
Lead	7.1		0.93	0.26	mg/Kg	1	✱	6010D	Total/NA

Client Sample ID: MDCRRF-CS-03

Lab Sample ID: 240-196258-23

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	31		18	0.32	mg/Kg	1	✱	6010D	Total/NA
Cadmium	0.77		0.44	0.042	mg/Kg	1	✱	6010D	Total/NA
Chromium	12		0.88	0.30	mg/Kg	1	✱	6010D	Total/NA
Silver	0.13	J	0.88	0.071	mg/Kg	1	✱	6010D	Total/NA
Arsenic	35		1.3	0.28	mg/Kg	1	✱	6010D	Total/NA
Lead	57		0.88	0.25	mg/Kg	1	✱	6010D	Total/NA
Mercury	0.030	J	0.11	0.020	mg/Kg	1	✱	7471B	Total/NA

Client Sample ID: MDCRRF-CS-04

Lab Sample ID: 240-196258-24

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	32		15	0.28	mg/Kg	1	✱	6010D	Total/NA
Cadmium	0.32	J	0.38	0.037	mg/Kg	1	✱	6010D	Total/NA
Chromium	9.8		0.77	0.26	mg/Kg	1	✱	6010D	Total/NA
Arsenic	2.6		1.2	0.24	mg/Kg	1	✱	6010D	Total/NA
Lead	11		0.77	0.22	mg/Kg	1	✱	6010D	Total/NA

Client Sample ID: MDCRRF-CS-05

Lab Sample ID: 240-196258-25

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	37		15	0.28	mg/Kg	1	✱	6010D	Total/NA
Cadmium	9.1		0.39	0.037	mg/Kg	1	✱	6010D	Total/NA
Chromium	23		0.77	0.27	mg/Kg	1	✱	6010D	Total/NA
Silver	0.30	J	0.77	0.063	mg/Kg	1	✱	6010D	Total/NA
Arsenic	2.9		1.2	0.24	mg/Kg	1	✱	6010D	Total/NA
Lead	150		0.77	0.22	mg/Kg	1	✱	6010D	Total/NA
Mercury	0.023	J	0.11	0.021	mg/Kg	1	✱	7471B	Total/NA

Client Sample ID: MDCRRF-CS-06

Lab Sample ID: 240-196258-26

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	33		17	0.32	mg/Kg	1	✱	6010D	Total/NA
Cadmium	0.95		0.44	0.042	mg/Kg	1	✱	6010D	Total/NA
Chromium	13		0.87	0.30	mg/Kg	1	✱	6010D	Total/NA
Arsenic	2.7		1.3	0.28	mg/Kg	1	✱	6010D	Total/NA
Lead	16		0.87	0.25	mg/Kg	1	✱	6010D	Total/NA
Mercury	0.13		0.11	0.019	mg/Kg	1	✱	7471B	Total/NA

Client Sample ID: MDCRRF-PR-01

Lab Sample ID: 240-196258-27

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	200		18	0.33	mg/Kg	1		6010D	Total/NA
Cadmium	14		0.91	0.087	mg/Kg	2		6010D	Total/NA
Chromium	200		0.91	0.31	mg/Kg	1		6010D	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cleveland

Detection Summary

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Client Sample ID: MDCRRF-PR-01 (Continued)

Lab Sample ID: 240-196258-27

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Silver	1.6		0.91	0.074	mg/Kg	1		6010D	Total/NA
Arsenic	22		1.4	0.29	mg/Kg	1		6010D	Total/NA
Lead	590		1.8	0.51	mg/Kg	2		6010D	Total/NA
Mercury	0.39		0.088	0.016	mg/Kg	1		7471B	Total/NA

Client Sample ID: MDCRRF-PR-02

Lab Sample ID: 240-196258-28

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	94		14	0.26	mg/Kg	1		6010D	Total/NA
Cadmium	14		0.36	0.035	mg/Kg	1		6010D	Total/NA
Chromium	22		0.72	0.25	mg/Kg	1		6010D	Total/NA
Silver	1.2		0.72	0.059	mg/Kg	1		6010D	Total/NA
Arsenic	10		1.1	0.23	mg/Kg	1		6010D	Total/NA
Lead	690		0.72	0.20	mg/Kg	1		6010D	Total/NA
Mercury	0.22		0.095	0.017	mg/Kg	1		7471B	Total/NA

Client Sample ID: MDCRRF-TAR-01

Lab Sample ID: 240-196258-29

No Detections.

Client Sample ID: MDCRRF-TO-05

Lab Sample ID: 240-196258-30

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1260	3200		490	210	ug/Kg	1		8082A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cleveland

Client Sample Results

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Client Sample ID: MDCRRF-PS-01

Lab Sample ID: 240-196258-1

Date Collected: 11/29/23 08:35

Matrix: Solid

Date Received: 12/01/23 10:20

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	2500	U	4900	2500	ug/Kg		12/04/23 08:35	12/04/23 21:41	10
Aroclor-1221	2900	U	4900	2900	ug/Kg		12/04/23 08:35	12/04/23 21:41	10
Aroclor-1232	2100	U	4900	2100	ug/Kg		12/04/23 08:35	12/04/23 21:41	10
Aroclor-1242	1900	U	4900	1900	ug/Kg		12/04/23 08:35	12/04/23 21:41	10
Aroclor-1248	1700	U	4900	1700	ug/Kg		12/04/23 08:35	12/04/23 21:41	10
Aroclor-1254	2100	U	4900	2100	ug/Kg		12/04/23 08:35	12/04/23 21:41	10
Aroclor-1260	2100	U	4900	2100	ug/Kg		12/04/23 08:35	12/04/23 21:41	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	107		10 - 149	12/04/23 08:35	12/04/23 21:41	10
DCB Decachlorobiphenyl	93		10 - 174	12/04/23 08:35	12/04/23 21:41	10

Method: SW846 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	43		9.1	2.6	mg/Kg		12/04/23 13:00	12/06/23 19:19	10

Client Sample Results

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Client Sample ID: MDCRRF-PS-02

Lab Sample ID: 240-196258-2

Date Collected: 11/29/23 08:40

Matrix: Solid

Date Received: 12/01/23 10:20

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	26	U	52	26	ug/Kg		12/04/23 08:35	12/04/23 21:56	1
Aroclor-1221	31	U	52	31	ug/Kg		12/04/23 08:35	12/04/23 21:56	1
Aroclor-1232	22	U	52	22	ug/Kg		12/04/23 08:35	12/04/23 21:56	1
Aroclor-1242	20	U	52	20	ug/Kg		12/04/23 08:35	12/04/23 21:56	1
Aroclor-1248	18	U	52	18	ug/Kg		12/04/23 08:35	12/04/23 21:56	1
Aroclor-1254	22	U	52	22	ug/Kg		12/04/23 08:35	12/04/23 21:56	1
Aroclor-1260	22	U	52	22	ug/Kg		12/04/23 08:35	12/04/23 21:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	90		10 - 149	12/04/23 08:35	12/04/23 21:56	1
DCB Decachlorobiphenyl	105		10 - 174	12/04/23 08:35	12/04/23 21:56	1

Method: SW846 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	53		9.9	2.8	mg/Kg		12/04/23 13:00	12/06/23 19:24	10

Client Sample Results

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Client Sample ID: MDCRRF-PS-03

Lab Sample ID: 240-196258-3

Date Collected: 11/29/23 08:45

Matrix: Solid

Date Received: 12/01/23 10:20

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	210	U	410	210	ug/Kg		12/04/23 08:35	12/04/23 22:10	1
Aroclor-1221	250	U	410	250	ug/Kg		12/04/23 08:35	12/04/23 22:10	1
Aroclor-1232	170	U	410	170	ug/Kg		12/04/23 08:35	12/04/23 22:10	1
Aroclor-1242	160	U	410	160	ug/Kg		12/04/23 08:35	12/04/23 22:10	1
Aroclor-1248	140	U	410	140	ug/Kg		12/04/23 08:35	12/04/23 22:10	1
Aroclor-1254	170	U	410	170	ug/Kg		12/04/23 08:35	12/04/23 22:10	1
Aroclor-1260	170	U	410	170	ug/Kg		12/04/23 08:35	12/04/23 22:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	100		10 - 149	12/04/23 08:35	12/04/23 22:10	1
DCB Decachlorobiphenyl	125		10 - 174	12/04/23 08:35	12/04/23 22:10	1

Method: SW846 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	640		8.8	2.5	mg/Kg		12/04/23 13:00	12/06/23 19:28	10

Client Sample Results

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Client Sample ID: MDCRRF-PS-04

Lab Sample ID: 240-196258-4

Date Collected: 11/29/23 08:50

Matrix: Solid

Date Received: 12/01/23 10:20

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	230	U	450	230	ug/Kg		12/04/23 08:35	12/04/23 22:25	1
Aroclor-1221	270	U	450	270	ug/Kg		12/04/23 08:35	12/04/23 22:25	1
Aroclor-1232	190	U	450	190	ug/Kg		12/04/23 08:35	12/04/23 22:25	1
Aroclor-1242	170	U	450	170	ug/Kg		12/04/23 08:35	12/04/23 22:25	1
Aroclor-1248	150	U	450	150	ug/Kg		12/04/23 08:35	12/04/23 22:25	1
Aroclor-1254	190	U	450	190	ug/Kg		12/04/23 08:35	12/04/23 22:25	1
Aroclor-1260	190	U	450	190	ug/Kg		12/04/23 08:35	12/04/23 22:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	98		10 - 149	12/04/23 08:35	12/04/23 22:25	1
DCB Decachlorobiphenyl	116		10 - 174	12/04/23 08:35	12/04/23 22:25	1

Method: SW846 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	79		9.8	2.8	mg/Kg		12/04/23 13:00	12/06/23 19:41	10

Client Sample Results

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Client Sample ID: MDCRRF-PS-05

Lab Sample ID: 240-196258-5

Date Collected: 11/29/23 00:00

Matrix: Solid

Date Received: 12/01/23 10:20

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	220	U	450	220	ug/Kg		12/04/23 08:35	12/04/23 22:39	1
Aroclor-1221	270	U	450	270	ug/Kg		12/04/23 08:35	12/04/23 22:39	1
Aroclor-1232	190	U	450	190	ug/Kg		12/04/23 08:35	12/04/23 22:39	1
Aroclor-1242	170	U	450	170	ug/Kg		12/04/23 08:35	12/04/23 22:39	1
Aroclor-1248	150	U	450	150	ug/Kg		12/04/23 08:35	12/04/23 22:39	1
Aroclor-1254	190	U	450	190	ug/Kg		12/04/23 08:35	12/04/23 22:39	1
Aroclor-1260	190	U	450	190	ug/Kg		12/04/23 08:35	12/04/23 22:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	92		10 - 149	12/04/23 08:35	12/04/23 22:39	1
DCB Decachlorobiphenyl	106		10 - 174	12/04/23 08:35	12/04/23 22:39	1

Method: SW846 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	86		9.3	2.6	mg/Kg		12/04/23 13:00	12/06/23 19:45	10

Client Sample Results

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Client Sample ID: MDCRRF-PS-06

Lab Sample ID: 240-196258-6

Date Collected: 11/29/23 09:50

Matrix: Solid

Date Received: 12/01/23 10:20

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	200	U	390	200	ug/Kg		12/04/23 08:35	12/04/23 22:53	1
Aroclor-1221	240	U	390	240	ug/Kg		12/04/23 08:35	12/04/23 22:53	1
Aroclor-1232	170	U	390	170	ug/Kg		12/04/23 08:35	12/04/23 22:53	1
Aroclor-1242	150	U	390	150	ug/Kg		12/04/23 08:35	12/04/23 22:53	1
Aroclor-1248	130	U	390	130	ug/Kg		12/04/23 08:35	12/04/23 22:53	1
Aroclor-1254	170	U	390	170	ug/Kg		12/04/23 08:35	12/04/23 22:53	1
Aroclor-1260	170	U	390	170	ug/Kg		12/04/23 08:35	12/04/23 22:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	86		10 - 149	12/04/23 08:35	12/04/23 22:53	1
DCB Decachlorobiphenyl	109		10 - 174	12/04/23 08:35	12/04/23 22:53	1

Method: SW846 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	19		9.0	2.5	mg/Kg		12/04/23 13:00	12/06/23 19:50	10

Client Sample Results

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Client Sample ID: MDCRRF-PS-07

Lab Sample ID: 240-196258-7

Date Collected: 11/29/23 10:20

Matrix: Solid

Date Received: 12/01/23 10:20

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	1700	U	3500	1700	ug/Kg		12/04/23 08:35	12/05/23 13:37	10
Aroclor-1221	2100	U	3500	2100	ug/Kg		12/04/23 08:35	12/05/23 13:37	10
Aroclor-1232	1500	U	3500	1500	ug/Kg		12/04/23 08:35	12/05/23 13:37	10
Aroclor-1242	1300	U	3500	1300	ug/Kg		12/04/23 08:35	12/05/23 13:37	10
Aroclor-1248	1200	U	3500	1200	ug/Kg		12/04/23 08:35	12/05/23 13:37	10
Aroclor-1254	1500	U	3500	1500	ug/Kg		12/04/23 08:35	12/05/23 13:37	10
Aroclor-1260	1500	U	3500	1500	ug/Kg		12/04/23 08:35	12/05/23 13:37	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	102		10 - 149	12/04/23 08:35	12/05/23 13:37	10
DCB Decachlorobiphenyl	172		10 - 174	12/04/23 08:35	12/05/23 13:37	10

Method: SW846 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	220		7.4	2.1	mg/Kg		12/04/23 13:00	12/06/23 19:54	10

Client Sample Results

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Client Sample ID: MDCRRF-PS-08

Lab Sample ID: 240-196258-8

Date Collected: 11/29/23 13:15

Matrix: Solid

Date Received: 12/01/23 10:20

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	230	U	460	230	ug/Kg		12/04/23 08:35	12/05/23 13:51	1
Aroclor-1221	280	U	460	280	ug/Kg		12/04/23 08:35	12/05/23 13:51	1
Aroclor-1232	190	U	460	190	ug/Kg		12/04/23 08:35	12/05/23 13:51	1
Aroclor-1242	180	U	460	180	ug/Kg		12/04/23 08:35	12/05/23 13:51	1
Aroclor-1248	970		460	160	ug/Kg		12/04/23 08:35	12/05/23 13:51	1
Aroclor-1254	190	U	460	190	ug/Kg		12/04/23 08:35	12/05/23 13:51	1
Aroclor-1260	190	U	460	190	ug/Kg		12/04/23 08:35	12/05/23 13:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	85		10 - 149	12/04/23 08:35	12/05/23 13:51	1
DCB Decachlorobiphenyl	96		10 - 174	12/04/23 08:35	12/05/23 13:51	1

Method: SW846 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	190		8.9	2.5	mg/Kg		12/04/23 13:00	12/06/23 19:59	10

Client Sample Results

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Client Sample ID: MDCRRF-PS-09

Lab Sample ID: 240-196258-9

Date Collected: 11/29/23 13:20

Matrix: Solid

Date Received: 12/01/23 10:20

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	250	U	500	250	ug/Kg		12/04/23 08:35	12/04/23 23:37	1
Aroclor-1221	300	U	500	300	ug/Kg		12/04/23 08:35	12/04/23 23:37	1
Aroclor-1232	210	U	500	210	ug/Kg		12/04/23 08:35	12/04/23 23:37	1
Aroclor-1242	190	U	500	190	ug/Kg		12/04/23 08:35	12/04/23 23:37	1
Aroclor-1248	170	U	500	170	ug/Kg		12/04/23 08:35	12/04/23 23:37	1
Aroclor-1254	210	U	500	210	ug/Kg		12/04/23 08:35	12/04/23 23:37	1
Aroclor-1260	210	U	500	210	ug/Kg		12/04/23 08:35	12/04/23 23:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	92		10 - 149	12/04/23 08:35	12/04/23 23:37	1
DCB Decachlorobiphenyl	108		10 - 174	12/04/23 08:35	12/04/23 23:37	1

Method: SW846 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	100		10	2.8	mg/Kg		12/04/23 13:00	12/06/23 20:03	10

Client Sample Results

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Client Sample ID: MDCRRF-PS-10

Lab Sample ID: 240-196258-10

Date Collected: 11/29/23 13:40

Matrix: Solid

Date Received: 12/01/23 10:20

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	230	U	470	230	ug/Kg		12/04/23 08:35	12/04/23 23:51	1
Aroclor-1221	280	U	470	280	ug/Kg		12/04/23 08:35	12/04/23 23:51	1
Aroclor-1232	200	U	470	200	ug/Kg		12/04/23 08:35	12/04/23 23:51	1
Aroclor-1242	180	U	470	180	ug/Kg		12/04/23 08:35	12/04/23 23:51	1
Aroclor-1248	160	U	470	160	ug/Kg		12/04/23 08:35	12/04/23 23:51	1
Aroclor-1254	200	U	470	200	ug/Kg		12/04/23 08:35	12/04/23 23:51	1
Aroclor-1260	200	U	470	200	ug/Kg		12/04/23 08:35	12/04/23 23:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	94		10 - 149	12/04/23 08:35	12/04/23 23:51	1
DCB Decachlorobiphenyl	102		10 - 174	12/04/23 08:35	12/04/23 23:51	1

Method: SW846 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	1800		10	2.8	mg/Kg		12/04/23 13:00	12/06/23 20:07	10

Client Sample Results

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Client Sample ID: MDCRRF-PS-11

Lab Sample ID: 240-196258-11

Date Collected: 11/29/23 13:50

Matrix: Solid

Date Received: 12/01/23 10:20

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	230	U	460	230	ug/Kg		12/04/23 08:35	12/05/23 00:06	1
Aroclor-1221	280	U	460	280	ug/Kg		12/04/23 08:35	12/05/23 00:06	1
Aroclor-1232	190	U	460	190	ug/Kg		12/04/23 08:35	12/05/23 00:06	1
Aroclor-1242	310	J p	460	180	ug/Kg		12/04/23 08:35	12/05/23 00:06	1
Aroclor-1248	160	U	460	160	ug/Kg		12/04/23 08:35	12/05/23 00:06	1
Aroclor-1254	490		460	190	ug/Kg		12/04/23 08:35	12/05/23 00:06	1
Aroclor-1260	190	U	460	190	ug/Kg		12/04/23 08:35	12/05/23 00:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	94		10 - 149	12/04/23 08:35	12/05/23 00:06	1
Tetrachloro-m-xylene	92		10 - 149	12/04/23 08:35	12/05/23 00:06	1
DCB Decachlorobiphenyl	111		10 - 174	12/04/23 08:35	12/05/23 00:06	1
DCB Decachlorobiphenyl	106		10 - 174	12/04/23 08:35	12/05/23 00:06	1

Method: SW846 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	79		9.6	2.7	mg/Kg		12/04/23 13:00	12/06/23 20:12	10

Client Sample Results

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Client Sample ID: MDCRRF-PS-12

Lab Sample ID: 240-196258-12

Date Collected: 11/29/23 14:00

Matrix: Solid

Date Received: 12/01/23 10:20

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	220	U	430	220	ug/Kg		12/04/23 08:35	12/05/23 00:20	1
Aroclor-1221	260	U	430	260	ug/Kg		12/04/23 08:35	12/05/23 00:20	1
Aroclor-1232	180	U	430	180	ug/Kg		12/04/23 08:35	12/05/23 00:20	1
Aroclor-1242	170	U	430	170	ug/Kg		12/04/23 08:35	12/05/23 00:20	1
Aroclor-1248	150	U	430	150	ug/Kg		12/04/23 08:35	12/05/23 00:20	1
Aroclor-1254	180	U	430	180	ug/Kg		12/04/23 08:35	12/05/23 00:20	1
Aroclor-1260	180	U	430	180	ug/Kg		12/04/23 08:35	12/05/23 00:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	80		10 - 149	12/04/23 08:35	12/05/23 00:20	1
DCB Decachlorobiphenyl	91		10 - 174	12/04/23 08:35	12/05/23 00:20	1

Client Sample Results

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Client Sample ID: MDCRRF-PS-13

Lab Sample ID: 240-196258-13

Date Collected: 11/29/23 09:20

Matrix: Solid

Date Received: 12/01/23 10:20

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	220	U	440	220	ug/Kg		12/04/23 08:35	12/05/23 00:35	1
Aroclor-1221	270	U	440	270	ug/Kg		12/04/23 08:35	12/05/23 00:35	1
Aroclor-1232	190	U	440	190	ug/Kg		12/04/23 08:35	12/05/23 00:35	1
Aroclor-1242	1100		440	170	ug/Kg		12/04/23 08:35	12/05/23 00:35	1
Aroclor-1248	150	U	440	150	ug/Kg		12/04/23 08:35	12/05/23 00:35	1
Aroclor-1254	310	J	440	190	ug/Kg		12/04/23 08:35	12/05/23 00:35	1
Aroclor-1260	190	U	440	190	ug/Kg		12/04/23 08:35	12/05/23 00:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	100		10 - 149	12/04/23 08:35	12/05/23 00:35	1
DCB Decachlorobiphenyl	112		10 - 174	12/04/23 08:35	12/05/23 00:35	1

Method: SW846 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	69		9.7	2.7	mg/Kg		12/04/23 13:00	12/06/23 20:37	10

Client Sample Results

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Client Sample ID: MDCRRF-TW-01

Lab Sample ID: 240-196258-14

Date Collected: 11/29/23 09:10

Matrix: Solid

Date Received: 12/01/23 10:20

Method: SW846 6010D - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.2		0.050	0.0041	mg/L		12/06/23 14:00	12/07/23 14:27	1
Barium	0.16	J	0.50	0.0030	mg/L		12/06/23 14:00	12/07/23 14:27	1
Cadmium	0.030	J	0.050	0.00045	mg/L		12/06/23 14:00	12/07/23 14:27	1
Chromium	0.42	B	0.050	0.00076	mg/L		12/06/23 14:00	12/07/23 14:27	1
Lead	0.068		0.050	0.0028	mg/L		12/06/23 14:00	12/07/23 14:27	1
Selenium	0.0060	U	0.050	0.0060	mg/L		12/06/23 14:00	12/07/23 14:27	1
Silver	0.00062	U	0.050	0.00062	mg/L		12/06/23 14:00	12/07/23 14:27	1

Method: SW846 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00013	U	0.0020	0.00013	mg/L		12/06/23 14:00	12/07/23 15:33	1

Client Sample Results

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Client Sample ID: MDCRRF-TO-01

Lab Sample ID: 240-196258-15

Date Collected: 11/29/23 10:45

Matrix: Waste

Date Received: 12/01/23 10:20

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	220	U	490	220	ug/Kg		12/08/23 08:46	12/08/23 16:56	1
Aroclor-1221	240	U	490	240	ug/Kg		12/08/23 08:46	12/08/23 16:56	1
Aroclor-1232	230	U	490	230	ug/Kg		12/08/23 08:46	12/08/23 16:56	1
Aroclor-1242	190	U	490	190	ug/Kg		12/08/23 08:46	12/08/23 16:56	1
Aroclor-1248	240	U	490	240	ug/Kg		12/08/23 08:46	12/08/23 16:56	1
Aroclor-1254	230	U	490	230	ug/Kg		12/08/23 08:46	12/08/23 16:56	1
Aroclor-1260	220	U	490	220	ug/Kg		12/08/23 08:46	12/08/23 16:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	78		10 - 149	12/08/23 08:46	12/08/23 16:56	1
DCB Decachlorobiphenyl	61		10 - 174	12/08/23 08:46	12/08/23 16:56	1

Client Sample Results

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Client Sample ID: MDCRRF-TO-02

Lab Sample ID: 240-196258-16

Date Collected: 11/29/23 11:00

Matrix: Waste

Date Received: 12/01/23 10:20

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	220	U	490	220	ug/Kg		12/08/23 08:46	12/08/23 17:13	1
Aroclor-1221	240	U	490	240	ug/Kg		12/08/23 08:46	12/08/23 17:13	1
Aroclor-1232	230	U	490	230	ug/Kg		12/08/23 08:46	12/08/23 17:13	1
Aroclor-1242	190	U	490	190	ug/Kg		12/08/23 08:46	12/08/23 17:13	1
Aroclor-1248	240	U	490	240	ug/Kg		12/08/23 08:46	12/08/23 17:13	1
Aroclor-1254	230	U	490	230	ug/Kg		12/08/23 08:46	12/08/23 17:13	1
Aroclor-1260	540		490	220	ug/Kg		12/08/23 08:46	12/08/23 17:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	78		10 - 149	12/08/23 08:46	12/08/23 17:13	1
DCB Decachlorobiphenyl	59		10 - 174	12/08/23 08:46	12/08/23 17:13	1

Client Sample Results

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Client Sample ID: MDCRRF-TO-03

Lab Sample ID: 240-196258-17

Date Collected: 11/29/23 13:00

Matrix: Waste

Date Received: 12/01/23 10:20

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	220	U	490	220	ug/Kg		12/08/23 08:46	12/11/23 12:54	1
Aroclor-1221	240	U	490	240	ug/Kg		12/08/23 08:46	12/11/23 12:54	1
Aroclor-1232	230	U	490	230	ug/Kg		12/08/23 08:46	12/11/23 12:54	1
Aroclor-1242	190	U	490	190	ug/Kg		12/08/23 08:46	12/11/23 12:54	1
Aroclor-1248	240	U	490	240	ug/Kg		12/08/23 08:46	12/11/23 12:54	1
Aroclor-1254	230	U	490	230	ug/Kg		12/08/23 08:46	12/11/23 12:54	1
Aroclor-1260	500		490	220	ug/Kg		12/08/23 08:46	12/11/23 12:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	77		10 - 149	12/08/23 08:46	12/11/23 12:54	1
DCB Decachlorobiphenyl	64		10 - 174	12/08/23 08:46	12/11/23 12:54	1

Client Sample Results

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Client Sample ID: MDCRRF-TO-04

Lab Sample ID: 240-196258-18

Date Collected: 11/29/23 13:20

Matrix: Waste

Date Received: 12/01/23 10:20

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	220	U	490	220	ug/Kg		12/08/23 08:46	12/11/23 13:11	1
Aroclor-1221	240	U	490	240	ug/Kg		12/08/23 08:46	12/11/23 13:11	1
Aroclor-1232	230	U	490	230	ug/Kg		12/08/23 08:46	12/11/23 13:11	1
Aroclor-1242	190	U	490	190	ug/Kg		12/08/23 08:46	12/11/23 13:11	1
Aroclor-1248	240	U	490	240	ug/Kg		12/08/23 08:46	12/11/23 13:11	1
Aroclor-1254	230	U	490	230	ug/Kg		12/08/23 08:46	12/11/23 13:11	1
Aroclor-1260	220	U	490	220	ug/Kg		12/08/23 08:46	12/11/23 13:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	75		10 - 149	12/08/23 08:46	12/11/23 13:11	1
DCB Decachlorobiphenyl	67		10 - 174	12/08/23 08:46	12/11/23 13:11	1

Client Sample Results

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Client Sample ID: MDCRRF-WC-01

Lab Sample ID: 240-196258-19

Date Collected: 11/29/23 11:00

Matrix: Solid

Date Received: 12/01/23 10:20

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	190	U	370	190	ug/Kg		12/04/23 08:35	12/05/23 01:33	1
Aroclor-1221	220	U	370	220	ug/Kg		12/04/23 08:35	12/05/23 01:33	1
Aroclor-1232	160	U	370	160	ug/Kg		12/04/23 08:35	12/05/23 01:33	1
Aroclor-1242	140	U	370	140	ug/Kg		12/04/23 08:35	12/05/23 01:33	1
Aroclor-1248	130	U	370	130	ug/Kg		12/04/23 08:35	12/05/23 01:33	1
Aroclor-1254	160	U	370	160	ug/Kg		12/04/23 08:35	12/05/23 01:33	1
Aroclor-1260	160	U	370	160	ug/Kg		12/04/23 08:35	12/05/23 01:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	85		10 - 149	12/04/23 08:35	12/05/23 01:33	1
DCB Decachlorobiphenyl	117		10 - 174	12/04/23 08:35	12/05/23 01:33	1

Client Sample Results

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Client Sample ID: MDCRRF-WC-02

Lab Sample ID: 240-196258-20

Date Collected: 11/29/23 11:15

Matrix: Solid

Date Received: 12/01/23 10:20

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	1800	U	3500	1800	ug/Kg		12/04/23 08:35	12/05/23 14:05	10
Aroclor-1221	2100	U	3500	2100	ug/Kg		12/04/23 08:35	12/05/23 14:05	10
Aroclor-1232	1500	U	3500	1500	ug/Kg		12/04/23 08:35	12/05/23 14:05	10
Aroclor-1242	1300	U	3500	1300	ug/Kg		12/04/23 08:35	12/05/23 14:05	10
Aroclor-1248	1200	U	3500	1200	ug/Kg		12/04/23 08:35	12/05/23 14:05	10
Aroclor-1254	1500	U	3500	1500	ug/Kg		12/04/23 08:35	12/05/23 14:05	10
Aroclor-1260	1500	U	3500	1500	ug/Kg		12/04/23 08:35	12/05/23 14:05	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	88		10 - 149	12/04/23 08:35	12/05/23 14:05	10
DCB Decachlorobiphenyl	116		10 - 174	12/04/23 08:35	12/05/23 14:05	10

Client Sample Results

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Client Sample ID: MDCRRF-CS-01

Lab Sample ID: 240-196258-21

Date Collected: 11/29/23 13:45

Matrix: Solid

Date Received: 12/01/23 10:20

Percent Solids: 93.8

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	26	U	52	26	ug/Kg	✱	12/06/23 09:13	12/06/23 15:08	1
Aroclor-1221	31	U	52	31	ug/Kg	✱	12/06/23 09:13	12/06/23 15:08	1
Aroclor-1232	22	U	52	22	ug/Kg	✱	12/06/23 09:13	12/06/23 15:08	1
Aroclor-1242	20	U	52	20	ug/Kg	✱	12/06/23 09:13	12/06/23 15:08	1
Aroclor-1248	18	U	52	18	ug/Kg	✱	12/06/23 09:13	12/06/23 15:08	1
Aroclor-1254	22	U	52	22	ug/Kg	✱	12/06/23 09:13	12/06/23 15:08	1
Aroclor-1260	22	U	52	22	ug/Kg	✱	12/06/23 09:13	12/06/23 15:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	99		10 - 149	12/06/23 09:13	12/06/23 15:08	1
DCB Decachlorobiphenyl	103		10 - 174	12/06/23 09:13	12/06/23 15:08	1

Method: SW846 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	53		21	0.38	mg/Kg	✱	12/05/23 14:00	12/06/23 16:51	1
Cadmium	0.38	J	0.52	0.050	mg/Kg	✱	12/05/23 14:00	12/06/23 16:51	1
Chromium	10		1.0	0.36	mg/Kg	✱	12/05/23 14:00	12/06/23 16:51	1
Silver	0.085	U	1.0	0.085	mg/Kg	✱	12/05/23 14:00	12/06/23 16:51	1
Arsenic	25		1.6	0.33	mg/Kg	✱	12/05/23 14:00	12/06/23 16:51	1
Lead	41		1.0	0.29	mg/Kg	✱	12/05/23 14:00	12/06/23 16:51	1
Selenium	0.49	U	2.1	0.49	mg/Kg	✱	12/05/23 14:00	12/06/23 16:51	1

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.035	J	0.11	0.020	mg/Kg	✱	12/05/23 14:00	12/07/23 08:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (EPA Moisture)	93.8		0.1	0.1	%			12/05/23 09:27	1
Percent Moisture (EPA Moisture)	6.2		0.1	0.1	%			12/05/23 09:27	1

Client Sample Results

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Client Sample ID: MDCRRF-CS-02

Lab Sample ID: 240-196258-22

Date Collected: 11/29/23 14:00

Matrix: Solid

Date Received: 12/01/23 10:20

Percent Solids: 94.3

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	27	U	53	27	ug/Kg	✱	12/06/23 09:13	12/06/23 15:24	1
Aroclor-1221	32	U	53	32	ug/Kg	✱	12/06/23 09:13	12/06/23 15:24	1
Aroclor-1232	22	U	53	22	ug/Kg	✱	12/06/23 09:13	12/06/23 15:24	1
Aroclor-1242	20	U	53	20	ug/Kg	✱	12/06/23 09:13	12/06/23 15:24	1
Aroclor-1248	18	U	53	18	ug/Kg	✱	12/06/23 09:13	12/06/23 15:24	1
Aroclor-1254	22	U	53	22	ug/Kg	✱	12/06/23 09:13	12/06/23 15:24	1
Aroclor-1260	22	U	53	22	ug/Kg	✱	12/06/23 09:13	12/06/23 15:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	73		10 - 149	12/06/23 09:13	12/06/23 15:24	1
DCB Decachlorobiphenyl	76		10 - 174	12/06/23 09:13	12/06/23 15:24	1

Method: SW846 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	13	J	19	0.34	mg/Kg	✱	12/05/23 14:00	12/06/23 17:21	1
Cadmium	0.15	J	0.47	0.045	mg/Kg	✱	12/05/23 14:00	12/06/23 17:21	1
Chromium	12		0.93	0.32	mg/Kg	✱	12/05/23 14:00	12/06/23 17:21	1
Silver	0.12	J	0.93	0.075	mg/Kg	✱	12/05/23 14:00	12/06/23 17:21	1
Arsenic	1.3	J	1.4	0.29	mg/Kg	✱	12/05/23 14:00	12/06/23 17:21	1
Lead	7.1		0.93	0.26	mg/Kg	✱	12/05/23 14:00	12/06/23 17:21	1
Selenium	0.44	U	1.9	0.44	mg/Kg	✱	12/05/23 14:00	12/06/23 17:21	1

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.020	U	0.11	0.020	mg/Kg	✱	12/05/23 14:00	12/07/23 09:04	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (EPA Moisture)	94.3		0.1	0.1	%			12/05/23 09:27	1
Percent Moisture (EPA Moisture)	5.7		0.1	0.1	%			12/05/23 09:27	1

Client Sample Results

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Client Sample ID: MDCRRF-CS-03

Lab Sample ID: 240-196258-23

Date Collected: 11/29/23 14:15

Matrix: Solid

Date Received: 12/01/23 10:20

Percent Solids: 95.3

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	26	U	52	26	ug/Kg	✱	12/06/23 09:13	12/06/23 15:39	1
Aroclor-1221	31	U	52	31	ug/Kg	✱	12/06/23 09:13	12/06/23 15:39	1
Aroclor-1232	22	U	52	22	ug/Kg	✱	12/06/23 09:13	12/06/23 15:39	1
Aroclor-1242	20	U	52	20	ug/Kg	✱	12/06/23 09:13	12/06/23 15:39	1
Aroclor-1248	18	U	52	18	ug/Kg	✱	12/06/23 09:13	12/06/23 15:39	1
Aroclor-1254	22	U	52	22	ug/Kg	✱	12/06/23 09:13	12/06/23 15:39	1
Aroclor-1260	22	U	52	22	ug/Kg	✱	12/06/23 09:13	12/06/23 15:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	90		10 - 149	12/06/23 09:13	12/06/23 15:39	1
DCB Decachlorobiphenyl	86		10 - 174	12/06/23 09:13	12/06/23 15:39	1

Method: SW846 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	31		18	0.32	mg/Kg	✱	12/05/23 14:00	12/06/23 17:25	1
Cadmium	0.77		0.44	0.042	mg/Kg	✱	12/05/23 14:00	12/06/23 17:25	1
Chromium	12		0.88	0.30	mg/Kg	✱	12/05/23 14:00	12/06/23 17:25	1
Silver	0.13	J	0.88	0.071	mg/Kg	✱	12/05/23 14:00	12/06/23 17:25	1
Arsenic	35		1.3	0.28	mg/Kg	✱	12/05/23 14:00	12/06/23 17:25	1
Lead	57		0.88	0.25	mg/Kg	✱	12/05/23 14:00	12/06/23 17:25	1
Selenium	0.41	U	1.8	0.41	mg/Kg	✱	12/05/23 14:00	12/06/23 17:25	1

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.030	J	0.11	0.020	mg/Kg	✱	12/05/23 14:00	12/07/23 09:06	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (EPA Moisture)	95.3		0.1	0.1	%			12/05/23 09:27	1
Percent Moisture (EPA Moisture)	4.7		0.1	0.1	%			12/05/23 09:27	1

Client Sample Results

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Client Sample ID: MDCRRF-CS-04

Lab Sample ID: 240-196258-24

Date Collected: 11/29/23 14:30

Matrix: Solid

Date Received: 12/01/23 10:20

Percent Solids: 96.2

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	26	U	51	26	ug/Kg	✱	12/06/23 09:13	12/06/23 15:55	1
Aroclor-1221	31	U	51	31	ug/Kg	✱	12/06/23 09:13	12/06/23 15:55	1
Aroclor-1232	21	U	51	21	ug/Kg	✱	12/06/23 09:13	12/06/23 15:55	1
Aroclor-1242	19	U	51	19	ug/Kg	✱	12/06/23 09:13	12/06/23 15:55	1
Aroclor-1248	17	U	51	17	ug/Kg	✱	12/06/23 09:13	12/06/23 15:55	1
Aroclor-1254	21	U	51	21	ug/Kg	✱	12/06/23 09:13	12/06/23 15:55	1
Aroclor-1260	21	U	51	21	ug/Kg	✱	12/06/23 09:13	12/06/23 15:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	91		10 - 149	12/06/23 09:13	12/06/23 15:55	1
DCB Decachlorobiphenyl	84		10 - 174	12/06/23 09:13	12/06/23 15:55	1

Method: SW846 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	32		15	0.28	mg/Kg	✱	12/05/23 14:00	12/06/23 17:30	1
Cadmium	0.32	J	0.38	0.037	mg/Kg	✱	12/05/23 14:00	12/06/23 17:30	1
Chromium	9.8		0.77	0.26	mg/Kg	✱	12/05/23 14:00	12/06/23 17:30	1
Silver	0.062	U	0.77	0.062	mg/Kg	✱	12/05/23 14:00	12/06/23 17:30	1
Arsenic	2.6		1.2	0.24	mg/Kg	✱	12/05/23 14:00	12/06/23 17:30	1
Lead	11		0.77	0.22	mg/Kg	✱	12/05/23 14:00	12/06/23 17:30	1
Selenium	0.36	U	1.5	0.36	mg/Kg	✱	12/05/23 14:00	12/06/23 17:30	1

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.021	U	0.12	0.021	mg/Kg	✱	12/05/23 14:00	12/07/23 09:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (EPA Moisture)	96.2		0.1	0.1	%			12/05/23 09:27	1
Percent Moisture (EPA Moisture)	3.8		0.1	0.1	%			12/05/23 09:27	1

Client Sample Results

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Client Sample ID: MDCRRF-CS-05

Lab Sample ID: 240-196258-25

Date Collected: 11/29/23 14:40

Matrix: Solid

Date Received: 12/01/23 10:20

Percent Solids: 94.9

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	25	U	51	25	ug/Kg	✱	12/06/23 09:13	12/06/23 16:10	1
Aroclor-1221	30	U	51	30	ug/Kg	✱	12/06/23 09:13	12/06/23 16:10	1
Aroclor-1232	21	U	51	21	ug/Kg	✱	12/06/23 09:13	12/06/23 16:10	1
Aroclor-1242	19	U	51	19	ug/Kg	✱	12/06/23 09:13	12/06/23 16:10	1
Aroclor-1248	17	U	51	17	ug/Kg	✱	12/06/23 09:13	12/06/23 16:10	1
Aroclor-1254	21	U	51	21	ug/Kg	✱	12/06/23 09:13	12/06/23 16:10	1
Aroclor-1260	21	U	51	21	ug/Kg	✱	12/06/23 09:13	12/06/23 16:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	84		10 - 149	12/06/23 09:13	12/06/23 16:10	1
DCB Decachlorobiphenyl	76		10 - 174	12/06/23 09:13	12/06/23 16:10	1

Method: SW846 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	37		15	0.28	mg/Kg	✱	12/05/23 14:00	12/06/23 17:34	1
Cadmium	9.1		0.39	0.037	mg/Kg	✱	12/05/23 14:00	12/06/23 17:34	1
Chromium	23		0.77	0.27	mg/Kg	✱	12/05/23 14:00	12/06/23 17:34	1
Silver	0.30	J	0.77	0.063	mg/Kg	✱	12/05/23 14:00	12/06/23 17:34	1
Arsenic	2.9		1.2	0.24	mg/Kg	✱	12/05/23 14:00	12/06/23 17:34	1
Lead	150		0.77	0.22	mg/Kg	✱	12/05/23 14:00	12/06/23 17:34	1
Selenium	0.36	U	1.5	0.36	mg/Kg	✱	12/05/23 14:00	12/06/23 17:34	1

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.023	J	0.11	0.021	mg/Kg	✱	12/05/23 14:00	12/07/23 09:10	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (EPA Moisture)	94.9		0.1	0.1	%			12/05/23 09:27	1
Percent Moisture (EPA Moisture)	5.1		0.1	0.1	%			12/05/23 09:27	1

Client Sample Results

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Client Sample ID: MDCRRF-CS-06

Lab Sample ID: 240-196258-26

Date Collected: 11/29/23 14:50

Matrix: Solid

Date Received: 12/01/23 10:20

Percent Solids: 98.0

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	130	U	250	130	ug/Kg	✱	12/06/23 09:13	12/07/23 12:33	5
Aroclor-1221	150	U	250	150	ug/Kg	✱	12/06/23 09:13	12/07/23 12:33	5
Aroclor-1232	110	U	250	110	ug/Kg	✱	12/06/23 09:13	12/07/23 12:33	5
Aroclor-1242	97	U	250	97	ug/Kg	✱	12/06/23 09:13	12/07/23 12:33	5
Aroclor-1248	86	U	250	86	ug/Kg	✱	12/06/23 09:13	12/07/23 12:33	5
Aroclor-1254	110	U	250	110	ug/Kg	✱	12/06/23 09:13	12/07/23 12:33	5
Aroclor-1260	110	U	250	110	ug/Kg	✱	12/06/23 09:13	12/07/23 12:33	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	109		10 - 149	12/06/23 09:13	12/07/23 12:33	5
DCB Decachlorobiphenyl	160		10 - 174	12/06/23 09:13	12/07/23 12:33	5

Method: SW846 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	33		17	0.32	mg/Kg	✱	12/05/23 14:00	12/06/23 17:38	1
Cadmium	0.95		0.44	0.042	mg/Kg	✱	12/05/23 14:00	12/06/23 17:38	1
Chromium	13		0.87	0.30	mg/Kg	✱	12/05/23 14:00	12/06/23 17:38	1
Silver	0.071	U	0.87	0.071	mg/Kg	✱	12/05/23 14:00	12/06/23 17:38	1
Arsenic	2.7		1.3	0.28	mg/Kg	✱	12/05/23 14:00	12/06/23 17:38	1
Lead	16		0.87	0.25	mg/Kg	✱	12/05/23 14:00	12/06/23 17:38	1
Selenium	0.41	U	1.7	0.41	mg/Kg	✱	12/05/23 14:00	12/06/23 17:38	1

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.13		0.11	0.019	mg/Kg	✱	12/05/23 14:00	12/07/23 09:12	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (EPA Moisture)	98.0		0.1	0.1	%			12/05/23 09:27	1
Percent Moisture (EPA Moisture)	2.0		0.1	0.1	%			12/05/23 09:27	1

Client Sample Results

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Client Sample ID: MDCRRF-PR-01

Lab Sample ID: 240-196258-27

Date Collected: 11/29/23 10:00

Matrix: Solid

Date Received: 12/01/23 10:20

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	25	U	51	25	ug/Kg		12/04/23 08:35	12/05/23 02:02	1
Aroclor-1221	30	U	51	30	ug/Kg		12/04/23 08:35	12/05/23 02:02	1
Aroclor-1232	21	U	51	21	ug/Kg		12/04/23 08:35	12/05/23 02:02	1
Aroclor-1242	19	U	51	19	ug/Kg		12/04/23 08:35	12/05/23 02:02	1
Aroclor-1248	17	U	51	17	ug/Kg		12/04/23 08:35	12/05/23 02:02	1
Aroclor-1254	21	U	51	21	ug/Kg		12/04/23 08:35	12/05/23 02:02	1
Aroclor-1260	21	U	51	21	ug/Kg		12/04/23 08:35	12/05/23 02:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	58		10 - 149	12/04/23 08:35	12/05/23 02:02	1
DCB Decachlorobiphenyl	59		10 - 174	12/04/23 08:35	12/05/23 02:02	1

Method: SW846 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	200		18	0.33	mg/Kg		12/04/23 13:00	12/05/23 11:28	1
Cadmium	14		0.91	0.087	mg/Kg		12/04/23 13:00	12/05/23 11:45	2
Chromium	200		0.91	0.31	mg/Kg		12/04/23 13:00	12/05/23 11:28	1
Silver	1.6		0.91	0.074	mg/Kg		12/04/23 13:00	12/05/23 11:28	1
Arsenic	22		1.4	0.29	mg/Kg		12/04/23 13:00	12/05/23 11:28	1
Lead	590		1.8	0.51	mg/Kg		12/04/23 13:00	12/05/23 11:45	2
Selenium	0.43	U	1.8	0.43	mg/Kg		12/04/23 13:00	12/05/23 11:28	1

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.39		0.088	0.016	mg/Kg		12/04/23 13:00	12/05/23 09:45	1

Client Sample Results

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Client Sample ID: MDCRRF-PR-02

Lab Sample ID: 240-196258-28

Date Collected: 11/29/23 10:10

Matrix: Solid

Date Received: 12/01/23 10:20

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	24	U	48	24	ug/Kg		12/04/23 08:35	12/05/23 14:20	1
Aroclor-1221	29	U	48	29	ug/Kg		12/04/23 08:35	12/05/23 14:20	1
Aroclor-1232	20	U	48	20	ug/Kg		12/04/23 08:35	12/05/23 14:20	1
Aroclor-1242	18	U	48	18	ug/Kg		12/04/23 08:35	12/05/23 14:20	1
Aroclor-1248	16	U	48	16	ug/Kg		12/04/23 08:35	12/05/23 14:20	1
Aroclor-1254	20	U	48	20	ug/Kg		12/04/23 08:35	12/05/23 14:20	1
Aroclor-1260	20	U	48	20	ug/Kg		12/04/23 08:35	12/05/23 14:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	107		10 - 149	12/04/23 08:35	12/05/23 14:20	1
DCB Decachlorobiphenyl	80		10 - 174	12/04/23 08:35	12/05/23 14:20	1

Method: SW846 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	94		14	0.26	mg/Kg		12/04/23 13:00	12/05/23 11:33	1
Cadmium	14		0.36	0.035	mg/Kg		12/04/23 13:00	12/05/23 11:33	1
Chromium	22		0.72	0.25	mg/Kg		12/04/23 13:00	12/05/23 11:33	1
Silver	1.2		0.72	0.059	mg/Kg		12/04/23 13:00	12/05/23 11:33	1
Arsenic	10		1.1	0.23	mg/Kg		12/04/23 13:00	12/05/23 11:33	1
Lead	690		0.72	0.20	mg/Kg		12/04/23 13:00	12/05/23 11:33	1
Selenium	0.34	U	1.4	0.34	mg/Kg		12/04/23 13:00	12/05/23 11:33	1

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.22		0.095	0.017	mg/Kg		12/04/23 13:00	12/05/23 09:47	1

Client Sample Results

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Client Sample ID: MDCRRF-TAR-01

Lab Sample ID: 240-196258-29

Date Collected: 11/30/23 07:45

Matrix: Waste

Date Received: 12/01/23 10:20

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	2200	U	5000	2200	ug/Kg		12/08/23 08:46	12/11/23 13:28	10
Aroclor-1221	2400	U	5000	2400	ug/Kg		12/08/23 08:46	12/11/23 13:28	10
Aroclor-1232	2300	U	5000	2300	ug/Kg		12/08/23 08:46	12/11/23 13:28	10
Aroclor-1242	1900	U	5000	1900	ug/Kg		12/08/23 08:46	12/11/23 13:28	10
Aroclor-1248	2400	U	5000	2400	ug/Kg		12/08/23 08:46	12/11/23 13:28	10
Aroclor-1254	2300	U	5000	2300	ug/Kg		12/08/23 08:46	12/11/23 13:28	10
Aroclor-1260	2200	U	5000	2200	ug/Kg		12/08/23 08:46	12/11/23 13:28	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	73		10 - 149	12/08/23 08:46	12/11/23 13:28	10
DCB Decachlorobiphenyl	35	p	10 - 174	12/08/23 08:46	12/11/23 13:28	10

Client Sample Results

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Client Sample ID: MDCRRF-TO-05

Lab Sample ID: 240-196258-30

Date Collected: 11/30/23 09:29

Matrix: Waste

Date Received: 12/01/23 10:20

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	210	U	490	210	ug/Kg		12/08/23 08:46	12/11/23 13:46	1
Aroclor-1221	230	U	490	230	ug/Kg		12/08/23 08:46	12/11/23 13:46	1
Aroclor-1232	220	U	490	220	ug/Kg		12/08/23 08:46	12/11/23 13:46	1
Aroclor-1242	180	U	490	180	ug/Kg		12/08/23 08:46	12/11/23 13:46	1
Aroclor-1248	230	U	490	230	ug/Kg		12/08/23 08:46	12/11/23 13:46	1
Aroclor-1254	220	U	490	220	ug/Kg		12/08/23 08:46	12/11/23 13:46	1
Aroclor-1260	3200		490	210	ug/Kg		12/08/23 08:46	12/11/23 13:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	89		10 - 149	12/08/23 08:46	12/11/23 13:46	1
DCB Decachlorobiphenyl	75		10 - 174	12/08/23 08:46	12/11/23 13:46	1

Surrogate Summary

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		TCX1 (10-149)	TCX2 (10-149)	DCBP1 (10-174)	DCBP2 (10-174)
240-196258-1	MDCRRF-PS-01	107		93	
240-196258-2	MDCRRF-PS-02	90		105	
240-196258-3	MDCRRF-PS-03	100		125	
240-196258-4	MDCRRF-PS-04	98		116	
240-196258-5	MDCRRF-PS-05	92		106	
240-196258-6	MDCRRF-PS-06	86		109	
240-196258-7	MDCRRF-PS-07		102		172
240-196258-8	MDCRRF-PS-08		85		96
240-196258-9	MDCRRF-PS-09	92		108	
240-196258-10	MDCRRF-PS-10	94		102	
240-196258-11	MDCRRF-PS-11	92	94	106	111
240-196258-12	MDCRRF-PS-12	80		91	
240-196258-13	MDCRRF-PS-13	100		112	
240-196258-19	MDCRRF-WC-01	85		117	
240-196258-20	MDCRRF-WC-02		88		116
240-196258-21	MDCRRF-CS-01		99		103
240-196258-22	MDCRRF-CS-02		73		76
240-196258-23	MDCRRF-CS-03		90		86
240-196258-24	MDCRRF-CS-04		91		84
240-196258-25	MDCRRF-CS-05		84		76
240-196258-26	MDCRRF-CS-06		109		160
240-196258-27	MDCRRF-PR-01	58		59	
240-196258-28	MDCRRF-PR-02		107		80
LCS 240-596381/2-A	Lab Control Sample	67		111	
LCS 240-596687/2-A	Lab Control Sample		75		92
MB 240-596381/1-A	Method Blank	100		116	
MB 240-596687/1-A	Method Blank		97		86
Surrogate Legend					
TCX = Tetrachloro-m-xylene					
DCBP = DCB Decachlorobiphenyl					

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Waste

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		TCX1 (10-149)	DCBP1 (10-174)
240-196258-15	MDCRRF-TO-01	78	61
240-196258-16	MDCRRF-TO-02	78	59
240-196258-17	MDCRRF-TO-03	77	64
240-196258-18	MDCRRF-TO-04	75	67
240-196258-29	MDCRRF-TAR-01	73	35 p
240-196258-30	MDCRRF-TO-05	89	75
LCS 240-596980/2-A	Lab Control Sample	104	116
MB 240-596980/1-A	Method Blank	105	119
Surrogate Legend			
TCX = Tetrachloro-m-xylene			
DCBP = DCB Decachlorobiphenyl			

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QC Sample Results

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 240-596381/1-A

Matrix: Solid

Analysis Batch: 596497

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 596381

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	25	U	50	25	ug/Kg		12/04/23 08:35	12/04/23 20:29	1
Aroclor-1221	30	U	50	30	ug/Kg		12/04/23 08:35	12/04/23 20:29	1
Aroclor-1232	21	U	50	21	ug/Kg		12/04/23 08:35	12/04/23 20:29	1
Aroclor-1242	19	U	50	19	ug/Kg		12/04/23 08:35	12/04/23 20:29	1
Aroclor-1248	17	U	50	17	ug/Kg		12/04/23 08:35	12/04/23 20:29	1
Aroclor-1254	21	U	50	21	ug/Kg		12/04/23 08:35	12/04/23 20:29	1
Aroclor-1260	21	U	50	21	ug/Kg		12/04/23 08:35	12/04/23 20:29	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	100		10 - 149	12/04/23 08:35	12/04/23 20:29	1
DCB Decachlorobiphenyl	116		10 - 174	12/04/23 08:35	12/04/23 20:29	1

Lab Sample ID: LCS 240-596381/2-A

Matrix: Solid

Analysis Batch: 596497

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 596381

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aroclor-1016	1000	731		ug/Kg		73	28 - 140
Aroclor-1260	1000	852		ug/Kg		85	39 - 153

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	67		10 - 149
DCB Decachlorobiphenyl	111		10 - 174

Lab Sample ID: MB 240-596687/1-A

Matrix: Solid

Analysis Batch: 596664

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 596687

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	25	U	50	25	ug/Kg		12/06/23 09:13	12/06/23 13:09	1
Aroclor-1221	30	U	50	30	ug/Kg		12/06/23 09:13	12/06/23 13:09	1
Aroclor-1232	21	U	50	21	ug/Kg		12/06/23 09:13	12/06/23 13:09	1
Aroclor-1242	19	U	50	19	ug/Kg		12/06/23 09:13	12/06/23 13:09	1
Aroclor-1248	17	U	50	17	ug/Kg		12/06/23 09:13	12/06/23 13:09	1
Aroclor-1254	21	U	50	21	ug/Kg		12/06/23 09:13	12/06/23 13:09	1
Aroclor-1260	21	U	50	21	ug/Kg		12/06/23 09:13	12/06/23 13:09	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	97		10 - 149	12/06/23 09:13	12/06/23 13:09	1
DCB Decachlorobiphenyl	86		10 - 174	12/06/23 09:13	12/06/23 13:09	1

Lab Sample ID: LCS 240-596687/2-A

Matrix: Solid

Analysis Batch: 596664

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 596687

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aroclor-1016	1000	679		ug/Kg		68	28 - 140
Aroclor-1260	1000	733		ug/Kg		73	39 - 153

Eurofins Cleveland

QC Sample Results

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

	LCS LCS		
Surrogate	%Recovery	Qualifier	Limits
Tetrachloro-m-xylene	75		10 - 149
DCB Decachlorobiphenyl	92		10 - 174

Lab Sample ID: MB 240-596980/1-A

Matrix: Waste

Analysis Batch: 596991

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 596980

	MB MB									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Aroclor-1016	220	U	500	220	ug/Kg		12/08/23 08:46	12/08/23 12:16	1	
Aroclor-1221	240	U	500	240	ug/Kg		12/08/23 08:46	12/08/23 12:16	1	
Aroclor-1232	230	U	500	230	ug/Kg		12/08/23 08:46	12/08/23 12:16	1	
Aroclor-1242	190	U	500	190	ug/Kg		12/08/23 08:46	12/08/23 12:16	1	
Aroclor-1248	240	U	500	240	ug/Kg		12/08/23 08:46	12/08/23 12:16	1	
Aroclor-1254	230	U	500	230	ug/Kg		12/08/23 08:46	12/08/23 12:16	1	
Aroclor-1260	220	U	500	220	ug/Kg		12/08/23 08:46	12/08/23 12:16	1	

	MB MB									
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac				
Tetrachloro-m-xylene	105		10 - 149	12/08/23 08:46	12/08/23 12:16	1				
DCB Decachlorobiphenyl	119		10 - 174	12/08/23 08:46	12/08/23 12:16	1				

Lab Sample ID: LCS 240-596980/2-A

Matrix: Waste

Analysis Batch: 596991

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 596980

			Spike		LCS LCS				%Rec	
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	
Aroclor-1016			10000	9690		ug/Kg		97	28 - 140	
Aroclor-1260			10000	9900		ug/Kg		99	39 - 153	

	LCS LCS		
Surrogate	%Recovery	Qualifier	Limits
Tetrachloro-m-xylene	104		10 - 149
DCB Decachlorobiphenyl	116		10 - 174

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 240-596424/1-A

Matrix: Solid

Analysis Batch: 596797

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 596424

	MB MB									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Lead	0.28	U	1.0	0.28	mg/Kg		12/04/23 13:00	12/06/23 18:22	1	

Lab Sample ID: LCS 240-596424/2-A

Matrix: Solid

Analysis Batch: 596797

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 596424

			Spike		LCS LCS				%Rec	
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	
Lead			100	97.7		mg/Kg		98	80 - 120	

Eurofins Cleveland

QC Sample Results

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Method: 6010D - Metals (ICP) (Continued)

Lab Sample ID: MB 240-596437/1-A

Matrix: Solid

Analysis Batch: 596659

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 596437

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.36	U	20	0.36	mg/Kg		12/04/23 13:00	12/05/23 10:27	1
Cadmium	0.048	U	0.50	0.048	mg/Kg		12/04/23 13:00	12/05/23 10:27	1
Chromium	0.34	U	1.0	0.34	mg/Kg		12/04/23 13:00	12/05/23 10:27	1
Arsenic	0.32	U	1.5	0.32	mg/Kg		12/04/23 13:00	12/05/23 10:27	1
Lead	0.28	U	1.0	0.28	mg/Kg		12/04/23 13:00	12/05/23 10:27	1
Selenium	0.47	U	2.0	0.47	mg/Kg		12/04/23 13:00	12/05/23 10:27	1
Silver	0.081	U	1.0	0.081	mg/Kg		12/04/23 13:00	12/05/23 10:27	1

Lab Sample ID: LCS 240-596437/2-A

Matrix: Solid

Analysis Batch: 596659

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 596437

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Barium	200	179		mg/Kg		90	80 - 120
Cadmium	100	91.9		mg/Kg		92	80 - 120
Chromium	100	88.0		mg/Kg		88	80 - 120
Arsenic	200	184		mg/Kg		92	80 - 120
Lead	100	86.7		mg/Kg		87	80 - 120
Selenium	200	183		mg/Kg		92	80 - 120
Silver	10.0	9.00		mg/Kg		90	80 - 120

Lab Sample ID: MB 240-596582/1-A

Matrix: Solid

Analysis Batch: 596888

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 596582

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.36	U	20	0.36	mg/Kg		12/05/23 14:00	12/07/23 17:42	1
Cadmium	0.048	U	0.50	0.048	mg/Kg		12/05/23 14:00	12/07/23 17:42	1
Chromium	0.34	U	1.0	0.34	mg/Kg		12/05/23 14:00	12/07/23 17:42	1
Arsenic	0.32	U	1.5	0.32	mg/Kg		12/05/23 14:00	12/07/23 17:42	1
Lead	0.28	U	1.0	0.28	mg/Kg		12/05/23 14:00	12/07/23 17:42	1
Selenium	0.47	U	2.0	0.47	mg/Kg		12/05/23 14:00	12/07/23 17:42	1
Silver	0.081	U	1.0	0.081	mg/Kg		12/05/23 14:00	12/07/23 17:42	1

Lab Sample ID: LCS 240-596582/2-A

Matrix: Solid

Analysis Batch: 596797

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 596582

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Barium	200	194		mg/Kg		97	80 - 120
Cadmium	100	99.1		mg/Kg		99	80 - 120
Chromium	100	93.9		mg/Kg		94	80 - 120
Arsenic	200	200		mg/Kg		100	80 - 120
Lead	100	94.2		mg/Kg		94	80 - 120
Selenium	200	199		mg/Kg		100	80 - 120
Silver	10.0	9.42		mg/Kg		94	80 - 120

Eurofins Cleveland

QC Sample Results

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Method: 6010D - Metals (ICP) (Continued)

Lab Sample ID: 240-196258-21 MS

Matrix: Solid

Analysis Batch: 596797

Client Sample ID: MDCRRF-CS-01

Prep Type: Total/NA

Prep Batch: 596582

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Barium	53		178	207		mg/Kg	✱	87	75 - 125
Cadmium	0.38	J	88.8	82.2		mg/Kg	✱	92	75 - 125
Chromium	10		88.8	81.0		mg/Kg	✱	80	75 - 125
Arsenic	25		178	193		mg/Kg	✱	95	75 - 125
Lead	41		88.8	109		mg/Kg	✱	77	75 - 125
Selenium	0.49	U	178	164		mg/Kg	✱	92	75 - 125
Silver	0.085	U	8.88	8.30		mg/Kg	✱	93	75 - 125

Lab Sample ID: 240-196258-21 MSD

Matrix: Solid

Analysis Batch: 596797

Client Sample ID: MDCRRF-CS-01

Prep Type: Total/NA

Prep Batch: 596582

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Barium	53		178	205		mg/Kg	✱	86	75 - 125	1	20
Cadmium	0.38	J	88.8	81.8		mg/Kg	✱	92	75 - 125	0	20
Chromium	10		88.8	79.9		mg/Kg	✱	78	75 - 125	1	20
Arsenic	25		178	190		mg/Kg	✱	93	75 - 125	2	20
Lead	41		88.8	108		mg/Kg	✱	76	75 - 125	2	20
Selenium	0.49	U	178	163		mg/Kg	✱	92	75 - 125	1	20
Silver	0.085	U	8.88	8.19		mg/Kg	✱	92	75 - 125	1	20

Lab Sample ID: MB 240-596678/2-A

Matrix: Solid

Analysis Batch: 596888

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 596678

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.0030	U	0.50	0.0030	mg/L		12/06/23 14:00	12/07/23 12:19	1
Cadmium	0.00045	U	0.050	0.00045	mg/L		12/06/23 14:00	12/07/23 12:19	1
Chromium	0.00076	U	0.050	0.00076	mg/L		12/06/23 14:00	12/07/23 12:19	1
Arsenic	0.0041	U	0.050	0.0041	mg/L		12/06/23 14:00	12/07/23 12:19	1
Lead	0.0028	U	0.050	0.0028	mg/L		12/06/23 14:00	12/07/23 12:19	1
Selenium	0.0060	U	0.050	0.0060	mg/L		12/06/23 14:00	12/07/23 12:19	1
Silver	0.00062	U	0.050	0.00062	mg/L		12/06/23 14:00	12/07/23 12:19	1

Lab Sample ID: LCS 240-596678/3-A

Matrix: Solid

Analysis Batch: 596888

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 596678

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Barium	2.00	1.97		mg/L		99	50 - 150
Cadmium	1.00	1.04		mg/L		104	50 - 150
Chromium	1.00	0.972		mg/L		97	50 - 150
Arsenic	2.00	2.19		mg/L		109	50 - 150
Lead	1.00	0.906		mg/L		91	50 - 150
Selenium	2.00	2.22		mg/L		111	50 - 150
Silver	0.100	0.105		mg/L		105	50 - 150

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QC Sample Results

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Method: 6010D - Metals (ICP) (Continued)

Lab Sample ID: LB 240-596626/1-B

Matrix: Solid

Analysis Batch: 596888

Client Sample ID: Method Blank

Prep Type: TCLP

Prep Batch: 596678

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.0030	U	0.50	0.0030	mg/L		12/06/23 14:00	12/07/23 12:14	1
Cadmium	0.00045	U	0.050	0.00045	mg/L		12/06/23 14:00	12/07/23 12:14	1
Chromium	0.000833	J	0.050	0.00076	mg/L		12/06/23 14:00	12/07/23 12:14	1
Arsenic	0.0041	U	0.050	0.0041	mg/L		12/06/23 14:00	12/07/23 12:14	1
Lead	0.0028	U	0.050	0.0028	mg/L		12/06/23 14:00	12/07/23 12:14	1
Selenium	0.0060	U	0.050	0.0060	mg/L		12/06/23 14:00	12/07/23 12:14	1
Silver	0.00062	U	0.050	0.00062	mg/L		12/06/23 14:00	12/07/23 12:14	1

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-596682/2-A

Matrix: Solid

Analysis Batch: 596919

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 596682

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000252	J	0.0020	0.00013	mg/L		12/06/23 14:00	12/07/23 15:03	1

Lab Sample ID: LCS 240-596682/3-A

Matrix: Solid

Analysis Batch: 596919

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 596682

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00500	0.00484		mg/L		97	80 - 120

Lab Sample ID: LB 240-596626/1-C

Matrix: Solid

Analysis Batch: 596919

Client Sample ID: Method Blank

Prep Type: TCLP

Prep Batch: 596682

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000518	J	0.0020	0.00013	mg/L		12/06/23 14:00	12/07/23 15:01	1

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 240-596440/1-A

Matrix: Solid

Analysis Batch: 596591

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 596440

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.018	U	0.10	0.018	mg/Kg		12/04/23 13:00	12/05/23 09:34	1

Lab Sample ID: LCS 240-596440/2-A

Matrix: Solid

Analysis Batch: 596591

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 596440

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.833	0.870		mg/Kg		104	80 - 120

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QC Sample Results

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Method: 7471B - Mercury (CVAA) (Continued)

Lab Sample ID: MB 240-596586/1-A

Matrix: Solid

Analysis Batch: 596868

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 596586

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.018	U	0.10	0.018	mg/Kg		12/05/23 14:00	12/07/23 08:53	1

Lab Sample ID: LCS 240-596586/2-A

Matrix: Solid

Analysis Batch: 596868

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 596586

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.833	0.855		mg/Kg		103	80 - 120

Lab Sample ID: 240-196258-21 MS

Matrix: Solid

Analysis Batch: 596868

Client Sample ID: MDCRRF-CS-01

Prep Type: Total/NA

Prep Batch: 596586

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.035	J	0.175	0.240		mg/Kg	⚠	118	80 - 120

Lab Sample ID: 240-196258-21 MSD

Matrix: Solid

Analysis Batch: 596868

Client Sample ID: MDCRRF-CS-01

Prep Type: Total/NA

Prep Batch: 596586

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	0.035	J	0.175	0.241		mg/Kg	⚠	118	80 - 120	0	20

QC Association Summary

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

GC Semi VOA

Processed Batch: 596360

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-196258-21	MDCRRF-CS-01	Total/NA	Solid	Part Size Red	
240-196258-22	MDCRRF-CS-02	Total/NA	Solid	Part Size Red	
240-196258-23	MDCRRF-CS-03	Total/NA	Solid	Part Size Red	
240-196258-24	MDCRRF-CS-04	Total/NA	Solid	Part Size Red	
240-196258-25	MDCRRF-CS-05	Total/NA	Solid	Part Size Red	
240-196258-26	MDCRRF-CS-06	Total/NA	Solid	Part Size Red	

Prep Batch: 596381

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-196258-1	MDCRRF-PS-01	Total/NA	Solid	3546	
240-196258-2	MDCRRF-PS-02	Total/NA	Solid	3546	
240-196258-3	MDCRRF-PS-03	Total/NA	Solid	3546	
240-196258-4	MDCRRF-PS-04	Total/NA	Solid	3546	
240-196258-5	MDCRRF-PS-05	Total/NA	Solid	3546	
240-196258-6	MDCRRF-PS-06	Total/NA	Solid	3546	
240-196258-7	MDCRRF-PS-07	Total/NA	Solid	3546	
240-196258-8	MDCRRF-PS-08	Total/NA	Solid	3546	
240-196258-9	MDCRRF-PS-09	Total/NA	Solid	3546	
240-196258-10	MDCRRF-PS-10	Total/NA	Solid	3546	
240-196258-11	MDCRRF-PS-11	Total/NA	Solid	3546	
240-196258-12	MDCRRF-PS-12	Total/NA	Solid	3546	
240-196258-13	MDCRRF-PS-13	Total/NA	Solid	3546	
240-196258-19	MDCRRF-WC-01	Total/NA	Solid	3546	
240-196258-20	MDCRRF-WC-02	Total/NA	Solid	3546	
240-196258-27	MDCRRF-PR-01	Total/NA	Solid	3546	
240-196258-28	MDCRRF-PR-02	Total/NA	Solid	3546	
MB 240-596381/1-A	Method Blank	Total/NA	Solid	3546	
LCS 240-596381/2-A	Lab Control Sample	Total/NA	Solid	3546	

Analysis Batch: 596497

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-196258-1	MDCRRF-PS-01	Total/NA	Solid	8082A	596381
240-196258-2	MDCRRF-PS-02	Total/NA	Solid	8082A	596381
240-196258-3	MDCRRF-PS-03	Total/NA	Solid	8082A	596381
240-196258-4	MDCRRF-PS-04	Total/NA	Solid	8082A	596381
240-196258-5	MDCRRF-PS-05	Total/NA	Solid	8082A	596381
240-196258-6	MDCRRF-PS-06	Total/NA	Solid	8082A	596381
240-196258-9	MDCRRF-PS-09	Total/NA	Solid	8082A	596381
240-196258-10	MDCRRF-PS-10	Total/NA	Solid	8082A	596381
240-196258-11	MDCRRF-PS-11	Total/NA	Solid	8082A	596381
240-196258-12	MDCRRF-PS-12	Total/NA	Solid	8082A	596381
240-196258-13	MDCRRF-PS-13	Total/NA	Solid	8082A	596381
240-196258-19	MDCRRF-WC-01	Total/NA	Solid	8082A	596381
240-196258-27	MDCRRF-PR-01	Total/NA	Solid	8082A	596381
MB 240-596381/1-A	Method Blank	Total/NA	Solid	8082A	596381
LCS 240-596381/2-A	Lab Control Sample	Total/NA	Solid	8082A	596381

Analysis Batch: 596549

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-196258-7	MDCRRF-PS-07	Total/NA	Solid	8082A	596381
240-196258-8	MDCRRF-PS-08	Total/NA	Solid	8082A	596381

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QC Association Summary

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

GC Semi VOA (Continued)

Analysis Batch: 596549 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-196258-20	MDCRRF-WC-02	Total/NA	Solid	8082A	596381
240-196258-28	MDCRRF-PR-02	Total/NA	Solid	8082A	596381

Analysis Batch: 596664

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-196258-21	MDCRRF-CS-01	Total/NA	Solid	8082A	596687
240-196258-22	MDCRRF-CS-02	Total/NA	Solid	8082A	596687
240-196258-23	MDCRRF-CS-03	Total/NA	Solid	8082A	596687
240-196258-24	MDCRRF-CS-04	Total/NA	Solid	8082A	596687
240-196258-25	MDCRRF-CS-05	Total/NA	Solid	8082A	596687
MB 240-596687/1-A	Method Blank	Total/NA	Solid	8082A	596687
LCS 240-596687/2-A	Lab Control Sample	Total/NA	Solid	8082A	596687

Prep Batch: 596687

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-196258-21	MDCRRF-CS-01	Total/NA	Solid	3546	596360
240-196258-22	MDCRRF-CS-02	Total/NA	Solid	3546	596360
240-196258-23	MDCRRF-CS-03	Total/NA	Solid	3546	596360
240-196258-24	MDCRRF-CS-04	Total/NA	Solid	3546	596360
240-196258-25	MDCRRF-CS-05	Total/NA	Solid	3546	596360
240-196258-26	MDCRRF-CS-06	Total/NA	Solid	3546	596360
MB 240-596687/1-A	Method Blank	Total/NA	Solid	3546	
LCS 240-596687/2-A	Lab Control Sample	Total/NA	Solid	3546	

Analysis Batch: 596853

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-196258-26	MDCRRF-CS-06	Total/NA	Solid	8082A	596687

Prep Batch: 596980

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-196258-15	MDCRRF-TO-01	Total/NA	Waste	3580A	
240-196258-16	MDCRRF-TO-02	Total/NA	Waste	3580A	
240-196258-17	MDCRRF-TO-03	Total/NA	Waste	3580A	
240-196258-18	MDCRRF-TO-04	Total/NA	Waste	3580A	
240-196258-29	MDCRRF-TAR-01	Total/NA	Waste	3580A	
240-196258-30	MDCRRF-TO-05	Total/NA	Waste	3580A	
MB 240-596980/1-A	Method Blank	Total/NA	Waste	3580A	
LCS 240-596980/2-A	Lab Control Sample	Total/NA	Waste	3580A	

Analysis Batch: 596991

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-196258-15	MDCRRF-TO-01	Total/NA	Waste	8082A	596980
240-196258-16	MDCRRF-TO-02	Total/NA	Waste	8082A	596980
MB 240-596980/1-A	Method Blank	Total/NA	Waste	8082A	596980
LCS 240-596980/2-A	Lab Control Sample	Total/NA	Waste	8082A	596980

Analysis Batch: 597151

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-196258-17	MDCRRF-TO-03	Total/NA	Waste	8082A	596980
240-196258-18	MDCRRF-TO-04	Total/NA	Waste	8082A	596980
240-196258-29	MDCRRF-TAR-01	Total/NA	Waste	8082A	596980

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QC Association Summary

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

GC Semi VOA (Continued)

Analysis Batch: 597151 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-196258-30	MDCRRF-TO-05	Total/NA	Waste	8082A	596980

Metals

Processed Batch: 596360

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-196258-21	MDCRRF-CS-01	Total/NA	Solid	Part Size Red	
240-196258-22	MDCRRF-CS-02	Total/NA	Solid	Part Size Red	
240-196258-23	MDCRRF-CS-03	Total/NA	Solid	Part Size Red	
240-196258-24	MDCRRF-CS-04	Total/NA	Solid	Part Size Red	
240-196258-25	MDCRRF-CS-05	Total/NA	Solid	Part Size Red	
240-196258-26	MDCRRF-CS-06	Total/NA	Solid	Part Size Red	
240-196258-21 MS	MDCRRF-CS-01	Total/NA	Solid	Part Size Red	
240-196258-21 MSD	MDCRRF-CS-01	Total/NA	Solid	Part Size Red	

Processed Batch: 596361

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-196258-14	MDCRRF-TW-01	TCLP	Solid	Part Size Red	

Prep Batch: 596424

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-196258-1	MDCRRF-PS-01	Total/NA	Solid	3050B	
240-196258-2	MDCRRF-PS-02	Total/NA	Solid	3050B	
240-196258-3	MDCRRF-PS-03	Total/NA	Solid	3050B	
240-196258-4	MDCRRF-PS-04	Total/NA	Solid	3050B	
240-196258-5	MDCRRF-PS-05	Total/NA	Solid	3050B	
240-196258-6	MDCRRF-PS-06	Total/NA	Solid	3050B	
240-196258-7	MDCRRF-PS-07	Total/NA	Solid	3050B	
240-196258-8	MDCRRF-PS-08	Total/NA	Solid	3050B	
240-196258-9	MDCRRF-PS-09	Total/NA	Solid	3050B	
240-196258-10	MDCRRF-PS-10	Total/NA	Solid	3050B	
240-196258-11	MDCRRF-PS-11	Total/NA	Solid	3050B	
240-196258-13	MDCRRF-PS-13	Total/NA	Solid	3050B	
MB 240-596424/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 240-596424/2-A	Lab Control Sample	Total/NA	Solid	3050B	

Prep Batch: 596437

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-196258-27	MDCRRF-PR-01	Total/NA	Solid	3050B	
240-196258-28	MDCRRF-PR-02	Total/NA	Solid	3050B	
MB 240-596437/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 240-596437/2-A	Lab Control Sample	Total/NA	Solid	3050B	

Prep Batch: 596440

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-196258-27	MDCRRF-PR-01	Total/NA	Solid	7471B	
240-196258-28	MDCRRF-PR-02	Total/NA	Solid	7471B	
MB 240-596440/1-A	Method Blank	Total/NA	Solid	7471B	
LCS 240-596440/2-A	Lab Control Sample	Total/NA	Solid	7471B	

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QC Association Summary

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Metals

Prep Batch: 596582

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-196258-21	MDCRRF-CS-01	Total/NA	Solid	3050B	596360
240-196258-22	MDCRRF-CS-02	Total/NA	Solid	3050B	596360
240-196258-23	MDCRRF-CS-03	Total/NA	Solid	3050B	596360
240-196258-24	MDCRRF-CS-04	Total/NA	Solid	3050B	596360
240-196258-25	MDCRRF-CS-05	Total/NA	Solid	3050B	596360
240-196258-26	MDCRRF-CS-06	Total/NA	Solid	3050B	596360
MB 240-596582/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 240-596582/2-A	Lab Control Sample	Total/NA	Solid	3050B	
240-196258-21 MS	MDCRRF-CS-01	Total/NA	Solid	3050B	596360
240-196258-21 MSD	MDCRRF-CS-01	Total/NA	Solid	3050B	596360

Prep Batch: 596586

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-196258-21	MDCRRF-CS-01	Total/NA	Solid	7471B	596360
240-196258-22	MDCRRF-CS-02	Total/NA	Solid	7471B	596360
240-196258-23	MDCRRF-CS-03	Total/NA	Solid	7471B	596360
240-196258-24	MDCRRF-CS-04	Total/NA	Solid	7471B	596360
240-196258-25	MDCRRF-CS-05	Total/NA	Solid	7471B	596360
240-196258-26	MDCRRF-CS-06	Total/NA	Solid	7471B	596360
MB 240-596586/1-A	Method Blank	Total/NA	Solid	7471B	
LCS 240-596586/2-A	Lab Control Sample	Total/NA	Solid	7471B	
240-196258-21 MS	MDCRRF-CS-01	Total/NA	Solid	7471B	596360
240-196258-21 MSD	MDCRRF-CS-01	Total/NA	Solid	7471B	596360

Analysis Batch: 596591

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-196258-27	MDCRRF-PR-01	Total/NA	Solid	7471B	596440
240-196258-28	MDCRRF-PR-02	Total/NA	Solid	7471B	596440
MB 240-596440/1-A	Method Blank	Total/NA	Solid	7471B	596440
LCS 240-596440/2-A	Lab Control Sample	Total/NA	Solid	7471B	596440

Leach Batch: 596626

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-196258-14	MDCRRF-TW-01	TCLP	Solid	1311	596361
LB 240-596626/1-B	Method Blank	TCLP	Solid	1311	
LB 240-596626/1-C	Method Blank	TCLP	Solid	1311	

Analysis Batch: 596659

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-196258-27	MDCRRF-PR-01	Total/NA	Solid	6010D	596437
240-196258-27	MDCRRF-PR-01	Total/NA	Solid	6010D	596437
240-196258-28	MDCRRF-PR-02	Total/NA	Solid	6010D	596437
MB 240-596437/1-A	Method Blank	Total/NA	Solid	6010D	596437
LCS 240-596437/2-A	Lab Control Sample	Total/NA	Solid	6010D	596437

Prep Batch: 596678

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-196258-14	MDCRRF-TW-01	TCLP	Solid	3010A	596626
LB 240-596626/1-B	Method Blank	TCLP	Solid	3010A	596626
MB 240-596678/2-A	Method Blank	Total/NA	Solid	3010A	
LCS 240-596678/3-A	Lab Control Sample	Total/NA	Solid	3010A	

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QC Association Summary

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Metals

Prep Batch: 596682

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-196258-14	MDCRRF-TW-01	TCLP	Solid	7470A	596626
LB 240-596626/1-C	Method Blank	TCLP	Solid	7470A	596626
MB 240-596682/2-A	Method Blank	Total/NA	Solid	7470A	
LCS 240-596682/3-A	Lab Control Sample	Total/NA	Solid	7470A	

Analysis Batch: 596797

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-196258-1	MDCRRF-PS-01	Total/NA	Solid	6010D	596424
240-196258-2	MDCRRF-PS-02	Total/NA	Solid	6010D	596424
240-196258-3	MDCRRF-PS-03	Total/NA	Solid	6010D	596424
240-196258-4	MDCRRF-PS-04	Total/NA	Solid	6010D	596424
240-196258-5	MDCRRF-PS-05	Total/NA	Solid	6010D	596424
240-196258-6	MDCRRF-PS-06	Total/NA	Solid	6010D	596424
240-196258-7	MDCRRF-PS-07	Total/NA	Solid	6010D	596424
240-196258-8	MDCRRF-PS-08	Total/NA	Solid	6010D	596424
240-196258-9	MDCRRF-PS-09	Total/NA	Solid	6010D	596424
240-196258-10	MDCRRF-PS-10	Total/NA	Solid	6010D	596424
240-196258-11	MDCRRF-PS-11	Total/NA	Solid	6010D	596424
240-196258-13	MDCRRF-PS-13	Total/NA	Solid	6010D	596424
240-196258-21	MDCRRF-CS-01	Total/NA	Solid	6010D	596582
240-196258-22	MDCRRF-CS-02	Total/NA	Solid	6010D	596582
240-196258-23	MDCRRF-CS-03	Total/NA	Solid	6010D	596582
240-196258-24	MDCRRF-CS-04	Total/NA	Solid	6010D	596582
240-196258-25	MDCRRF-CS-05	Total/NA	Solid	6010D	596582
240-196258-26	MDCRRF-CS-06	Total/NA	Solid	6010D	596582
MB 240-596424/1-A	Method Blank	Total/NA	Solid	6010D	596424
LCS 240-596424/2-A	Lab Control Sample	Total/NA	Solid	6010D	596424
LCS 240-596582/2-A	Lab Control Sample	Total/NA	Solid	6010D	596582
240-196258-21 MS	MDCRRF-CS-01	Total/NA	Solid	6010D	596582
240-196258-21 MSD	MDCRRF-CS-01	Total/NA	Solid	6010D	596582

Analysis Batch: 596868

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-196258-21	MDCRRF-CS-01	Total/NA	Solid	7471B	596586
240-196258-22	MDCRRF-CS-02	Total/NA	Solid	7471B	596586
240-196258-23	MDCRRF-CS-03	Total/NA	Solid	7471B	596586
240-196258-24	MDCRRF-CS-04	Total/NA	Solid	7471B	596586
240-196258-25	MDCRRF-CS-05	Total/NA	Solid	7471B	596586
240-196258-26	MDCRRF-CS-06	Total/NA	Solid	7471B	596586
MB 240-596586/1-A	Method Blank	Total/NA	Solid	7471B	596586
LCS 240-596586/2-A	Lab Control Sample	Total/NA	Solid	7471B	596586
240-196258-21 MS	MDCRRF-CS-01	Total/NA	Solid	7471B	596586
240-196258-21 MSD	MDCRRF-CS-01	Total/NA	Solid	7471B	596586

Analysis Batch: 596888

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-196258-14	MDCRRF-TW-01	TCLP	Solid	6010D	596678
LB 240-596626/1-B	Method Blank	TCLP	Solid	6010D	596678
MB 240-596582/1-A	Method Blank	Total/NA	Solid	6010D	596582
MB 240-596678/2-A	Method Blank	Total/NA	Solid	6010D	596678
LCS 240-596678/3-A	Lab Control Sample	Total/NA	Solid	6010D	596678

Eurofins Cleveland

QC Association Summary

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Metals

Analysis Batch: 596919

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-196258-14	MDCRRF-TW-01	TCLP	Solid	7470A	596682
LB 240-596626/1-C	Method Blank	TCLP	Solid	7470A	596682
MB 240-596682/2-A	Method Blank	Total/NA	Solid	7470A	596682
LCS 240-596682/3-A	Lab Control Sample	Total/NA	Solid	7470A	596682

General Chemistry

Processed Batch: 596360

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-196258-21	MDCRRF-CS-01	Total/NA	Solid	Part Size Red	596360
240-196258-22	MDCRRF-CS-02	Total/NA	Solid	Part Size Red	
240-196258-23	MDCRRF-CS-03	Total/NA	Solid	Part Size Red	
240-196258-24	MDCRRF-CS-04	Total/NA	Solid	Part Size Red	
240-196258-25	MDCRRF-CS-05	Total/NA	Solid	Part Size Red	
240-196258-26	MDCRRF-CS-06	Total/NA	Solid	Part Size Red	

Analysis Batch: 596551

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-196258-21	MDCRRF-CS-01	Total/NA	Solid	Moisture	596360
240-196258-22	MDCRRF-CS-02	Total/NA	Solid	Moisture	596360
240-196258-23	MDCRRF-CS-03	Total/NA	Solid	Moisture	596360
240-196258-24	MDCRRF-CS-04	Total/NA	Solid	Moisture	596360
240-196258-25	MDCRRF-CS-05	Total/NA	Solid	Moisture	596360
240-196258-26	MDCRRF-CS-06	Total/NA	Solid	Moisture	596360

Lab Chronicle

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Client Sample ID: MDCRRF-PS-01

Lab Sample ID: 240-196258-1

Date Collected: 11/29/23 08:35

Matrix: Solid

Date Received: 12/01/23 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3546			596381	BV1	EET CLE	12/04/23 08:35
Total/NA	Analysis	8082A		10	596497	MBB	EET CLE	12/04/23 21:41
Total/NA	Prep	3050B			596424	DEE	EET CLE	12/04/23 13:00
Total/NA	Analysis	6010D		10	596797	RKT	EET CLE	12/06/23 19:19

Client Sample ID: MDCRRF-PS-02

Lab Sample ID: 240-196258-2

Date Collected: 11/29/23 08:40

Matrix: Solid

Date Received: 12/01/23 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3546			596381	BV1	EET CLE	12/04/23 08:35
Total/NA	Analysis	8082A		1	596497	MBB	EET CLE	12/04/23 21:56
Total/NA	Prep	3050B			596424	DEE	EET CLE	12/04/23 13:00
Total/NA	Analysis	6010D		10	596797	RKT	EET CLE	12/06/23 19:24

Client Sample ID: MDCRRF-PS-03

Lab Sample ID: 240-196258-3

Date Collected: 11/29/23 08:45

Matrix: Solid

Date Received: 12/01/23 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3546			596381	BV1	EET CLE	12/04/23 08:35
Total/NA	Analysis	8082A		1	596497	MBB	EET CLE	12/04/23 22:10
Total/NA	Prep	3050B			596424	DEE	EET CLE	12/04/23 13:00
Total/NA	Analysis	6010D		10	596797	RKT	EET CLE	12/06/23 19:28

Client Sample ID: MDCRRF-PS-04

Lab Sample ID: 240-196258-4

Date Collected: 11/29/23 08:50

Matrix: Solid

Date Received: 12/01/23 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3546			596381	BV1	EET CLE	12/04/23 08:35
Total/NA	Analysis	8082A		1	596497	MBB	EET CLE	12/04/23 22:25
Total/NA	Prep	3050B			596424	DEE	EET CLE	12/04/23 13:00
Total/NA	Analysis	6010D		10	596797	RKT	EET CLE	12/06/23 19:41

Client Sample ID: MDCRRF-PS-05

Lab Sample ID: 240-196258-5

Date Collected: 11/29/23 00:00

Matrix: Solid

Date Received: 12/01/23 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3546			596381	BV1	EET CLE	12/04/23 08:35
Total/NA	Analysis	8082A		1	596497	MBB	EET CLE	12/04/23 22:39
Total/NA	Prep	3050B			596424	DEE	EET CLE	12/04/23 13:00
Total/NA	Analysis	6010D		10	596797	RKT	EET CLE	12/06/23 19:45

Eurofins Cleveland

Lab Chronicle

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Client Sample ID: MDCRRF-PS-06

Lab Sample ID: 240-196258-6

Date Collected: 11/29/23 09:50

Matrix: Solid

Date Received: 12/01/23 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3546			596381	BV1	EET CLE	12/04/23 08:35
Total/NA	Analysis	8082A		1	596497	MBB	EET CLE	12/04/23 22:53
Total/NA	Prep	3050B			596424	DEE	EET CLE	12/04/23 13:00
Total/NA	Analysis	6010D		10	596797	RKT	EET CLE	12/06/23 19:50

Client Sample ID: MDCRRF-PS-07

Lab Sample ID: 240-196258-7

Date Collected: 11/29/23 10:20

Matrix: Solid

Date Received: 12/01/23 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3546			596381	BV1	EET CLE	12/04/23 08:35
Total/NA	Analysis	8082A		10	596549	MBB	EET CLE	12/05/23 13:37
Total/NA	Prep	3050B			596424	DEE	EET CLE	12/04/23 13:00
Total/NA	Analysis	6010D		10	596797	RKT	EET CLE	12/06/23 19:54

Client Sample ID: MDCRRF-PS-08

Lab Sample ID: 240-196258-8

Date Collected: 11/29/23 13:15

Matrix: Solid

Date Received: 12/01/23 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3546			596381	BV1	EET CLE	12/04/23 08:35
Total/NA	Analysis	8082A		1	596549	MBB	EET CLE	12/05/23 13:51
Total/NA	Prep	3050B			596424	DEE	EET CLE	12/04/23 13:00
Total/NA	Analysis	6010D		10	596797	RKT	EET CLE	12/06/23 19:59

Client Sample ID: MDCRRF-PS-09

Lab Sample ID: 240-196258-9

Date Collected: 11/29/23 13:20

Matrix: Solid

Date Received: 12/01/23 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3546			596381	BV1	EET CLE	12/04/23 08:35
Total/NA	Analysis	8082A		1	596497	MBB	EET CLE	12/04/23 23:37
Total/NA	Prep	3050B			596424	DEE	EET CLE	12/04/23 13:00
Total/NA	Analysis	6010D		10	596797	RKT	EET CLE	12/06/23 20:03

Client Sample ID: MDCRRF-PS-10

Lab Sample ID: 240-196258-10

Date Collected: 11/29/23 13:40

Matrix: Solid

Date Received: 12/01/23 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3546			596381	BV1	EET CLE	12/04/23 08:35
Total/NA	Analysis	8082A		1	596497	MBB	EET CLE	12/04/23 23:51
Total/NA	Prep	3050B			596424	DEE	EET CLE	12/04/23 13:00
Total/NA	Analysis	6010D		10	596797	RKT	EET CLE	12/06/23 20:07

Eurofins Cleveland

Lab Chronicle

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Client Sample ID: MDCRRF-PS-11

Lab Sample ID: 240-196258-11

Date Collected: 11/29/23 13:50

Matrix: Solid

Date Received: 12/01/23 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3546			596381	BV1	EET CLE	12/04/23 08:35
Total/NA	Analysis	8082A		1	596497	MBB	EET CLE	12/05/23 00:06
Total/NA	Prep	3050B			596424	DEE	EET CLE	12/04/23 13:00
Total/NA	Analysis	6010D		10	596797	RKT	EET CLE	12/06/23 20:12

Client Sample ID: MDCRRF-PS-12

Lab Sample ID: 240-196258-12

Date Collected: 11/29/23 14:00

Matrix: Solid

Date Received: 12/01/23 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3546			596381	BV1	EET CLE	12/04/23 08:35
Total/NA	Analysis	8082A		1	596497	MBB	EET CLE	12/05/23 00:20

Client Sample ID: MDCRRF-PS-13

Lab Sample ID: 240-196258-13

Date Collected: 11/29/23 09:20

Matrix: Solid

Date Received: 12/01/23 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3546			596381	BV1	EET CLE	12/04/23 08:35
Total/NA	Analysis	8082A		1	596497	MBB	EET CLE	12/05/23 00:35
Total/NA	Prep	3050B			596424	DEE	EET CLE	12/04/23 13:00
Total/NA	Analysis	6010D		10	596797	RKT	EET CLE	12/06/23 20:37

Client Sample ID: MDCRRF-TW-01

Lab Sample ID: 240-196258-14

Date Collected: 11/29/23 09:10

Matrix: Solid

Date Received: 12/01/23 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Processed	Part Size Red			596361	POP	EET CLE	12/04/23 07:16
TCLP	Leach	1311			596626	DRJ	EET CLE	12/05/23 16:50 - 12/06/23 09:05 ¹
TCLP	Prep	3010A			596678	BN	EET CLE	12/06/23 14:00
TCLP	Analysis	6010D		1	596888	RKT	EET CLE	12/07/23 14:27
TCLP	Processed	Part Size Red			596361	POP	EET CLE	12/04/23 07:16
TCLP	Leach	1311			596626	DRJ	EET CLE	12/05/23 16:50 - 12/06/23 09:05 ¹
TCLP	Prep	7470A			596682	BN	EET CLE	12/06/23 14:00
TCLP	Analysis	7470A		1	596919	AJC	EET CLE	12/07/23 15:33

Client Sample ID: MDCRRF-TO-01

Lab Sample ID: 240-196258-15

Date Collected: 11/29/23 10:45

Matrix: Waste

Date Received: 12/01/23 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3580A			596980	BV1	EET CLE	12/08/23 08:46
Total/NA	Analysis	8082A		1	596991	MBB	EET CLE	12/08/23 16:56

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Lab Chronicle

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Client Sample ID: MDCRRF-TO-02

Lab Sample ID: 240-196258-16

Date Collected: 11/29/23 11:00

Matrix: Waste

Date Received: 12/01/23 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3580A			596980	BV1	EET CLE	12/08/23 08:46
Total/NA	Analysis	8082A		1	596991	MBB	EET CLE	12/08/23 17:13

Client Sample ID: MDCRRF-TO-03

Lab Sample ID: 240-196258-17

Date Collected: 11/29/23 13:00

Matrix: Waste

Date Received: 12/01/23 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3580A			596980	BV1	EET CLE	12/08/23 08:46
Total/NA	Analysis	8082A		1	597151	MBB	EET CLE	12/11/23 12:54

Client Sample ID: MDCRRF-TO-04

Lab Sample ID: 240-196258-18

Date Collected: 11/29/23 13:20

Matrix: Waste

Date Received: 12/01/23 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3580A			596980	BV1	EET CLE	12/08/23 08:46
Total/NA	Analysis	8082A		1	597151	MBB	EET CLE	12/11/23 13:11

Client Sample ID: MDCRRF-WC-01

Lab Sample ID: 240-196258-19

Date Collected: 11/29/23 11:00

Matrix: Solid

Date Received: 12/01/23 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3546			596381	BV1	EET CLE	12/04/23 08:35
Total/NA	Analysis	8082A		1	596497	MBB	EET CLE	12/05/23 01:33

Client Sample ID: MDCRRF-WC-02

Lab Sample ID: 240-196258-20

Date Collected: 11/29/23 11:15

Matrix: Solid

Date Received: 12/01/23 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3546			596381	BV1	EET CLE	12/04/23 08:35
Total/NA	Analysis	8082A		10	596549	MBB	EET CLE	12/05/23 14:05

Client Sample ID: MDCRRF-CS-01

Lab Sample ID: 240-196258-21

Date Collected: 11/29/23 13:45

Matrix: Solid

Date Received: 12/01/23 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Processed	Part Size Red			596360	POP	EET CLE	12/04/23 07:15
Total/NA	Analysis	Moisture		1	596551	MS	EET CLE	12/05/23 09:27

Eurofins Cleveland

Lab Chronicle

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Client Sample ID: MDCRRF-CS-01

Lab Sample ID: 240-196258-21

Date Collected: 11/29/23 13:45

Matrix: Solid

Date Received: 12/01/23 10:20

Percent Solids: 93.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Processed	Part Size Red			596360	POP	EET CLE	12/04/23 07:15
Total/NA	Prep	3546			596687	BV1	EET CLE	12/06/23 09:13
Total/NA	Analysis	8082A		1	596664	BPM	EET CLE	12/06/23 15:08
Total/NA	Processed	Part Size Red			596360	POP	EET CLE	12/04/23 07:15
Total/NA	Prep	3050B			596582	DEE	EET CLE	12/05/23 14:00
Total/NA	Analysis	6010D		1	596797	RKT	EET CLE	12/06/23 16:51
Total/NA	Processed	Part Size Red			596360	POP	EET CLE	12/04/23 07:15
Total/NA	Prep	7471B			596586	DEE	EET CLE	12/05/23 14:00
Total/NA	Analysis	7471B		1	596868	AJC	EET CLE	12/07/23 08:57

Client Sample ID: MDCRRF-CS-02

Lab Sample ID: 240-196258-22

Date Collected: 11/29/23 14:00

Matrix: Solid

Date Received: 12/01/23 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Processed	Part Size Red			596360	POP	EET CLE	12/04/23 07:15
Total/NA	Analysis	Moisture		1	596551	MS	EET CLE	12/05/23 09:27

Client Sample ID: MDCRRF-CS-02

Lab Sample ID: 240-196258-22

Date Collected: 11/29/23 14:00

Matrix: Solid

Date Received: 12/01/23 10:20

Percent Solids: 94.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Processed	Part Size Red			596360	POP	EET CLE	12/04/23 07:15
Total/NA	Prep	3546			596687	BV1	EET CLE	12/06/23 09:13
Total/NA	Analysis	8082A		1	596664	BPM	EET CLE	12/06/23 15:24
Total/NA	Processed	Part Size Red			596360	POP	EET CLE	12/04/23 07:15
Total/NA	Prep	3050B			596582	DEE	EET CLE	12/05/23 14:00
Total/NA	Analysis	6010D		1	596797	RKT	EET CLE	12/06/23 17:21
Total/NA	Processed	Part Size Red			596360	POP	EET CLE	12/04/23 07:15
Total/NA	Prep	7471B			596586	DEE	EET CLE	12/05/23 14:00
Total/NA	Analysis	7471B		1	596868	AJC	EET CLE	12/07/23 09:04

Client Sample ID: MDCRRF-CS-03

Lab Sample ID: 240-196258-23

Date Collected: 11/29/23 14:15

Matrix: Solid

Date Received: 12/01/23 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Processed	Part Size Red			596360	POP	EET CLE	12/04/23 07:15
Total/NA	Analysis	Moisture		1	596551	MS	EET CLE	12/05/23 09:27

Lab Chronicle

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Client Sample ID: MDCRRF-CS-03

Lab Sample ID: 240-196258-23

Date Collected: 11/29/23 14:15

Matrix: Solid

Date Received: 12/01/23 10:20

Percent Solids: 95.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Processed	Part Size Red			596360	POP	EET CLE	12/04/23 07:15
Total/NA	Prep	3546			596687	BV1	EET CLE	12/06/23 09:13
Total/NA	Analysis	8082A		1	596664	BPM	EET CLE	12/06/23 15:39
Total/NA	Processed	Part Size Red			596360	POP	EET CLE	12/04/23 07:15
Total/NA	Prep	3050B			596582	DEE	EET CLE	12/05/23 14:00
Total/NA	Analysis	6010D		1	596797	RKT	EET CLE	12/06/23 17:25
Total/NA	Processed	Part Size Red			596360	POP	EET CLE	12/04/23 07:15
Total/NA	Prep	7471B			596586	DEE	EET CLE	12/05/23 14:00
Total/NA	Analysis	7471B		1	596868	AJC	EET CLE	12/07/23 09:06

Client Sample ID: MDCRRF-CS-04

Lab Sample ID: 240-196258-24

Date Collected: 11/29/23 14:30

Matrix: Solid

Date Received: 12/01/23 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Processed	Part Size Red			596360	POP	EET CLE	12/04/23 07:15
Total/NA	Analysis	Moisture		1	596551	MS	EET CLE	12/05/23 09:27

Client Sample ID: MDCRRF-CS-04

Lab Sample ID: 240-196258-24

Date Collected: 11/29/23 14:30

Matrix: Solid

Date Received: 12/01/23 10:20

Percent Solids: 96.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Processed	Part Size Red			596360	POP	EET CLE	12/04/23 07:15
Total/NA	Prep	3546			596687	BV1	EET CLE	12/06/23 09:13
Total/NA	Analysis	8082A		1	596664	BPM	EET CLE	12/06/23 15:55
Total/NA	Processed	Part Size Red			596360	POP	EET CLE	12/04/23 07:15
Total/NA	Prep	3050B			596582	DEE	EET CLE	12/05/23 14:00
Total/NA	Analysis	6010D		1	596797	RKT	EET CLE	12/06/23 17:30
Total/NA	Processed	Part Size Red			596360	POP	EET CLE	12/04/23 07:15
Total/NA	Prep	7471B			596586	DEE	EET CLE	12/05/23 14:00
Total/NA	Analysis	7471B		1	596868	AJC	EET CLE	12/07/23 09:08

Client Sample ID: MDCRRF-CS-05

Lab Sample ID: 240-196258-25

Date Collected: 11/29/23 14:40

Matrix: Solid

Date Received: 12/01/23 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Processed	Part Size Red			596360	POP	EET CLE	12/04/23 07:15
Total/NA	Analysis	Moisture		1	596551	MS	EET CLE	12/05/23 09:27

Lab Chronicle

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Client Sample ID: MDCRRF-CS-05

Lab Sample ID: 240-196258-25

Date Collected: 11/29/23 14:40

Matrix: Solid

Date Received: 12/01/23 10:20

Percent Solids: 94.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Processed	Part Size Red			596360	POP	EET CLE	12/04/23 07:15
Total/NA	Prep	3546			596687	BV1	EET CLE	12/06/23 09:13
Total/NA	Analysis	8082A		1	596664	BPM	EET CLE	12/06/23 16:10
Total/NA	Processed	Part Size Red			596360	POP	EET CLE	12/04/23 07:15
Total/NA	Prep	3050B			596582	DEE	EET CLE	12/05/23 14:00
Total/NA	Analysis	6010D		1	596797	RKT	EET CLE	12/06/23 17:34
Total/NA	Processed	Part Size Red			596360	POP	EET CLE	12/04/23 07:15
Total/NA	Prep	7471B			596586	DEE	EET CLE	12/05/23 14:00
Total/NA	Analysis	7471B		1	596868	AJC	EET CLE	12/07/23 09:10

Client Sample ID: MDCRRF-CS-06

Lab Sample ID: 240-196258-26

Date Collected: 11/29/23 14:50

Matrix: Solid

Date Received: 12/01/23 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Processed	Part Size Red			596360	POP	EET CLE	12/04/23 07:15
Total/NA	Analysis	Moisture		1	596551	MS	EET CLE	12/05/23 09:27

Client Sample ID: MDCRRF-CS-06

Lab Sample ID: 240-196258-26

Date Collected: 11/29/23 14:50

Matrix: Solid

Date Received: 12/01/23 10:20

Percent Solids: 98.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Processed	Part Size Red			596360	POP	EET CLE	12/04/23 07:15
Total/NA	Prep	3546			596687	BV1	EET CLE	12/06/23 09:13
Total/NA	Analysis	8082A		5	596853	EPF	EET CLE	12/07/23 12:33
Total/NA	Processed	Part Size Red			596360	POP	EET CLE	12/04/23 07:15
Total/NA	Prep	3050B			596582	DEE	EET CLE	12/05/23 14:00
Total/NA	Analysis	6010D		1	596797	RKT	EET CLE	12/06/23 17:38
Total/NA	Processed	Part Size Red			596360	POP	EET CLE	12/04/23 07:15
Total/NA	Prep	7471B			596586	DEE	EET CLE	12/05/23 14:00
Total/NA	Analysis	7471B		1	596868	AJC	EET CLE	12/07/23 09:12

Client Sample ID: MDCRRF-PR-01

Lab Sample ID: 240-196258-27

Date Collected: 11/29/23 10:00

Matrix: Solid

Date Received: 12/01/23 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3546			596381	BV1	EET CLE	12/04/23 08:35
Total/NA	Analysis	8082A		1	596497	MBB	EET CLE	12/05/23 02:02
Total/NA	Prep	3050B			596437	DEE	EET CLE	12/04/23 13:00
Total/NA	Analysis	6010D		1	596659	RKT	EET CLE	12/05/23 11:28
Total/NA	Prep	3050B			596437	DEE	EET CLE	12/04/23 13:00
Total/NA	Analysis	6010D		2	596659	RKT	EET CLE	12/05/23 11:45
Total/NA	Prep	7471B			596440	DEE	EET CLE	12/04/23 13:00
Total/NA	Analysis	7471B		1	596591	AJC	EET CLE	12/05/23 09:45

Eurofins Cleveland

Lab Chronicle

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Client Sample ID: MDCRRF-PR-02

Lab Sample ID: 240-196258-28

Date Collected: 11/29/23 10:10

Matrix: Solid

Date Received: 12/01/23 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3546			596381	BV1	EET CLE	12/04/23 08:35
Total/NA	Analysis	8082A		1	596549	MBB	EET CLE	12/05/23 14:20
Total/NA	Prep	3050B			596437	DEE	EET CLE	12/04/23 13:00
Total/NA	Analysis	6010D		1	596659	RKT	EET CLE	12/05/23 11:33
Total/NA	Prep	7471B			596440	DEE	EET CLE	12/04/23 13:00
Total/NA	Analysis	7471B		1	596591	AJC	EET CLE	12/05/23 09:47

Client Sample ID: MDCRRF-TAR-01

Lab Sample ID: 240-196258-29

Date Collected: 11/30/23 07:45

Matrix: Waste

Date Received: 12/01/23 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3580A			596980	BV1	EET CLE	12/08/23 08:46
Total/NA	Analysis	8082A		10	597151	MBB	EET CLE	12/11/23 13:28

Client Sample ID: MDCRRF-TO-05

Lab Sample ID: 240-196258-30

Date Collected: 11/30/23 09:29

Matrix: Waste

Date Received: 12/01/23 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3580A			596980	BV1	EET CLE	12/08/23 08:46
Total/NA	Analysis	8082A		1	597151	MBB	EET CLE	12/11/23 13:46

¹ This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Laboratory References:

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Accreditation/Certification Summary

Client: WSP USA Inc
Project/Site: Covanta Energy - MDCRRF

Job ID: 240-196258-1

Laboratory: Eurofins Cleveland

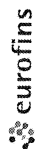
All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-27-24
Georgia	State	4062	02-27-24
Illinois	NELAP	200004	07-31-24
Iowa	State	421	06-01-25
Kentucky (UST)	State	112225	02-28-24
Kentucky (WW)	State	KY98016	12-31-23
Michigan	State	9135	02-27-24
Minnesota	NELAP	039-999-348	12-31-23
Minnesota (Petrofund)	State	3506	08-01-23 *
New Jersey	NELAP	OH001	07-01-24
New York	NELAP	10975	04-02-24
Ohio	State	8303	02-27-24
Ohio VAP	State	ORELAP 4062	02-27-24
Oregon	NELAP	4062	02-27-24
Pennsylvania	NELAP	68-00340	08-31-24
Texas	NELAP	T104704517-22-19	08-31-24
Virginia	NELAP	460175	09-14-24
West Virginia DEP	State	210	12-31-23

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Cleveland

Chain of Custody Record



Environment Testing

Client Information

Client Contact: Andy Lewis	Sampler: Brooks, Kris M	Lab PM: Brooks, Kris M	Carrier Tracking No(s):	COC No: 240-114566-40645.6
Company: WSP USA Inc	Phone: 517 285 4704	E-Mail: Kris.Brooks@et.eurofins.com	State of Origin:	Page: 1 of 3
Address: 46850 Magellan Drive Suite 190	PWSID:	Job #:		
City: Novi	Due Date Requested:	Analysis Requested		
State, Zip: MI, 48377	TAT Requested (days): STANDARD	Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (specify)		
Phone: 517-285-4704(Tel)	Compliance Project: ☐ Yes ☐ No	Other:		
Email: andy.lewis@wsp.com	PO #: 202310979			
Project Name: Covanta Energy	WO #: 202310979			
Site: MDRRF	Eurofins Project #: 24032267			
	SSOW#:			

Sample Identification

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=wastelol, BT=tissue, A=air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Print - 6010D/741B Metals, 8082A PCBs, Moisture	Solids - 6010D/741B Metals, 8082A PCBs, Moisture	Solids - 8082A PCBs, Moisture	Oil (Waste) - 8082A - PCBs	Masonry - 6010D/741B Metals, 8082A PCBs, Moisture	Total Number of containers	Special Instructions/Note:
MDRRF-PS-01	11/29/23	0835	G	S	X	X	X	X	X	X	X	1	
-PS-02		0840			X	X	X	X	X	X	X	1	
-PS-03		0845			X	X	X	X	X	X	X	1	
-PS-04		0850			X	X	X	X	X	X	X	1	
-PS-05		0950			X	X	X	X	X	X	X	1	
-PS-06		1020			X	X	X	X	X	X	X	1	
-PS-07		1315			X	X	X	X	X	X	X	1	
-PS-08		1320			X	X	X	X	X	X	X	1	
-PS-09		1340			X	X	X	X	X	X	X	1	
-PS-10		1350			X	X	X	X	X	X	X	1	
-PS-11					X	X	X	X	X	X	X	1	

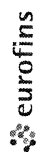
Possible Hazard Identification

☐ Non-Hazard	☐ Flammable	☐ Skin Irritant	☐ Poison B	☐ Unknown	☐ Radiological
Deliverable Requested: I, II, III, IV, Other (specify)					

Empty Kit Relinquished by:

Relinquished by:	Date/Time:	Company:	Time:	Method of Shipment:
Relinquished by:	Date/Time:	Company:	Time:	Return To Client ☒ Disposal By Lab ☐ Archive For ☐ Months
Relinquished by:	Date/Time:	Company:	Time:	Special Instructions/QC Requirements:
Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:		

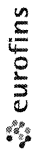
Chain of Custody Record



Environment Testing

Client Information		Sampler:		Lab PM:		Carrier Tracking No(s):		COC No:						
Client Contact: Andy Lewis		Phone: 517 285 4704		Brooks, Kris M				240-114566-40645.6						
Company: WSP USA Inc		E-Mail: Kris.Brooks@et.eurofins.com		E-Mail:		State of Origin:		Page: 2 of 3						
Address: 46850 Magellan Drive Suite 190		Due Date Requested:		Analysis Requested				Job #:						
City: Novi		TAT Requested (days): STD												
State, Zip: MI, 48377		Compliance Project: ☐ Yes ☒ No												
Phone: 517-285-4704(Tel)		PO #: 202310979												
Email: andy.lewis@wsp.com		WO #: 202310979												
Project Name: Covanta Energy		Eurofins Project #: 24032267												
Site: MDCRF		SSOW#:												
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=wastewater, BT=tissue, A=air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Paint - 6010D/741B PCBs, Moisture	Solids - 6010D/741B Metals, 8082A PCBs, Moisture	Solids - 8082A PCBs, Moisture	Oil (Waste) - 8082A - PCBs	Masonry - 6010D/741B Metals, 8082A PCBs, Moisture	Masonry - TCM/ORM	Total Number of Containers	Special Instructions/Note:
MDCRF-PS-12	11/24/23	1400	G	S					X				1	
MDCRF-PS-13		0920		S			X						1	
MDCRF-TW-03		0910		S									3	
MDCRF-TO-01		1045		O									1	
-TO-02		1100		O									1	
-TO-03		1300		O									1	
-TO-04		1320		O									1	
MDCRF-WC-01		1100		S			X						1	
-WC-02		1115		S			X						1	
MDCRF-CS-01		1345		S							X		1	
-CS-02		1400		S							X		1	
Possible Hazard Identification ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological														
Deliverable Requested: I, II, III, IV, Other (specify)														
Empty Kit Relinquished by:														
Relinquished by:														
Relinquished by:														
Relinquished by:														
Custody Seals Intact: ☐ Yes ☒ No														
Custody Seal No.:														
Cooler Temperature(s) °C and Other Remarks:														
Received by: Adam Atkinson Date/Time: 12-1-23 1020 Company: EETIVE														
Received by: Date/Time: Company:														
Received by: Date/Time: Company:														
Special Instructions/QC Requirements:														
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months														

Chain of Custody Record



Environment Testing

Client Information		Lab PM:		Carrier Tracking No(s):		COC No:							
Client Contact: Andy Lewis		Brooks, Kris M				240-114566-40645.6							
Company: WSP USA Inc		E-Mail: Kris.Brooks@et.eurofins.com		State of Origin:		Page: 3 of 3							
Address: 46850 Magellan Drive Suite 190		PWSID:		Job #:									
City: Novi		Due Date Requested:		Analysis Requested									
State, Zip: MI, 48377		TAT Requested (days): STD											
Phone: 517-285-4704(Tel)		Compliance Project: ☐ Yes ☐ No											
Email: andy.lewis@wsp.com		PO #: 202310979											
Project Name: Covanta Energy		WO #: 202310979											
Site: MDX BRF		Eurofins Project #: 24032267											
		SSOW#:											
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oli)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Paint - 6010D/7471B Metals, 8082A PCBs	Solids - 6010D/7471B Metals, 8082A PCBs, Moisture	Oil (Waste) - 8082A - PCBs	Masonry - 6010D/7471B Metals, 8082A PCBs, Moisture	Masonry - TENORM	Total Number of Containers	Special Instructions/Note:
MDX BRF - CS-03	11/29/23	1415	G	S									Please crush "CS" samples prior to analysis
-CS-04		1430											
-CS-05		1440											
-CS-06		1450											
MDX BRF - PR-01		1000											
-PR-02		1010											
MDX BRF - TAR-01	11/30/23	0745	G	S									
MDX BRF - TO-05	11/30/23	0929	G	S									
Possible Hazard Identification ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological													
Deliverable Requested: I, II, III, IV, Other (specify)													
Empty Kit Relinquished by:													
Time: Date:													
Relinquished by: Company													
Relinquished by: Company													
Relinquished by: Company													
Custody Seals Intact: ☐ Yes ☐ No													
Custody Seal No.:													
Cooler Temperature(s) °C and Other Remarks:													
Received by: <u>Alana Atkinson</u> Date/Time: <u>12-1-23 10:20</u> Company: <u>EEF/EE</u>													
Received by: Company													
Received by: Company													

Eurofins - Cleveland Sample Receipt Form/Narrative Login # : _____
Barberton Facility

Client WSP Site Name _____ Cooler unpacked by: Alicia Peterson
Cooler Received on 12-1-23 Opened on 12-1-23
FedEx: 1st Grd ☒ Exp UPS FAS Waypoint Client Drop Off Eurofins Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

Eurofins Cooler # EC Foam Box Client Cooler Box Other _____
Packing material used: Bubble Wrap Foam Plastic Bag None Other _____
COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
IR GUN # 21 (CF 40.2 °C) Observed Cooler Temp. 16.7 °C Corrected Cooler Temp 16.9 °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity _____ Yes ☒ No ☒ NA
- Were the seals on the outside of the cooler(s) signed & dated? Yes ☒ No ☒ NA
- Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes ☒ No ☒ NA
- Were tamper/custody seals intact and uncompromised? Yes ☒ No ☒ NA

3. Shippers' packing slip attached to the cooler(s)? ☒ Yes ☒ No
4. Did custody papers accompany the sample(s)? ☒ Yes ☒ No
5. Were the custody papers relinquished & signed in the appropriate place? ☒ Yes ☒ No
6. Was/were the person(s) who collected the samples clearly identified on the COC? ☒ Yes ☒ No
7. Did all bottles arrive in good condition (Unbroken)? ☒ Yes ☒ No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC? ☒ Yes ☒ No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)? ☒ Yes ☒ No
10. Were correct bottle(s) used for the test(s) indicated? ☒ Yes ☒ No
11. Sufficient quantity received to perform indicated analyses? ☒ Yes ☒ No
12. Are these work share samples and all listed on the COC? ☒ Yes ☒ No
If yes, Questions 13-17 have been checked at the originating laboratory.

13. Were all preserved sample(s) at the correct pH upon receipt? ☒ Yes ☒ No ☒ NA pH Strip Lot# HC316719
14. Were VOAs on the COC? ☒ Yes ☒ No ☒ NA
15. Were air bubbles >6 mm in any VOA vials? ☒ Yes ☒ No ☒ NA Larger than this. 
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____ ☒ Yes ☒ No
17. Was a LL Hg or Me Hg trip blank present? ☒ Yes ☒ No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____
Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page Samples processed by: _____
Received 3 8oz jars labeled MDCRRE-TW-01
Did not receive sample MDCRRE-TW-03 as
listed on COC

19. SAMPLE CONDITION
Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION
Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____
VOA Sample Preservation - Date/Time VOAs Frozen: _____



wsp.com

Appendix B

Miami-Dade Resources Recovery Facility Building Materials Sampling and Analyses Plan

Area of Interest	Objective/Approach	Existing Data	Proposed Sampling	Laboratory	Proposed Total Quantity of Samples	Laboratory Analytical Parameters	Laboratory Analytical Methods
Asbestos Containing Materials	Identify locations and quantities of asbestos containing materials to be abated for demolition and removal of all above-slab structures and flooring.	Pre-Demolition Asbestos Survey Report by Partner Engineering and Science, Inc. 848 samples for asbestos from various suspect materials.	Collect bulk samples for analysis to determine if building materials contain asbestos (drywall, joint compound, ceiling tile, cove base, mastic, siding (including interior and exterior building materials and roofing)).	EMSL	300	Asbestos	Polarized Light Microscopy USEPA-600/R-93/116
Asbestos Containing Materials	Confirmation for ACM containing <1%.		Assumed number of samples. Actual will depend on results of standard PLM analyses.	EMSL	30	PLM w/400 point count	USEPA-600/R-93/116, 400 point count with gravimetric reduction
Paint and Epoxy Chips	Representative sampling for preliminary RCRA and TSCA waste profiling and information to support exposure assessments.	RMS by WPS (January 2024) provides analysis results for PCBs and lead in: 2 epoxy samples from slabs 2 fallen paint samples 2 intact paint samples from steel structures 7 intact paint samples from above-slab concrete walls and bumper PCBs ranged from ND to 1.1 mg/kg Lead ranged from 43mg/kg to 1,800 mg/kg; 4 samples exceeded 20X rule for TCLP screening	Collect paint or epoxy chips (to substrate) as follows: One sample to represent each building or area substrate not previously sampled (12 samples estimated) Four RMS (2024) areas to be resampled for TCLP metals analysis where 20X screening criterion was exceeded for lead. Two Discretionary Fallen Paint Composite Samples	Eurofins	18	Total RCRA 8 Metals TCLP Metals (Contingent on Rule of 20X Results for Total Metals) PCBs	6020/7471 1311 Extraction 6020A/7471 8082A w Microwave Extraction
Caulks, Expansion Joints, Glazing, Mastics,	Confirm the presence/absence and concentration of PCBs in non-liquid building materials (not included in the paint and epoxy samples above) for comparison to PCB Bulk Product Waste screening criteria.	RMS by WPS (January 2024) provides analysis results for PCBs in: 1 window caulk between admin and GP 1 exterior door caulk PCBs were not detected in either sample	Collect 1 composite sample of each target material from each building or complex including slab expansion joints, window caulk, window glazing, door caulk, tile mastic, caulk/expansion seams between masonry walls and metal walls and roofing panels, and binders in asbestos laminated galvanized steel panels to be demolished.	Eurofins	24	PCBs	8082A w Microwave Extraction
Hardfill (Walls)	Representative sampling and analysis of concrete, concrete masonry units (CMUs), brick, and non-concrete block for preliminary RCRA and TSCA waste profiling, exposure assessments, and feasibility of recycling (onsite or offsite).	RMS by WPS (January 2024) provides analysis results for PCBs and RCRA 8 Metals in: 1 concrete wall sample inside ash building PCBs were not detected Lead at 150 mg/kg exceeded the 20X rule for TCLP screening	Collect samples with a rotary hammer drill, up to 2 inches deep, and composite by wall material type per building or complex.	Eurofins	20	Total RCRA 8 Metals TCLP Metals (Contingent on Rule of 20X Results for Total Metals) PCBs	6020/7471 1311 Extraction 6020A/7471 8082A w Microwave Extraction
Hardfill (Concrete Slabs, Pads and Pedestals)	Representative sampling and analysis of concrete slabs for preliminary RCRA and TSCA waste profiling, exposure assessments, and feasibility of recycling (onsite or offsite).	RMS by WPS (January 2024) provides analysis results for PCBs And RCRA 8 Metals in: 5 Concrete slabs in RTI Processing, Fuel Storage, GP, Vehicle Maintenance, and Turbine Hall PCBs were not detected in any samples Metals were detected in all samples but no results exceeded the 20X rule for TCLP screening	Collect samples with a rotary hammer drill, up to 2 inches deep, and composite by concrete material type per building, or complex, exterior pads, and tower and equipment pedestals (excluding concrete pads for oil containing electrical equipment that are included below).	Eurofins	20	Total RCRA 8 Metals TCLP Metals (Contingent on Rule of 20X Results for Total Metals) PCBs	6020/7471 1311 Extraction 6020A/7471 8082A w Microwave Extraction
Pads Supporting Oil Containing Electrical Equipment	Representative sampling and analysis of concrete slabs supporting liquid containing electrical transformers or voltage regulators for TSCA waste profiling.	RMS by WPS (January 2024) identified 17 pieces of equipment (transformers) containing oils did not sample any underlying concrete pads. One was labelled non-PCB.	Collect samples with a rotary hammer drill, 0.5 inches deep, as a single sample per pad consisting of 5-6 subsamples to provide one-30 gram sample per transformer pad for analysis.	Eurofins	17	PCBs	8082A w Microwave Extraction
Deenergized High Voltage Electrical Cables, Voltage Regulators, Switches and Reclosers,	To determine the presence/absence of liquid containing or liquid impregnated electrical components to determine if they contain PCBs, if not already labeled as PCB or non-PCBs.	RMS by WPS (January 2024) did not specifically identify electrical equipment and cables for potential to contain PCBs. Such equipment was energized at the time of the survey and excluded from any destructive inspection or sampling.	Representative destructive sampling of deenergized and gapped electrical cables at the gap points, as well as sampling any liquid filled electrical regulating devices other than transformers. Suspect damp or oily insulation paper or fabrics between conductors within metal jacketed cables will be sampled with hand tools. Fluid-filled devices will be sampled at drain ports.	Eurofins	10	PCBs	8082A w Microwave Extraction



Area of Interest	Objective/Approach	Existing Data	Proposed Sampling	Laboratory	Proposed Total Quantity of Samples	Laboratory Analytical Parameters	Laboratory Analytical Methods
Electrical Equipment Oils	To classify electrical equipment oils for recycling or disposal	RMS by WPS (January 2024) identified 17 pieces of equipment (transformers) and was able to sampled 5 deenergized transformers for PCB analysis. One transformer is labeled no-PCB, leaving 11 transformers without current sampling.	Sampling oil from each transformer and other fluid filled electrical equipment that is not labeled no-PCB. Contingency to add 3 other equipment samples to anticipated 11 transformer samples = 15 samples.	Eurofins	15	PCBs	8082A w Microwave Extraction
General Construction Demolition Debris	Representative sampling of above-slab demolition debris to be generated	RMS by WPS (January 2024) did not specifically identify or sample general future construction and demolition (C&D) debris.	Collect up to 18 locally segregated composite samples of general C&D (sheetrock, ceiling tiles, vinyl flooring, wood block tiles, poly block tiles, mic. debris, structural wood, trim wood, wood, plastic, etc.).	Eurofins	18	Total RCRA 8 Metals TCLP Metals (Contingent on Rule of 20X Results for Total Metals)	6020/7471 1311 Extraction 6020A/7471
Fire Damaged Debris	Representative sampling of above-slab demolition debris that has been charred by the 2023 fire.	RMS by WPS (January 2024) did not specifically identify or sample general future construction and demolition (C&D) that has been charred by the 2023 Fire, in anticipation of landfill restrictions on fire debris.	Collect up to 3 representative composite samples of charred organic debris, if still present on the site, for analysis of dioxin compounds.	Eurofins	3	Hexachlorodibenzo-p-dioxins and hexachlorodibenzofurans	8280B
Investigation based areas of concern	Stained porous materials (e/g., concrete stained by oil or chemicals), laboratories with residual chemicals coating sinks and fume hoods,	RMS by WPS (January 2024) did not specifically identify any building materials potentially impacted by oils or chemicals.	Contingency sampling based on visual observations and client knowledge. If slabs or walls appear to be impacted, these areas will be sampled separately from sampling listed above.	Eurofins	6	Total RCRA 8 Metals TCLP Metals (Contingent on Rule of 20X Results for Total Metals)	6020/7471 1311 Extraction 6020A/7472
Standing Water	Representative sampling of standing water in pits, sumps or depressions for preliminary RCRA waste profiling or feasibility of discharge to municipal POTW.	RMS by WPS (January 2024) did not specifically identify or sample standing water.	Collect representative grab or composite samples of standing water for analysis.	Eurofins	3	VOC SVOC PCBs Total RCRA 8 Metals Oil and Grease	8260 8270 8082A 6010/7471 1664
Sludge or Sediments	Representative sampling of sludge or sediments in pits, sumps, subdrain systems, or other depressions within the buildings.	RMS by WPS (January 2024) provides analysis results for RCRA 8 Metals in: 2 sediments samples from 2 trench drains: lead results for both exceeded the 20X Rule for TCLP screening	Collect representative samples of sediment or sludge (if accessible) for analysis.	Eurofins	6	VOC SVOC PCBs Total RCRA 8 Metals TCLP Metals (Contingent on Rule of 20X Results for Total Metals)	8260 8270 8082A 6010/7471 1311 Extraction 6020A/7472

Total Estimated Samples for Analyses 162

Sampling and Analysis Plan Notes:

1. The number of samples listed is approximate. The actual number of samples collected will depend upon facility conditions encountered (i.e., the presence of staining), accessibility.
2. Additional samples may be collected from Areas of Interest identified during the site inspection that are not listed above upon further discussion with the County.
3. Additional laboratory analytical parameters may be recommended in some areas based on results of observations.
4. No samples will be collected by Arcadis from inaccessible areas (confined spaces, etc.).
5. Samples collected for chemical analysis during the project will be submitted to Eurofins Laboratory Network.
6. Total RCRA 8 Metals and TCLP Metals includes the following: arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver.
7. Equipment and oil samples not included.
8. Delineation samples, if needed, are not included.
9. Assumes no listed wastes - Arcadis to review historical records to verify.

Appendix C

Miami-Dade County, FL – Code of Ordinances: Chapter 24

Miami-Dade County, Florida - Code of Ordinances

Chapter 24, Article III, Division 3 – Contaminated Site Clean-Ups

Sec. 24-44. - Clean-up Target Levels (CTLs) and Procedures for Site Rehabilitation Actions (SRAs).

- (1) STATE PROGRAM CONTAMINANT CLEAN-UP TARGET LEVELS (CTLs) AND PROCEDURES.
 - (a) For contaminants subject to Chapter 62-770, F.A.C., the CTLs and SRA procedures set forth in Chapter 62-777 and 62-770, Florida Administrative Code (F.A.C.) shall apply.
 - (b) For sites which have entered into a Brownfields Site Rehabilitation Agreement with the Department or the Florida Department of Environmental Protection pursuant to Chapter 62-785, F.A.C., the CTLs and SRA procedures set forth in Chapter 62-777 and 62-785, F.A.C. shall apply.
 - (c) For contaminants subject to Chapter 62-782, F.A.C., the CTLs and SRA procedures set forth in Chapter 62-777 and 62-782, F.A.C. shall apply.
 - (d) For lands owned by the state university system, the risk-based clean-up criteria as described in 376.3071, 376.3078, and 376.81, Florida Statutes, shall apply.

- (2) CLEAN-UP TARGET LEVELS (CTLs) AND PROCEDURES FOR SITES OR CONTAMINANTS OTHER THAN THOSE IDENTIFIED IN SECTION 24-44(1).
 - (a) Intent. To protect human health, public safety and environmental resources using risk-based corrective action strategies and to establish the point at which a site rehabilitation action is determined to be accomplished.
 - (b) The acceptable level of protection for the establishment of human health based CTLs shall be a lifetime excess cancer risk level of one in one million (1.0E-06) and a hazard quotient of one (1) or less. In addition, the CTLs shall be established to protect aquatic life and to prevent nuisance conditions as applicable.
 - (c) Applicability. The CTLs set forth in this section are not effluent standards and are not for the purpose of disposal or reuse.

The CTLs and SRA procedures set forth in this section shall not apply to those contaminants that are subject to the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 as amended by the Superfund Amendments and Reauthorization Act of 1986, the Resource Conservation and Recovery Act, the federal Hazardous and Solid Waste Amendments of 1984, or the Toxic Substance Control Act of 1976.

In addition, the soil CTLs set forth in Section 24-44(2)(f)(v)2. shall not apply to contaminants in soil that are present as a result of the application of registered pesticides that were applied in accordance with state and federal law and the EPA approved applicable registered labels. In making a determination of the applicability of CTLs pursuant to this provision, the party or parties responsible for SRAs shall provide records substantiating such pesticide applications to the Department upon request. Notwithstanding the foregoing provisions of Section 24-44(2)(b), if groundwater contains contaminants above the groundwater CTLs set forth in Section 24-44(2)(f)(v)1. as a result of the pesticide application, then the CTLs and SRA procedures set forth in Section 24-44(2) shall apply.

- (d) Party or parties responsible for site rehabilitation actions shall be the discharger or, if the discharger is unknown or the contamination was the result of a previously unreported discharge, the property owner or operator who is subject to the provisions of Section 24-44(2).
- (e) Retroactivity. The CTLs and the SRA procedures set forth herein shall not apply to those contaminants for which, on or before the effective date of this ordinance, a no further action plan, a source removal plan, a remedial action plan or a monitoring only plan has been approved in writing by the Director, or the Director's designee, unless the party or parties responsible for SRAs

have failed to comply with the conditions of the plan approval. However, the party or parties responsible for SRAs may elect to complete site rehabilitation as provided in Section 24-44(2).

(f) The Clean-up Target Levels are as follows:

- (i) The groundwater and surface water CTLs are set forth in Section 24-44(2)(f)(v)1. The groundwater CTLs are equivalent to the numerical standards set forth in Section 24-43.3(2)(h) of this chapter. For contaminants not listed in Section 24-43.3(2)(h), the groundwater CTLs are equivalent to the numerical standards set forth in Chapter 62-550, F.A.C., Table 1, Table 2, Table 3, Table 4, Table 5 and Table 6, as same may be amended from time to time.

For contaminants not listed in Section 24-43.3(2)(h) or Chapter 62-550, F.A.C., Table 1, Table 2, Table 3, Table 4, Table 5 and Table 6, as same may be amended from time to time, groundwater CTLs are based upon the protection of human health and the prevention of nuisance conditions as set forth in Section 24-44(2)(b). The groundwater CTLs have been established using the procedures, equations and input parameters set forth in the DERM Technical Report: "Development of Clean-up Target Levels (CTLs) for Chapter 24 of the Code of Miami-Dade County, Florida" (dated September, 2005).

The surface water CTLs are equivalent to the water quality standards set forth in Section 24-42(4) of this chapter.

For contaminants not listed in Section 24-42(4), the surface water CTLs are based upon the protection of human health and aquatic life and the prevention of nuisance conditions as set forth in Section 24-44(2)(b). The surface water CTLs have been established using the procedures, equations and input parameters set forth in the DERM Technical Report: "Development of Clean-up Target Levels (CTLs) for Chapter 24 of the Code of Miami-Dade County, Florida" (dated September, 2005) and, as applicable, the numerical standards set forth in Chapter 62-302, F.A.C, as same may be amended from time to time.

Notwithstanding the foregoing provisions of Section 24-44(2)(f)(i), no groundwater or surface water CTLs shall be more stringent than the practical quantitation limits or naturally occurring background concentrations determined in a natural background concentration study which has been approved by the Director or the Director's designee.

- (ii) The soil CTLs are set forth in Section 24-44(2)(f)(v)2.. The soil CTLs are based upon the protection of human health as set forth in Section 24-44(2)(b) and groundwater and surface water CTLs set forth in Section 24-44(2)(f)(v)1.. The soil CTLs have been established using the procedures, equations and input parameters set forth in the DERM Technical Report: "Development of Clean-up Target Levels (CTLs) for Chapter 24 of the Code of Miami-Dade County, Florida" (dated September, 2005).

However, the applicable leachability-based soil CTLs may be exceeded if it is demonstrated to the satisfaction of the Director, or the Director's designee, that:

1. Leachate concentrations do not exceed the applicable groundwater or surface water CTLs set forth in Section 24-44(2)(f)(v)1., using a laboratory leaching procedure which simulates soil leachability and which has been approved by the Director or the Director's designee; or
2. For soil that is and has been exposed to the elements (i.e., open ground, not covered by impermeable or semi-permeable cover) and subject to infiltration throughout the entire unsaturated zone for a minimum of two years, it has been subsequently demonstrated to the satisfaction of the Director, or the Director's designee, by a minimum of one year of groundwater monitoring data, that contaminants will not leach into the groundwater at concentrations that exceed the applicable groundwater or surface water CTLs set forth in Section 24-44(2)(f)(v)1.. This demonstration shall consider site-specific characteristics such as the thickness of the unsaturated zone,

depth and mass of soil contaminants, soil lithology, actual precipitation, concentration gradients, and the chemical and physical characteristics of the contaminants.

Notwithstanding the foregoing provisions of Section 24-44(2)(f)(ii), no soil CTLs shall be more stringent than the practical quantitation limits or naturally occurring background concentrations determined in a natural background concentration study which has been approved by the Director or the Director's designee.

- (iii) The Director, or the Director's designee, may approve alternative CTLs provided that: human health, public safety, and the environment are afforded equivalent protection to that provided in Section 24-44 (2)(f)(i) and Section 24-44(2)(f)(ii); and same are based upon one (1) of the following, or a combination of the following:
 1. The application of the procedures set forth in Section 24-44 (2)(k)(ii) or Section 24-44(2)(1)(ii).
 2. A demonstration, provided in a feasibility study approved by the Director, or the Director's designee, that achieving the CTLs is not feasible utilizing the best available technologies.
 3. Calculations of site-specific soil CTLs using appropriate site-specific soil properties and equations provided in the DERM Technical Report: "Development of Clean-up Target Levels (CTLs) for Chapter 24 of the Code of Miami-Dade County, Florida" (dated September, 2005), and approved by the Director or the Director's designee.
 4. Calculations of site-specific soil CTLs for total recoverable petroleum hydrocarbons (TRPH) based upon the site-specific composition of TRPH, as determined by an analytical method approved by the Director or the Director's designee. Calculations utilized to comply with this provision shall be in accordance with the DERM Technical Report: "Development of Clean-up Target Levels (CTLs) for Chapter 24 of the Code of Miami-Dade County, Florida" (dated September, 2005).
- (iv) The Director, or the Director's designee, shall maintain the DERM Technical Report: "Development of Clean-up Target Levels for Chapter 24 of the Code of Miami-Dade County, Florida" (dated September, 2005) which contains the risk equations, leachability equations and default input parameters used to calculate the CTLs set forth in Section 24-44(2)(f)(v) herein. The aforesaid Technical Report dated September, 2005, a copy of which is attached hereto, is hereby incorporated by reference, as same may be amended from time to time. Any changes, additions or deletions to the aforesaid Technical Report shall be approved by the Board of County Commissioners by ordinance.
- (v) Clean-up Target Levels (CTLs).
 1. *Groundwater and Surface Water CTLs.*

Table 1 Groundwater and Surface Water Clean-up Target levels

Contaminants	CAS#	Groundwater Criteria	Freshwater Surface Water Criteria	Marine Surface Water Criteria	Non-Cancer Target Organs/Systems or Effects#
Acenaphthene	83-32-9	20	3	3	-Liver
Acenaphthylene	208-96-8	210	*	*	-Liver
Acephate	30560-19-1	4	190	190	Cancer - Neurological
Acetone	67-64-1	6300	1700	1700	-Kidney -Liver -Neurological

Acetonitrile	75-05-8	42	20000	20000	-Mortality
Acetophenone	98-86-2	700	7800	7800	-None Specified
Acifluorfen, sodium [or Blazer]	62476-59-9	1	190	190	-Kidney
Acrolein	107-02-8	3.5	0.4	0.4	-Nasal
Acrylamide	79-06-1	0.008	0.3	0.3	Cancer - Neurological
Acrylic acid	79-10-7	3500	NA	NA	-Developmental
Acrylonitrile	107-13-1	0.06	0.2	0.2	Cancer -Nasal -Reproductive
Alachlor	15972-60-8	2	0.5	0.5	Cancer -Blood
Aldicarb [or Temik]	116-06-3	7	0.9	0.9	-Neurological
Aldicarb sulfone	1646-88-4	7	46	46	-Neurological
Aldicarb sulfoxide	1646-87-3	7	4.2	4.2	-Neurological
Aldrin	309-00-2	0.002	0.00014	0.00014	Cancer -Liver
Ally [or Metsulfuron, methyl]	74223-64-6	1800	NA	NA	-Body Weight
Allyl alcohol	107-18-6	35	5	5	-Kidney -Liver
Allyl chloride	107-05-1	35**	NA	NA	-Neurological
Aluminum	7429-90-5	200	13	1500	-Body Weight
Aluminum phosphide	20859-73-8	2.8	6.5	6.5	-Body Weight
Ametryn	834-12-8	63	6.2	6.2	-Liver
Ammonia	7664-41-7	NA	20	NA	-Body Weight
Ammonia (as Total)		2800	500	500	-Respiratory
Ammonium sulfamate	7773-06-0	1400	10000	10000	-Body Weight
Anilazine [or Dyrene]	101-05-3	2.8	NA	NA	-None Specified
Aniline	62-53-3	6.1	4	4	Cancer - Blood -Spleen

Anthracene	120-12-7	2100	0.3	0.3	-None Specified
Antimony	7440-36-0	6	4300	4300	-Blood
Aramite	140-57-8	1.4	3	3	-Cancer
Aroclor mixture [see PCBs]					
Arsenic	NOCAS	10	50	50	-Cancer -Cardiovascular -Skin
Atrazine	1912-24-9	3	1.9	1.9	-Cancer -Cardiovascular
Azinphos, methyl [see Guthion]					
Azobenzene	103-33-3	0.3	3.6	3.6	-Cancer
Barium (soluble salts)	7440-39-3	2000	NA	NA	-Cardiovascular
Baygon [or Propoxur]	114-26-1	28	0.4	0.4	-Blood -Neurological
Bayleton	43121-43-3	210	500	500	-Blood
Benomyl	17804-35-2	35**	0.3	0.3	-Developmental
Bensulide	741-58-2	46	NA	NA	-None Specified
Bentazon	25057-89-0	210	NA	NA	-Blood
Benzaldehyde	100-52-7	700	54	54	-Gastrointestinal -Kidney
Benzene	71-43-2	1	71.28	71.28	-Cancer -Blood
Benzenethiol	108-98-5	0.07	NA	NA	-Liver
Benzydine	92-87-5	0.0002	0.0002	0.0002	-Cancer -Liver -Neurological
Benzo(a)anthracene	56-55-3	0.05	*	*	-Cancer
Benzo(a)pyrene	50-32-8	0.2	*	*	-Cancer
Benzo(b)fluoranthene	205-99-2	0.05	*	*	-Cancer
Benzo(g,h,i)perylene	191-24-2	210	*	*	-Neurological
Benzo(k)fluoranthene	207-08-9	0.5	*	*	-Cancer

Benzoic acid	65-85-0	28000	9000	9000	-None Specified
Benzotrichloride	98-07-7	0.003	0.002	0.002	-Cancer
Benzyl alcohol	100-51-6	2100	500	500	-Gastrointestinal
Benzyl chloride	100-44-7	0.2	2	2	-Cancer
Beryllium	7440-41-7	4	0.13	0.13	-Cancer -Gastrointestinal -Respiratory
Beta radiation	NOCAS	4	NA	NA	-Cancer
BHC, alpha- [see Hexachlorocyclohexane, alpha-] (b)					
BHC, beta- [see Hexachlorocyclohexane, beta-] (b)					
BHC, delta- [see Hexachlorocyclohexane, delta-]					
BHC, gamma- [see Hexachlorocyclohexane, gamma-] (b)					
BHC, gamma- [see Hexachlorocyclohexane, Technical] (b)					
Bidrin [or Dicrotophos]	141-66-2	0.7	22	22	-Developmental
Bioallethrin	28057-48-9	35	NA	NA	-Liver
Biphenyl, 1,1'- [or Diphenyl]	92-52-4	0.5	18	18	-Kidney
Bis(2-chloro-1-methylethyl)ether [see Bis(2-chloroisopropyl)ether]					
Bis(2-chloroethyl)ether	111-44-4	0.03	0.5	0.5	-Cancer
Bis(2-chloroisopropyl)ether [or Bis(2-chloro-1-methylethyl)ether]	39638-32-9	0.5	23	23	-Cancer -Blood
Bis(2-ethylhexyl)adipate	103-23-1	400	33	33	-Cancer -Body Weight
Bis(2-ethylhexyl)phthalate [or DEHP]	117-81-7	6	2.2	2.2	-Cancer -Liver
Bisphenol A	80-05-7	350	55	55	-Body Weight
Blazer [see Acifluorfen, sodium]					
Boron	7440-42-8	1400	NA	NA	-Reproductive -Respiratory

Bravo [see Chlorothalonil]					
Bromacil	314-40-9	70**	97	97	-Body Weight
Bromate	15541-45-4	10	NA	100000	-Cancer -Kidney
Bromochloromethane	74-97-5	91	NA	NA	-None Specified
Bromodichloromethane	75-27-4	0.6	22	22	-Cancer -Kidney
Bromoform	75-25-2	4.4	360	360	-Cancer -Liver
Bromomethane [or Methyl bromide]	74-83-9	9.8	35	35	-Gastrointestinal -Respiratory
Bromoxynil	1689-84-5	140	NA	NA	-None Specified
Bromoxynil octanoate	1689-99-2	140	NA	NA	-Neurological
Butane	106-97-8	9100	NA	NA	-Neurological -Respiratory
Butanol, n-	71-36-3	700	25000	25000	-Neurological
Butanol, tert- [see Butyl alcohol, tert-]					
Butanone, 2- [see Methyl ethyl ketone]					
Butyl acetate, n-	123-86-4	43	1000	1000	-None Specified
Butyl alcohol, tert- [or Butanol, tert-]	75-65-0	1400	NA	NA	-Kidney -Neurological
Butyl benzyl phthalate	85-68-7	140**	26	26	-Liver
Butylate	2008-41-5	350	11	11	-Liver
Butylbenzene, n-	104-51-8	280	NA	NA	-Kidney -Liver -Neurological
Butylbenzene, sec	135-98-8	280	240	240	-Kidney -Neurological
Butylbenzene, tert	98-06-6	280	NA	NA	-Kidney -Neurological
Butylphthalyl butylglycolate	85-70-1	7000	NA	NA	-None Specified
Cadmium	7440-43-9	5	e ^(0.7852[lnH]-3.49)	9.3	-Cancer -Kidney
Calcium cyanide	592-01-8	280	NA	NA	-Neurological -Thyroid

Captafol	2425-06-1	4.1	0.9	0.9	-Cancer -Kidney
Captan	133-06-2	10	1.9	1.9	-Cancer -Body Weight
Carbaryl [or Sevin]	63-25-2	700	0.06	0.06	-Kidney -Liver
Carbazole	86-74-8	1.8	47	47	-Cancer
Carbofuran	1563-66-2	40	0.1	0.1	-Neurological -Reproductive
Carbon disulfide	75-15-0	700	110	110	-Developmental -Neurological
Carbon tetrachloride	56-23-5	3	4.42	4.42	-Cancer -Liver
Carbophenothion [or Trithion]	786-19-6	0.9	0.1	0.1	-Neurological
Carboxin	5234-68-4	700	60	60	-Body Weight
CFC 113 [see Trichloro-1,2,2-trifluoroethane, 1,1,2-]			NA	NA	-Adrenals
Chloral hydrate	302-17-0	70**	NA	NA	-Gastrointestinal -Neurological
Chloramben	133-90-4	110	NA	NA	-Liver
Chlordane (total)	(i)	2	0.00059	0.00059	-Cancer -Liver
Chloride	16887-00-6	250000	500000	e	-None Specified
Chlorine	7782-50-5	4000	10	10	-Respiratory
Chlorine cyanide [or Cyanogen chloride]	506-77-4	350	1.4	1.4	-Neurological -Thyroid
Chlorite (sodium salt) [or Sodium chlorite]	7758-19-2	1000	29	29	-Developmental -Neurological
Chloro-1,3-butadiene [or Chloroprene]	126-99-8	140	NA	NA	-Hair Loss -Nasal
Chloro-3-methylphenol, 4- [see Chloro-m-cresol, p-]					
Chloroacetic acid	79-11-8	14	2500	2500	-Cardiovascular
Chloroaniline, p-	106-47-8	28	2.5	2.5	-Spleen
Chlorobenzene	108-90-7	100	17	17	-Liver
Chlorobenzilate	510-15-6	0.1	0.02	0.02	-Cancer -Body Weight

Chloroethane [see Ethyl chloride]					
Chloroform	67-66-3	70	470.8	470.8	-Cancer -Liver
Chloro-m-cresol, p- [or Chloro-3-methylphenol, 4-]	59-50-7	63	100	100	-Body Weight
Chloromethane [see Methyl chloride]					
Chloronaphthalene, beta-	91-58-7	560	1600	1600	-Liver -Respiratory
Chloronitrobenzene, p-	100-00-5	1.9	110	110	-Cancer
Chlorophenol, 2-	95-57-8	35	130	130	-Reproductive
Chlorophenol, 3-	108-43-0	0.1	170	170	-Reproductive
Chlorophenol, 4-	106-48-9	0.1	180	180	-Reproductive
Chloropicrin	76-06-2	7.3	NA	NA	-None Specified
Chloroprene [see Chloro-1,3-butadiene]					
Chlorothalonil [or Bravo]	1897-45-6	3.2	0.8	0.8	-Cancer -Kidney
Chlorotoluene, o-	95-49-8	140	390	390	-Body Weight
Chlorotoluene, p-	106-43-4	140	NA	NA	-None Specified
Chlorpropham	101-21-3	1400	190	190	-Bone Marrow -Kidney -Liver -Spleen
Chlorpyrifos	2921-88-2	21	0.002	0.002	-Neurological
Chlorpyrifos, methyl	5598-13-0	70	0.04	0.04	-Reproductive
Chlorsulfuron	64902-72-3	350	16	16	-Body Weight
Chromium (hexavalent)	18540-29-9	NA	11	50	-Cancer -Respiratory
Chromium (total)	NOCAS	100	11	50	-Cancer
Chromium (trivalent)	16065-83-1	NA	$e^{(0.819[\ln H]+0.6848)}$	520	-None Specified
Chrysene	218-01-9	4.8	*	*	-Cancer
Cobalt	7440-48-4	140	NA	NA	-Cardiovascular -Immunological -Neurological -Reproductive

Copper	7440-50-8	1000	e ^(0.8545[lnH]-1.702)	2.9	-Gastrointestinal
Copper cyanide	544-92-3	35			-Kidney
Coumaphos	56-72-4	1.8	0.004	0.004	-Neurological
Cresol, m- [see Methylphenol, 3-]					
Cresol, o- [see Methylphenol, 2-]					
Cresol, p- [see Methylphenol, 4-]					
Crotonaldehyde	123-73-9	0.02	NA	NA	-Cancer
Cumene [or Isopropyl benzene]	98-82-8	0.8	260	260	-Adrenals -Kidney
Cyanazine	21725-46-2	0.04	5.5	5.5	-Cancer
Cyanide, free	57-12-5	140	5.2	1	-Neurological -Thyroid
Cyanogen	460-19-5	280	NA	NA	-Neurological -Thyroid
Cyanogen chloride [see Chlorine cyanide]					
Cycloate	1134-23-2	35	130	130	-Neurological
Cyclohexanone	108-94-1	35000	26000	26000	
Cyclohexylamine	108-91-8	1400	4000	4000	-Reproductive
Cyhalothrin [or Karate]	68085-85-8	35	18	18	-Developmental
Cymene, p- (or 4-Isopropyltoluene)	99-87-6	700	NA	NA	-Gastrointestinal -Neurological -Skin
Cypermethrin	52315-07-8	7**	0.0005	0.0005	-Gastrointestinal
Dacthal [or DCPA]	1861-32-1	70	310	310	-Eye -Kidney -Liver -Respiratory -Thyroid
Dalapon	75-99-0	200	5000	5000	-Kidney
DB, 2,4- [see Dichlorophenoxybutyric acid, 2,4-]					
DBCP, 1,2- [see Dibromo-3-chloropropane, 1,2-]					

DDD, 4,4'- [see Dichlorodiphenyl dichloroethane, p,p']					
DDE, 4,4'- [see Dichlorodiphenyl dichloroethylene, p,p']					
DDT, 4,4'- [see Dichlorodiphenyl trichloroethane, p,p']					
Decabromodiphenyl ether	1163-19-5	7**	NA	NA	-None Specified
DEET	134-62-3	6300	NA	NA	-Body Weight
DEHP [see Bis(2-ethylhexyl)phthalate]					
Demeton	8065-48-3	0.3	0.1	0.1	-Eye -Neurological
Diallate	2303-16-4	0.6	NA	NA	-Cancer -None Specified
Diazinon	333-41-5	6.3	0.002	0.002	-Neurological
Dibenz(a,h)anthracene	53-70-3	0.005	*	*	-Cancer
Dibenzofuran	132-64-9	28	67	67	-None Specified
Dibromo-3-chloropropane, 1,2- [or DBCP, 1,2-]	96-12-8	0.2	NA	NA	-Cancer -Reproductive
Dibromobenzene, 1,4-	106-37-6	70	240	240	-Liver
Dibromochloromethane	124-48-1	0.4	34	34	-Cancer -Liver
Dibromoethane, 1,2- [or EDB]	106-93-4	0.02	13	13	-Cancer -Reproductive
Dibutyl phthalate	84-74-2	700	23	23	-Mortality
Dicamba	1918-00-9	210	200	200	-Developmental
Dichloroacetic acid	79-43-6	0.7	1200	1200	-Cancer -Liver -Neurological -Reproductive
Dichloroacetonitrile	3018-12-0	5.6**	NA	NA	-None Specified
Dichlorobenzene, 1,2-	95-50-1	600	99	99	-Body Weight
Dichlorobenzene, 1,3-	541-73-1	210	85	85	-None Specified
Dichlorobenzene, 1,4-	106-46-7	75	3	3	-Cancer -Liver
Dichlorobenzidine, 3,3'-	91-94-1	0.08	0.03	0.03	-Cancer

Dichlorobenzophenone, 4,4'-	90-98-2	210	1600	1600	-None Specified
Dichlorodifluoromethane	75-71-8	1400	NA	NA	-Liver
Dichlorodiphenyldichloroethane, p,p'- [or DDD, 4,4'-]	72-54-8	0.1	0.0003	0.0003	-Cancer
Dichlorodiphenyldichloroethylene, p,p'- [or DDE, 4,4'-]	72-55-9	0.1	0.0002	0.0002	-Cancer
Dichlorodiphenyltrichloroethane, p,p'- [or DDT, 4,4'-]	50-29-3	0.1	0.00059	0.00059	-Cancer -Liver
Dichloroethane, 1,1-	75-34-3	70**	NA	NA	-Kidney
Dichloroethane, 1,2- [or EDC]	107-06-2	3	37	37	-Cancer -None Specified
Dichloroethene, 1,1-	75-35-4	7**	3.2	3.2	-Liver
Dichloroethene, 1,2- (mixture)	540-59-0	NA	7000	7000	-Blood -Liver
Dichloroethene, cis-1,2-	156-59-2	70	NA	NA	-Blood
Dichloroethene, trans-1,2-	156-60-5	100	11000	11000	-Blood -Liver
Dichlorophenol, 2,3-	576-24-9	0.04	56	56	-Immunological
Dichlorophenol, 2,4-	120-83-2	0.3	13	13	-Immunological
Dichlorophenol, 2,5-	583-78-8	0.5	90	90	-Immunological
Dichlorophenol, 2,6-	87-65-0	0.2	73	73	-Immunological
Dichlorophenol, 3,4-	95-77-2	0.3	61	61	-Immunological
Dichlorophenoxy acetic acid, 2,4-	94-75-7	70	80	80	-Blood -Kidney -Liver
Dichlorophenoxy butyric acid, 2,4- [or DB, 2,4-]	94-82-6	56	NA	NA	-Blood -Cardiovascular
Dichloropropane, 1,2-	78-87-5	5	14	14	-Cancer -Nasal
Dichloropropene, 1,3-	542-75-6	0.4	12	12	-Cancer -Gastrointestinal -Nasal
Dichlorprop	120-36-5	35	42	42	-None Specified
Dichlorvos	62-73-7	0.1	0.005	0.005	-Cancer -Neurological
Dicofol [or Kelthane]	115-32-2	0.08	0.006	0.006	-Cancer -Adrenals
Dicrotophos [see Bidrin]					
Dieldrin	60-57-1	0.002	0.00014	0.00014	-Cancer -Liver

Diethyl phthalate	84-66-2	5600	380	380	-Body Weight
Diethylene glycol, monoethyl ether	111-90-0	14000	170000	170000	-Kidney
Diethylstilbestrol	56-53-1	0.000007			-Cancer
Diisopropyl methylphosphonate	1445-75-6	560	13000	13000	-None Specified
Dimethoate	60-51-5	1.4	0.1	0.1	-Neurological
Dimethoxybenzidine, 3,3'-	119-90-4	2.5	NA	NA	-Cancer
Dimethrin	70-38-2	2100	1.1	1.1	-Liver
Dimethylaniline, 2,4-	95-68-1	0.05	1700	1700	-Cancer -Blood -Spleen
Dimethylaniline, N,N-	121-69-7	14	1700	1700	-Spleen
Dimethylbenzidine, 3,3'-	119-93-7	0.004	NA	NA	-Cancer
Dimethylformamide, N,N-	68-12-2	700	50000	50000	-Gastrointestinal -Liver
Dimethylphenol, 2,4-	105-67-9	140	160	160	-Blood -Neurological
Dimethylphenol, 2,6-	576-26-1	4.2	560	560	-Kidney -Liver -Spleen
Dimethylphenol, 3,4-	95-65-8	7	380	380	-Kidney -Liver -Spleen
Dimethylphthalate	131-11-3	70000	1400	1400	-Kidney
Dinitrobenzene, 1,2- (o)	528-29-0	2.8	30	30	-Spleen
Dinitrobenzene, 1,3- (m)	99-65-0	0.7	72	72	-Spleen
Dinitrobenzene, 1,4- (p)	100-25-4	2.8	30	30	-Spleen
Dinitro-o-cyclohexylphenol	131-89-5	14	NA	NA	-Eye
Dinitrophenol, 2,4-	51-28-5	14	3	3	-Eye
Dinitrotoluene, 2,4-	121-14-2	0.05	9.1	9.1	-Cancer -Liver -Neurological
Dinitrotoluene, 2,6-	606-20-2	0.05	0.7	0.7	-Cancer -Blood -Kidney -Neurological
Di-n-octylphthalate	117-84-0	140	NA	NA	-Kidney -Liver
Dinoseb	88-85-7	7	5.9	5.9	-Developmental
Dioxane, 1,4-	123-91-1	3.2	120	120	-Cancer

Dioxins, as total 2,3,7,8-TCDD equivalents (c)	1746-01-6	0.00003	0.000000005	0.000000005	-Cancer
Diphenamid	957-51-7	210	1600	1600	-Liver
Diphenyl [see Biphenyl, 1,1-]					
Diphenylamine, N,N-	122-39-4	180	NA	NA	-Kidney -Liver
Diphenylhydrazine, 1,2-	122-66-7	0.04	0.2	0.2	-Cancer
Diquat	85-00-7	20	1.5	1.5	-Eye
Disulfoton	298-04-4	0.3	0.3	0.3	-Neurological
Diuron	330-54-1	14	8	8	-Blood
Dyrene [see Anilazine]					
EDB [see Dibromoethane, 1,2-]					
EDC [see Dichloroethane, 1,2-]					
Endosulfan (alpha+beta+sulfate)	115-29-7	42	0.056	0.0087	-Cardiovascular -Kidney
Endothall	145-73-3	100	110	110	-Gastrointestinal
Endrin	72-20-8	2	0.0023	0.0023	-Liver
EPEG [see Ethylphthalyl ethylglycolate]					
Epichlorohydrin	106-89-8	3.5	130	130	-Cancer -Kidney -Nasal
EPN [see Ethyl p-nitrophenyl phenylphosphorothioate]					
EPTC [see Ethyl dipropylthiocarbamate, S-]					
Ethanol	64-17-5	10000	NA	NA	-Developmental
Ethion	563-12-2	3.5	0.007	0.007	-Neurological
Ethoprop	13194-48-4	0.7	0.3	0.3	-Neurological
Ethoxyethanol acetate, 2-	111-15-9	2100	2000	2000	-Developmental
Ethoxyethanol, 2-	110-80-5	2800	NA	NA	-Reproductive
Ethyl acetate	141-78-6	6300	6300	6300	-Body Weight

Ethyl acrylate	140-88-5	0.4	130	130	-Cancer
Ethyl chloride [or Chloroethane]	75-00-3	12	NA	NA	-Cancer -Developmental
Ethyl dipropylthiocarbamate, S- [or EPTC]	759-94-4	180	240	240	-Cardiovascular
Ethyl ether	60-29-7	750	130000	130000	-Body Weight
Ethyl methacrylate	97-63-2	630	NA	NA	-Kidney
Ethyl p-nitrophenyl phenylphosphorothioate [or EPN]	2104-64-5	0.07	0.02	0.02	-Neurological
Ethylbenzene	100-41-4	30	610	610	-Developmental -Kidney -Liver
Ethylene diamine	107-15-3	140	800	800	-Blood -Cardiovascular
Ethylene glycol	107-21-1	14000	16000	16000	-Kidney
Ethylene oxide	75-21-8	0.03	4200	4200	-Cancer
Ethylene thiourea [or ETU]	96-45-7	0.3	1300	1300	-Cancer -Thyroid
Ethylphthalyl ethylglycolate [or EPEG]	84-72-0	21000	NA	NA	-Kidney
Ethyltoluene, o-	622-96-8	210	NA	NA	-Body Weight -Liver
Ethyltoluene, p-	611-14-3	210	NA	NA	-Body Weight -Liver
ETU [see Ethylene thiourea]					
Famphur	52-85-7	3.5	NA	NA	-Blood
Fenamiphos	22224-92-6	1.8	0.2	0.2	-Neurological
Fensulfothion	115-90-2	1.8	0.5	0.5	-Neurological
Fenvalerate [see Pydrin]					
Fluometuron	2164-17-2	91	190	190	-None Specified
Fluoranthene	206-44-0	280	0.3	0.3	-Blood -Kidney -Liver
Fluorene	86-73-7	280	30	30	-Blood
Fluoride	7782-41-4	2000	10000	5000	-Teeth mottling
Fluoridone	59756-60-4	560	110	110	-Kidney -Reproductive

Fonofos	944-22-9	14	0.1	0.1	-Liver -Neurological
Formaldehyde	50-00-0	600	110	110	-Cancer -Gastrointestinal
Formic acid	64-18-6	14000	4500	4500	-Body Weight
Furan	110-00-9	7	NA	NA	-Liver
Furfural	98-01-1	21	650	650	-Liver -Nasal
Glycidaldehyde	765-34-4	2.8	NA	NA	-Adrenals -Blood -Kidney
Glyphosate [or Roundup]	1071-83-6	700	120	120	-Kidney
Gross alpha radiation	14127-62-9	15	15	15	-Cancer
Guthion [or Methyl azinphos]	86-50-0	11	0.01	0.01	-Neurological
Heptachlor	76-44-8	0.4	0.00021	0.00021	-Cancer -Liver
Heptachlor epoxide	1024-57-3	0.2	0.00004	0.00004	-Cancer -Liver
Hexachloro-1,3-butadiene	87-68-3	0.4	49.7	49.7	-Cancer -Kidney
Hexachlorobenzene	118-74-1	1	0.0003	0.0003	-Cancer -Liver
Hexachlorocyclohexane, alpha- [or BHC, alpha-]	319-84-6	0.006	0.005	0.005	-Cancer
Hexachlorocyclohexane, beta- [BHC, beta-]	319-85-7	0.02	0.046	0.046	-Cancer
Hexachlorocyclohexane, delta- [or BHC, delta-]	319-86-8	2.1	NA	NA	-Kidney -Liver
Hexachlorocyclohexane, gamma- [or Lindane or BHC, gamma-]	58-89-9	0.2	0.063	0.063	-Cancer -Kidney -Liver
Hexachlorocyclohexane, technical [or BHC, technical]	608-73-1	0.02	0.02	0.02	-Cancer
Hexachlorocyclopentadiene	77-47-4	50	3	3	-Gastrointestinal
Hexachlorodibenzo-p-dioxin (mixture)	19408-74-3	0.000006	NA	NA	-Cancer
Hexachloroethane	67-72-1	2.5	3.3	3.3	-Cancer -Kidney
Hexachlorophene	70-30-4	2.1	1.1	1.1	-Neurological
Hexahydro-1,3,5-trinitro-1,3,5-triazine [or RDX]	121-82-4	0.3	180	180	-Cancer -Reproductive
Hexane, n-	110-54-3	6	3400	3400	-Neurological

Hexanone, 2- [or Methyl butyl ketone]	591-78-6	280	NA	NA	-None Specified
Hexazinone	51235-04-2	230	25000	25000	-Body Weight
HMX [see Octahydro-1,3,5,7-tetranitro-tetrazocine]					
Hydrogen cyanide (as Cyanide)	74-90-8	140	3.5	3.5	-Neurological -Thyroid
Hydrogen sulfide	7783-06-4	21	0.1	0.1	-Gastrointestinal -Nasal
Hydroquinone	123-31-9	280	4.5	4.5	-Blood
Indeno(1,2,3-cd)pyrene	193-39-5	0.05	*	*	-Cancer
Iprodione	36734-19-7	280	150	150	-Blood
Iron	7439-89-6	300	1000	300	-Gastrointestinal
Isobutyl alcohol	78-83-1	2100	47000	47000	-Neurological
Isophorone	78-59-1	37	650	650	-Cancer -None Specified
Isopropyl benzene [see Cumene]					
4-Isopropyl toluene [see Cymene]					
Kelthane [see Dicofol]					
Kepone	143-50-0	0.004	NA	NA	-Cancer
Lead	7439-92-1	15	e ^(1.273[lnH]-4.705)	8.5	-Neurological
Limonene	138-86-3	700			-Kidney -Liver
Lindane [see Hexachlorocyclohexane, gamma-]					
Linuron	330-55-2	1.4**	45	45	-Blood
Lithium	7439-93-2	140	NA	NA	-None Specified
Malathion	121-75-5	140	0.1	0.1	-Neurological
Maleic anhydride	108-31-6	700	NA	NA	-Kidney
Maleic hydrazide	123-33-1	3500	750	750	-Kidney

Mancozeb	8018-01-7	210	3.5	3.5	-Thyroid
Maneb	12427-38-2	35	5.5	5.5	-Thyroid
Manganese	7439-96-5	50	NA	NA	-Neurological
MCPA [see Methyl-4- chlorophenoxy acetic acid, 2-]					
MCPP [see Propionic acid, 2-(2-methyl-4-chlorophenoxy)]					
Mercuric chloride (as Mercury)	7487-94-7	0.2**	0.05	0.05	-Immunological -Kidney
Mercury	7439-97-6	2	0.012	0.025	-Neurological
Mercury, methyl- [see Methylmercury]					
Merphos	150-50-5	0.2	NA	NA	-Neurological
Merphos oxide	78-48-8	0.2	0.2	0.2	-Neurological
Metalaxyl	57837-19-1	420	37	37	-Blood -Liver -Neurological
Methacrylonitrile	126-98-7	0.7	NA	NA	-Liver
Methamidophos	10265-92-6	0.4	0.00001	0.00001	-Neurological
Methanol	67-56-1	3500	45000	45000	-Developmental -Eye -Neurological
Methidathion	950-37-8	0.7**	0.03	0.03	-Liver
Methomyl	16752-77-5	180	1	1	-Kidney -Spleen
Methoxy-5-nitroaniline, 2-	99-59-2	0.8	NA	NA	-Cancer
Methoxychlor	72-43-5	40	0.03	0.03	-Developmental -Reproductive
Methoxyethanol, 2-	109-86-4	7	NA	NA	-Reproductive
Methyl acetate	79-20-9	3000	NA	NA	-Liver
Methyl acrylate	96-33-3	210	NA	NA	-None Specified
Methyl azinphos [see Guthion]					

Methyl bromide [see Bromomethane]					
Methyl butyl ketone [see Hexanone, 2-]					
Methyl chloride [or Chloromethane]	74-87-3	2.7	470.8	470.8	-Cancer -Neurological
Methyl chloroform [see Trichloroethane, 1,1,1-]					
Methyl ethyl ketone [or Butanone, 2-]	78-93-3	4200	120000	120000	-Developmental
Methyl isobutyl ketone [or MIBK]	108-10-1	560	23000	23000	-Kidney -Liver
Methyl methacrylate	80-62-6	25	6500	6500	-Nasal
Methyl parathion [or Parathion, methyl]	298-00-0	1.8	0.01	0.01	-Blood -Neurological
Methyl tert-butyl ether [or MTBE]	1634-04-4	20	34000	34000	-Eye -Kidney -Liver
Methyl-4-chlorophenoxy acetic acid, 2- [or MCPA]	94-74-6	3.5	72	72	-Kidney -Liver
Methyl-5-nitroaniline, 2-	99-55-8	1.1	NA	NA	-Cancer
Methylaniline, 2-	95-53-4	0.1	26	26	-Cancer
Methylene bis(2-chloroaniline), 4,4-	101-14-4	0.3	NA	NA	-Cancer -Liver -Bladder
Methylene bromide	74-95-3	70	NA	NA	-Blood
Methylene chloride	75-09-2	5	1580	1580	-Cancer -Liver
Methylmercury [or Mercury, methyl]	22967-92-6	0.07**	NA	NA	-Neurological
Methylnaphthalene, 1-	90-12-0	28	95	95	-Nasal
Methylnaphthalene, 2-	91-57-6	28	30	30	-Nasal
Methylphenol, 2- [or Cresol, o-]	95-48-7	35**	250	250	-Neurological
Methylphenol, 3- [or Cresol, m-]	108-39-4	35**	450	450	-Neurological
Methylphenol, 4- [or Cresol, p-]	106-44-5	3.5**	70	70	-Neurological -Respiratory
Metolachlor	51218-45-2	110**	1.1	1.1	-Body Weight
Metribuzin	21087-64-9	180	64	64	-Kidney -Liver
Metsulfuron, methyl [see Ally]					

Mevinphos	7786-34-7	1.8	0.05	0.05	-Neurological
MIBK [see Methyl isobutyl ketone]					
Mirex	2385-85-5	1.4	0.001	0.001	-Liver -Thyroid
Molinate	2212-67-1	14	17	17	-Reproductive
Molybdenum	7439-98-7	35	NA	NA	-Gout
MTBE [see Methyl tert-butyl ether]					
Naled	300-76-5	14	0.02	0.02	-Neurological
Naphthalene	91-20-3	14**	26	26	-Nasal
Naphthylamine, 2-	91-59-8	0.0003	NA	NA	-Cancer
Napropamide	15299-99-7	700	210	210	-Body Weight
Nickel	7440-02-0	100	$e^{(0.846[\text{mH}]+0.0584)}$	8.3	-Body Weight
Nickel subsulfide	12035-72-2	100	$e^{(0.846[\text{mH}]+0.0584)}$	8.3	-Cancer
Nitrate	14797-55-8	10000	NA	NA	-Blood
Nitrate+Nitrite	NOCAS	10000	NA	NA	-Blood
Nitrite	14797-65-0	1000	NA	NA	-Blood
Nitroaniline, m-	99-09-2	1.7	NA	NA	-Cancer -Blood
Nitroaniline, o-	88-74-4	21	NA	NA	-Blood
Nitroaniline, p-	100-01-6	1.7	1200	1200	-Cancer -Blood
Nitrobenzene	98-95-3	3.5	90	90	-Adrenals -Blood -Kidney -Liver
Nitrophenol, 4-	100-02-7	56	55	55	-None Specified
Nitroso-di-ethylamine, N-	55-18-5	0.0002	0.008	0.008	-Cancer
Nitroso-dimethylamine, N	62-75-9	0.0007	3	3	-Cancer

Nitroso-di-n-butylamine, N-	924-16-3	0.006	0.04	0.04	-Cancer
Nitroso-di-n-propylamine, N-	621-64-7	0.005	0.5	0.5	-Cancer
Nitroso-diphenylamine, N-	86-30-6	7.1	6	6	-Cancer
Nitroso-N-methylethylamine, N-	10595-95-6	0.002	0.06	0.06	-Cancer
Nitrosopyrrolidine, N-	930-55-2	0.02	NA	NA	-Cancer
Nitrotoluene, m-	99-08-1	140	380	380	-Spleen
Nitrotoluene, o-	88-72-2	70	550	550	-Spleen
Nitrotoluene, p-	99-99-0	70	550	550	-Spleen
Nonylphenol	25154-52-3	8.4	5.9	1.4	-Kidney
Norflurazon	27314-13-2	280	NA	NA	-Kidney -Liver -Thyroid
Octahydro-1,3,5,7-tetranitro-tetrazocine [or HMX]	2691-41-0	350	1300	1300	-Blood -Liver
Octamethylpyrophosphoramide	152-16-9	14	NA	NA	-Neurological
Oil and Grease	NOCAS	5000	5000	5000	-None Specified
Oryzalin	19044-88-3	35**	NA	NA	-Adrenals -Blood -Kidney -Liver
Oxadiazon	19666-30-9	35	44	44	-Liver
Oxamyl	23135-22-0	200	8.5	8.5	-Body Weight
Paraquat	1910-42-5	3.2**	47	47	-Respiratory
Parathion	56-38-2	4.2**	0.04	0.04	-Neurological
Parathion, methyl [see Methyl parathion]					
PCBs [or Aroclor mixture]	1336-36-3	0.5	0.000045	0.000045	-Cancer -Immunological
PCE [see Tetrachloroethene]					
Pebulate	1114-71-2	350	310	310	-Blood

Pendimethalin	40487-42-1	280	10	10	-Liver
Pentachlorobenzene	608-93-5	5.6	1.7	1.7	-Kidney -Liver
Pentachloronitrobenzene	82-68-8	0.1	0.02	0.02	-Cancer -Liver
Pentachlorophenol	87-86-5	1	8.2	7.9	-Cancer -Kidney -Liver
Perchlorate	7601-90-3	4	NA	NA	-Thyroid
Permethrin	52645-53-1	350	0.001	0.001	-Liver
Phenanthrene	85-01-8	210	*	*	-Kidney
Phenmedipham [or Betanal]	13684-63-4	1800	200	200	-None Specified
Phenol	108-95-2	10	6.5	6.5	-Developmental
Phenylenediamine, m-	108-45-2	42	NA	NA	-Liver
Phenylenediamine, p-	106-50-3	1300	NA	NA	-Whole Body
Phenylphenol, 2-	90-43-7	18	36	36	-Cancer
Phorate	298-02-2	1.4	0.005	0.005	-Neurological
Phosmet	732-11-6	140	0.1	0.1	-Liver -Neurological
Phosphine	7803-51-2	2.1	NA	NA	-Body Weight
Phthalic anhydride	85-44-9	14000	NA	NA	-Kidney -Nasal -Respiratory
Picloram	1918-02-1	500	70	70	-Liver
Polychlorinated dibenzo-p-dioxins [see Dioxins]					
Polycyclic Aromatic Hydrocarbons (PAHs)			0.031	0.031	-Various Endpoints
Potassium cyanide	151-50-8	350	5.5	5.5	-Neurological -Thyroid
Profluralin	26399-36-0	42	NA	NA	-None Specified
Prometon	1610-18-0	110	600	600	-None Specified

Prometryn	7287-19-6	28	21	21	-Bone Marrow -Kidney -Liver
Pronamide	23950-58-5	53**	NA	NA	-None Specified
Propachlor	1918-16-7	91	12	12	-Liver
Propanil	709-98-8	35	20	20	-Spleen
Propargite	2312-35-8	140	1.6	1.6	-None Specified
Propazine	139-40-2	14**	190	190	-Body Weight
Propham	122-42-9	140	500	500	-Neurological
Propiconazole	60207-90-1	91	26	26	-Gastrointestinal
Propionic acid, 2-(2-methyl-4-chlorophenoxy) [or MCPP]	93-65-2	7	NA	NA	-Kidney
Propoxur [see Baygon]					
Propylbenzene, n-	103-65-1	280	NA	NA	-Kidney -Liver -Neurological
Propylene glycol	57-55-6	140000	36000	36000	-Blood -Bone Marrow
Propylene glycol monomethyl ether	107-98-2	4900	NA	NA	-Kidney -Liver -Neurological
Propylene oxide	75-56-9	0.1	NA	NA	-Cancer -Nasal -Respiratory
Pydrin [or Fenvalerate]	51630-58-1	180	0.0004	0.0004	-Neurological
Pyrene	129-00-0	210	0.3	0.3	-Kidney
Pyridine	110-86-1	7	1300	1300	-Liver
Quinoline	91-22-5	0.01	NA	NA	-Cancer
Radium, 226 and 228 (combined)	7440-14-4	5	5	5	-Cancer
RDX [see Hexahydro-1,3,5-trinitro-1,3,5-triazine]					
Resmethrin	10453-86-8	210	0.003	0.003	-Reproductive
Ronnel	299-84-3	350	0.06	0.06	-Liver

Rotenone	83-79-4	28	0.1	0.1	-Developmental
Roundup [see Glyphosate]					
Selenious acid (as Selenium)	7783-00-8	35	40	40	-Hair Loss -Neurological -Skin
Selenium	7782-49-2	50	5	71	-Hair Loss -Neurological -Skin
Sevin [see Carbaryl]					
Silver	7440-22-4	100	0.07	0.4	-Skin
Silvex [see Trichlorophenoxy propionic acid]					
Simazine	122-34-9	4	7.3	7.3	-Cancer -Blood
Sodium	7440-23-5	160000	NA	NA	-None Specified
Sodium chlorite [see Chlorite (sodium salt)]					
Sodium cyanide (as Cyanide)	143-33-9	280	3.8	3.8	-Neurological
Strontium	7440-24-6	4200			-Bone
Strychnine	57-24-9	2.1	38	38	-Mortality
Styrene	100-42-5	100	460	460	-Blood -Liver -Neurological
Sulfate	14808-79-8	250000	NA	NA	-None Specified
TCDD, 2,3,7,8- [see Dioxins, as total 2,3,7,8-TCDD equivalents]					
TCE [see Trichloroethene]					
TCMTB [see Thiocyanomethylthio-benzothiazole, 2-]					
TDS [see Total dissolved solids]					
Tebuthiuron	34014-18-1	490	310	310	-Body Weight
Temephos	3383-96-8	140	0.002	0.002	-None Specified

Temik [see Aldicarb]					
Terbacil	5902-51-2	91	2500	2500	-Liver -Thyroid
Terbufos	13071-79-9	0.2	0.01	0.01	-Neurological
Terbutryn	886-50-0	7	3.1	3.1	-Blood
Tetrachlorobenzene, 1,2,4,5-	95-94-3	2.1	1.6	1.6	-Kidney
Tetrachloroethane, 1,1,1,2-	630-20-6	1.3	NA	NA	-Cancer -Kidney -Liver
Tetrachloroethane, 1,1,2,2-	79-34-5	0.2	10.8	10.8	-Cancer -Liver
Tetrachloroethene [or PCE]	127-18-4	3	8.85	8.85	-Cancer -Liver
Tetrachlorophenol, 2,3,4,6-	58-90-2	210	4.5	4.5	-Liver
Tetraethyl dithiopyrophosphate	3689-24-5	3.5	0.01	0.01	-Bone Marrow -Neurological
Thallium	7440-28-0	2	6.3	6.3	-Hair Loss -Liver
Thallium sulfate (as Thallium)	7446-18-6	0.6	26	26	-Blood -Hair Loss -Liver
Thiobencarb	28249-77-6	70	NA	NA	-Kidney
Thiocyanomethylthio-benzothiazole, 2- [or TCMTB]	21564-17-0	2.8**	0.4	0.4	-Gastrointestinal
Thiram	137-26-8	35	0.2	0.2	-Neurological
Tin	7440-31-5	4200	NA	NA	-Kidney -Liver
Titanium Dioxide	13463-67-7	28000	NA	NA	
Toluene	108-88-3	40	480	480	-Kidney -Liver -Neurological
Toluene-2,4-diamine	95-80-7	0.01	NA	NA	-Cancer
Toluidine, p-	106-49-0	0.2	NA	NA	-Cancer
Total dissolved solids [or TDS]	C-010	500000	NA	NA	-None Specified
Toxaphene	8001-35-2	3	0.0002	0.0002	-Cancer -Developmental

Triallate	2303-17-5	91	65	65	-Liver -Spleen
Tributyltin oxide	56-35-9	2.1	0.05	0.05	-Immunological
Trichloro-1,2,2-trifluoroethane, 1,1,2- [or CFC 113]	76-13-1	210000	NA	NA	-Neurological
Trichloroacetic acid	76-03-9	9.1	100000	100000	-None Specified
Trichlorobenzene, 1,2,3-	87-61-6	70	85	85	-Adrenals
Trichlorobenzene, 1,2,4-	120-82-1	70	23	23	-Adrenals
Trichlorobenzene, 1,3,5-	108-70-3	40	NA	NA	-None Specified
Trichloroethane, 1,1,1- [or Methyl chloroform]	71-55-6	200	270	270	-None Specified
Trichloroethane, 1,1,2-	79-00-5	5	16	16	-Cancer -Liver
Trichloroethene [or TCE]	79-01-6	3	80.7	80.7	-Cancer -None Specified
Trichlorofluoromethane	75-69-4	2100	NA	NA	-Cardiovascular -Kidney -Respiratory
Trichlorophenol, 2,4,5-	95-95-4	1	23	23	-Kidney -Liver
Trichlorophenol, 2,4,6-	88-06-2	3.2	6.5	6.5	-Cancer
Trichlorophenoxy acetic acid, 2,4,5-	93-76-5	70	140	140	-Kidney
Trichlorophenoxy propionic acid, 2, (2, 4, 5-) [or Silvex]	93-72-1	50	NA	NA	-Liver
Trichloropropane, 1,1,2-	598-77-6	35	NA	NA	-Cancer -Kidney -Liver -Thyroid
Trichloropropane, 1,2,3-	96-18-4	0.02	0.2	0.2	-Cancer -Kidney -Liver
Trichloropropene, 1,2,3-	96-19-5	35	NA	NA	-Eye
Trifluralin	1582-09-8	4.5	0.2	0.2	-Cancer -Blood -Liver
Trimethyl phosphate	512-56-1	0.9	NA	NA	-Cancer
Trimethylbenzene, 1,2,3-	526-73-8	10	NA	NA	-None Specified
Trimethylbenzene, 1,2,4-	95-63-6	10	220	220	-None Specified
Trimethylbenzene, 1,3,5-	108-67-8	10	220	220	-None Specified
Trinitrobenzene, 1,3,5-	99-35-4	210	19	19	-Blood -Spleen
Trinitrophenylmethylnitramine	479-45-8	70			-Kidney -Liver -Spleen

Trinitrotoluene, 2,4,6-	118-96-7	1.2	49	49	-Cancer -Liver
Trithion [see Carbophenothion]					
TRPH	NOCAS	5000	5000	5000	-Multiple Endpoints Mixed Contaminants
Uranium, soluble salts	7440-61-1	21	NA	NA	-Kidney
Vanadium	7440-62-2	49	NA	NA	-Hair Loss
Vanadium pentoxide (as Vanadium)	1314-62-1	63	13	13	-Hair Loss
Vernam	1929-77-7	7	12	12	-Body Weight
Vinyl acetate	108-05-4	88	700	700	-Kidney -Nasal
Vinyl chloride (d)	75-01-4	1	2.4	2.4	-Cancer -Liver
White phosphorus	7723-14-0	0.1	NA	0.1	-Maternal Death - Reproductive
Xylenes, total	1330-20-7	20	370	370	-Neurological
Zinc	7440-66-6	5000	$e^{(0.8473[\ln H] + 0.884)}$	86	-Blood
Zinc chloride	7646-85-7	2100	1.5	1.5	-Blood
Zinc phosphide	1314-84-7	2.1	NA	NA	-Body Weight
Zineb	12122-67-7	350	14	14	-Thyroid

CTLs are expressed in units of ug/l (ppb).

= These default Target Organ(s)/Systems or Effects are those reported to occur at the doses used to derive the referenced dose. Non-default Target Organ(s)/Systems or Effects may be justified through a detailed toxicological analysis of the chemicals present at a specific site.

* = There are no surface water standards for these individual polycyclic aromatic hydrocarbons. Per Chapter 62-302, F.A.C., the surface water criterion for PolycyclicAromatic Hydrocarbons (PAHs) shall apply to the total concentration of Acenaphthylene, Benzo(a)anthracene, Benzo(a)pyrene, Benzo(fluoranthene, Benzo(g,i,h) perylene, Benzo(k)fluoranthene, Chrysene, Dibenzo(a,h,)anthracene, Indenol(1,2,3-cd)pyrene, and Phenanthrene.

** = Groundwater CTLs for Class C carcinogens with no cancer slope factor were developed using the referenced dose divided by a factor of 10, as described in the DERM Technical Report: Development of Cleanup Target Levels (CTLs) for Chapter 24, of the Code of Miami-Dade County (September 2005).

(a) = Freshwater surface water criterion for Ammonia based on un-ionized ammonia only. All other water criteria for ammonia are based on total ammonia.

(b) = The common name BHC is a misnomer for Hexachlorocyclohexane.

(c) = Criteria for Dioxins, as total 2,3,7,8-TCDD equivalents shall be compared to the total dioxin equivalents for chlorinated dioxin and dibenzofuran congeners using the approach set forth in the DERM Technical Report: Development of Cleanup Target Levels (CTLs) for Chapter 24 of the Code of Miami-Dade County (September 2005).

(d) = Surface water values protective of human health for Vinyl chloride calculated assuming continuous lifetime exposure from birth as described in the DERM Technical Report: Development of Cleanup Target Levels (CTLs) for Chapter 24 of the Code of Miami-Dade County (September 2005).

(e) = Not to exceed 10% above ambient, as set forth in Sec. 24-42(4).

(f) = Hardness-dependent as set forth in Chapter 62-302, F.A.C.

(g) = Criteria for these metals are measured as total recoverable metal. However, they may be applied as dissolved metals when, as part of a permit application, a dissolved metals translator has been established according to the procedures set forth in the document, "Guidance for Establishing a Metals Translator", Florida Department of Environmental Protection, December 17, 2001.

(h) = In the absence of concentration data specific for the III and VI valence states of chromium, total chromium concentrations in surface water shall be compared to the criteria for Chromium (hexavalent).

(i) = 12789-03-6 or 57-74-9

NA = Not available.

None Specified = Target organ(s) not available.

Note: Freshwater and marine surface waters, and groundwater at the point of discharge into surface water shall pass acute and chronic toxicity bioassay tests: The user shall consult the standard definitions for acute and chronic toxicity set forth in F.A.C. 62-302.200(1) and F.A.C. 62-302.200(4), respectively.

Table 2 Soil Clean-up Target Levels

Contaminants	CAS#	Direct Exposure		Leachability Based on			Target Organs/Systems
		Residential	Commercial/ Industrial	Groundwater	Fresh Surface Water	Marine Surface Water	or Effects#
Acenaphthene	83-32-9	2400	20000	2.1	0.3	0.3	-Liver

Acenaphthylene	208-96-8	1800	20000	27	NA	NA	-Liver
Acephate	30560-19-1	120	720	0.02	0.8	0.8	-Cancer -Neurological
Acetaldehyde	75-07-0	15	20	NA	NA	NA	-Nasal
Acetone	67-64-1	11000	68000	25	6.8	6.8	-Kidney -Liver -Neurological
Acetophenone	98-86-2	3900	32000	3.9	44	44	-None Specified
Acifluorfen, sodium [or Blazer]	62476-59-9	28	140	0.1	25	25	-Kidney
Acrolein	107-02-8	0.05	0.3	0.01	0.002	0.002	-Nasal
Acrylamide	79-06-1	0.1	0.4	0.00003	0.001	0.001	-Cancer -Neurological
Acrylic acid	79-10-7	48	250	14	NA	NA	-Developmental
Acrylonitrile	107-13-1	0.3	0.6	0.0003	0.001	0.001	Cancer -Nasal -Reproductive
Alachlor	15972-60-8	11	44	0.02	0.005	0.005	-Cancer -Blood
Aldicarb [or Temik]	116-06-3	68	920	0.03	0.004	0.004	-Neurological
Aldrin	309-00-2	0.06	0.3	0.2	0.01	0.01	-Cancer -Liver
Ally [or Metsulfuron, methyl]	74223-64-6	19000	300000	12	NA	NA	-Body Weight
Allyl alcohol	107-18-6	140	970	0.1	0.02	0.02	-Kidney -Liver
Allyl chloride	107-05-1	0.5	2.7	0.2	NA	NA	-Neurological
Aluminum	7429-90-5	80000	*	***	***	***	-Body Weight
Aluminum phosphide	20859-73-8	35	880	***	***	***	-Body Weight
Ametryn	834-12-8	670	11000	0.8	0.08	0.08	-Liver
Ammonia (a)	7664-41-7	NA	NA	NA	***	NA	-Respiratory
Ammonia (as Total)	7664-41-7	4400	26,400	***	***	***	-Respiratory
Aniline	62-53-3	27	150	0.03	0.02	0.02	-Cancer -Blood -Spleen
Anthracene	120-12-7	21000	300000	2500	0.4	0.4	-None Specified

Antimony (b)	7440-36-0	27	370	5.4	3900	3900	-Blood
Aroclor mixture [see PCBs]							
Arsenic	NOCAS	2.1	12	***	***	***	-Cancer -Cardiovascular -Skin
Atrazine	1912-24-9	4.3	19	0.06	0.04	0.04	Cancer -Cardiovascular
Azinphos, methyl [see Guthion]							
Azobenzene	103-33-3	7.9	31	0.03	0.4	0.4	-Cancer
Barium (soluble salts) (b)	7440-39-3	120**	130000	1600	NA	NA	-Cardiovascular
Baygon [or Propoxur]	114-26-1	280	4100	0.2	0.002	0.002	-Blood -Neurological
Bayleton	43121-43-3	2400	46000	4.8	11	11	-Blood
Benomyl	17804-35-2	4000	77000	3.1	0.03	0.03	-Developmental
Bentazon	25057-89-0	2100	32000	1.2	NA	NA	-Blood
Benzaldehyde	100-52-7	3300	24000	4.8	0.4	0.4	-Gastrointestinal -Kidney
Benzene	71-43-2	1.2	1.7	0.007	0.5	0.5	-Cancer -Blood
Benzenethiol	108-98-5	0.2	1.3	0.001	NA	NA	-Liver
Benzidine	92-87-5	0.004	0.02	0.00002	0.00002	0.00002	-Cancer -Liver -Neurological
Benzo(a)anthracene	56-55-3	##	##	0.8	NA	NA	-Cancer
Benzo(a)pyrene	50-32-8	0.1	0.7	8	NA	NA	-Cancer
Benzo(b)fluoranthene	205-99-2	##	##	2.4	NA	NA	-Cancer
Benzo(g,h,i)perylene	191-24-2	2500	52000	32000	NA	NA	-Neurological
Benzo(k)fluoranthene	207-08-9	##	##	24	NA	NA	-Cancer
Benzoic acid	65-85-0	180000	*	110	36	36	-None Specified
Benzotrichloride	98-07-7	0.04	0.09	0.0001	0.00008	0.00008	-Cancer
Benzyl alcohol	100-51-6	26000	670000	9.5	2.3	2.3	-Gastrointestinal

Benzyl chloride	100-44-7	1	1.6	0.002	0.02	0.02	-Cancer
Beryllium (b)	7440-41-7	120	1400	63	2.1	2.1	-Cancer -Gastrointestinal -Respiratory
Betanal [see Phenmedipham]							
BHC, alpha- [see Hexachloro cyclohexane, alpha-] (f)							
BHC, beta- [see Hexachloro cyclohexane, beta-] (f)							
BHC, delta- [see Hexachloro cyclohexane, delta-] (f)							
BHC, gamma- [see Hexachloro cyclohexane, gamma-] (f)							
Bidrin [or Dicrotophos]	141-66-2	7.4	120	0.005	0.1	0.1	-Developmental
Biphenyl, 1,1- [or Diphenyl]	92-52-4	3000	34000	0.2	5.8	5.8	-Kidney
Bis(2-chloro-1-methylethyl)ether [see Bis(2-chloroisopropyl)ether]							
Bis(2-chloroethoxy)methane	111-91-1	250	5700	63	NA	NA	-Liver
Bis(2-chloroethyl)ether	111-44-4	0.3	0.5	0.0001	0.002	0.002	-Cancer
Bis(2-chloroisopropyl)ether [or Bis(2-chloro-1-methylethyl)ether]	39638-32-9	6	12	0.009	0.4	0.4	-Cancer -Blood
Bis(2-ethylhexyl)adipate	103-23-1	620	1900	780	64	64	-Cancer -Body Weight
Bis(2-ethylhexyl)phthalate [or DEHP]	117-81-7	72	390	3600	1300	1300	-Cancer -Liver
Bisphenol A	80-05-7	4000	79000	11	1.7	1.7	-Body Weight
Blazer [see Acifluorfen, sodium]							
Boron	7440-42-8	17000	430000	***	NA	NA	-Reproductive -Respiratory
Bravo [see Chlorothalonil]							
Bromacil	314-40-9	7500	120000	0.5	0.6	0.6	-Body Weight
Bromate	15541-45-4	1	2.8	0.04	NA	460	-Cancer -Kidney
Bromochloromethane	74-97-5	95	530	0.6	NA	NA	-None Specified

Bromodichloromethane	75-27-4	1.5	2.2	0.004	0.1	0.1	Cancer -Kidney
Bromoform	75-25-2	48	93	0.03	2.7	2.7	-Cancer -Liver
Bromomethane [or Methyl bromide]	74-83-9	3.1	16	0.05	0.2	0.2	-Gastrointestinal -Respiratory
Bromoxynil	1689-84-5	1600	29000	3	NA	NA	-None Specified
Butanol, n-	71-36-3	2900	21000	3	110	110	-Neurological
Butanol, tert- [see Butyl alcohol, tert-]							
Butanone, 2- [see Methyl ethyl ketone]							
Butyl alcohol, tert- [or Butanol, tert-]	75-65-0	3200	19000	5.7	NA	NA	-Kidney -Neurological
Butyl benzyl phthalate	85-68-7	17000	380000	310	56	56	-Liver
Butylate	2008-41-5	3200	40000	5.2	0.2	0.2	-Liver
Butylbenzene, n-	104-51-8	410	2400	21	NA	NA	-Kidney -Liver -Neurological
Butylbenzene, sec	135-98-8	360	2000	19	NA	NA	-Kidney -Neurological
Butylbenzene, tert	98-06-6	360	2100	15	NA	NA	-Kidney -Neurological
Butylphthalyl butylglycolate	85-70-1	84000	*	4200	NA	NA	-None Specified
Cadmium (b,c,h)	7440-43-9	82	1700	7.5	(k)	14	Cancer -Kidney
Calcium cyanide	592-01-8	3500	88000	***	NA	NA	-Neurological -Thyroid
Captafol	2425-06-1	110	570	0.5	0.1	0.1	-Cancer -Kidney
Captan	133-06-2	230	750	0.1	0.03	0.03	-Cancer -Body Weight
Carbaryl [or Sevin]	63-25-2	7700	130000	8.7	0.0007	0.0007	-Kidney -Liver
Carbazole	86-74-8	49	240	0.2	6.5	6.5	-Cancer
Carbofuran	1563-66-2	130	910	0.2	0.0006	0.0006	-Neurological -Reproductive
Carbon disulfide	75-15-0	270	1500	5.6	0.8	0.8	-Developmental -Neurological
Carbon tetrachloride	56-23-5	0.5	0.7	0.04	0.06	0.06	-Cancer -Liver
Carbophenothion [or Trithion]	786-19-6	11	250	13	1.5	1.5	-Neurological

Carboxin	5234-68-4	7400	120000	5	0.4	0.4	-Body Weight
CFC 113 [see Trichloro-1,2,2-trifluoroethane, 1,1,2-]							-Adrenals
Chloral hydrate	302-17-0	5700	62000	0.3	NA	NA	-Gastrointestinal -Neurological
Chloramben	133-90-4	960	12000	0.5	NA	NA	-Liver
Chlordane (total)	(j)	2.8	14	9.6	0.003	0.003	-Cancer -Liver
Chlorine cyanide [or Cyanogen chloride]	506-77-4	3100	37000	71	0.3	0.3	-Neurological -Thyroid
Chloro-1, 1-difluoroethane, 1-	75-68-3	16000	84000	NA	NA	NA	-None Specified
Chloro-1,3-butadiene [or Chloroprene]	126-99-8	3.5	19	1.5	NA	NA	-Hair Loss -Nasal
Chloro-3-methylphenol, 4- [see Chloro-m-cresol, p-]							
Chloroacetic acid	79-11-8	130	1700	0.07	13	13	-Cardiovascular
Chloroaniline, p-	106-47-8	270	3700	0.2	0.02	0.02	-Spleen
Chlorobenzene	108-90-7	120	650	1.3	0.2	0.2	-Liver
Chlorobenzilate	510-15-6	3.6	18	0.1	0.01	0.01	-Cancer -Body Weight
Chlorobenzoic acid, p-	74-11-3	16000	290000	28	NA	NA	-None Specified
Chlorobenzotrifluoride, 4-	98-56-6	130	710	5.2	NA	NA	-Kidney
Chlorobutane, 1-	109-69-3	780	4200	26	NA	NA	-Blood -Neurological
Chlorodifluoromethane	75-45-6	16000	82000	NA	NA	NA	-Adrenals -Kidney -Pituitary
Chloroethane [see Ethyl chloride]							
Chloroform	67-66-3	0.4	0.6	0.4	2.8	2.8	Cancer -Liver
Chloro-m-cresol, p- [or Chloro-3-methylphenol, 4-]	59-50-7	600	8000	0.4	0.6	0.6	-Body Weight
Chloromethane [see Methyl chloride]							
Chloronaphthalene, beta-	91-58-7	5000	61000	260	740	740	-Liver -Respiratory
Chloronitrobenzene, o-	88-73-3	22	51	0.02	NA	NA	Cancer
Chloronitrobenzene, p-	100-00-5	31	73	0.03	1.6	1.6	Cancer

Chlorophenol, 2-	95-57-8	130	860	0.7	2.5	2.5	-Reproductive
Chlorophenol, 3-	108-43-0	370	5900	0.002	3.1	3.1	-Reproductive
Chlorophenol, 4-	106-48-9	330	4400	0.0007	1.2	1.2	-Reproductive
Chloroprene [see Chloro-1,3-butadiene]							
Chloropropane, 2-	75-29-6	47	250	NA	NA	NA	-Liver
Chlorothalonil [or Bravo]	1897-45-6	88	420	0.2	0.06	0.06	-Cancer -Kidney
Chlorotoluene, o-	95-49-8	200	1200	2.8	7.7	7.7	-Body Weight
Chlorotoluene, p-	106-43-4	170	990	2.5	NA	NA	-None Specified
Chlorpropham	101-21-3	16000	310000	51	7	7	-Bone Marrow -Kidney -Liver -Spleen
Chlorpyrifos	2921-88-2	250	5000	15	0.001	0.001	-Neurological
Chromium (hexavalent) (b)	18540-29-9	310	470	NA	4.2	19	-Cancer -Respiratory
Chromium (total) (b,g)	NOCAS	310	470	38	4.2	19	-Cancer
Chromium (trivalent) (b)	16065-83-1	110000	*	NA	NA	*	-None Specified
Chrysene	218-01-9	##	##	77	NA	NA	-Cancer
Cobalt	7440-48-4	1700	42000	***	NA	NA	-Cardiovascular -Immunological - Neurological -Reproductive
Copper	7440-50-8	150**	89000	***	(k)	***	-Gastrointestinal
Coumaphos	56-72-4	21	450	0.3	0.0007	0.0007	-Neurological
Cresol, m- [see Methylphenol, 3-]							
Cresol, o- [see Methylphenol, 2-]							
Cresol, p- [see Methylphenol, 4-]							
Crotonaldehyde	123-73-9	0.6	3.3	0.00008	NA	NA	-Cancer
Cumene [or Isopropyl benzene]	98-82-8	220	1200	0.2	56	56	-Adrenals -Kidney
Cyanide, free (b)	57-12-5	34**	11000	0.56	0.02	0.004	-Neurological -Thyroid

Cyanogen	460-19-5	560	3400	57	NA	NA	-Neurological -Thyroid
Cyanogen chloride [see Chlorine cyanide]							
Cycloate	1134-23-2	340	4700	0.7	2.5	2.5	-Neurological
Cyclohexanone	108-94-1	150000	*	150	110	110	
Cyclohexylamine	108-91-8	18000	440000	7.9	22	22	-Reproductive
Cyhalothrin [or Karate]	68085-85-8	420	9600	290	150	150	-Developmental
Cymene, p- (or Isopropyltoluene)	99-87-6	960	5600	NA	NA	NA	-Gastrointestinal -Neurological -Skin
Cypermethrin	52315-07-8	840	19000	30	0.002	0.002	-Gastrointestinal
DBCP, 1,2- [see Dibromo-3-chloropropane, 1,2-]							
DDD, 4,4'- [see Dichlorodiphenyl dichloroethane, p,p']							
DDE, 4,4'- [see Dichlorodiphenyl dichloroethylene, p,p']							
DDT, 4,4'- [see Dichlorodiphenyl dichloroethane, p,p']							
Decabromodiphenyl ether	1163-19-5	840	19000	9.3	NA	NA	-None Specified
DEHP [see Bis(2-ethylhexyl)phthalate]							
Diallate	2303-16-4	16	82	0.6	NA	NA	-Cancer -None Specified
Diazinon	333-41-5	70	1200	0.2	0.00005	0.00005	-Neurological
Dibenz(a,h)anthracene	53-70-3	##	##	0.7	NA	NA	-Cancer
Dibenzofuran	132-64-9	320	6300	15	36	36	-None Specified
Dibromo-3-chloropropane, 1,2- [or DBCP, 1,2-]	96-12-8	0.7	3.8	0.001	NA	NA	-Cancer -Reproductive
Dibromobenzene, 1,4-	106-37-6	430	3600	7.8	27	27	-Liver
Dibromochloromethane	124-48-1	1.5	2.3	0.003	0.2	0.2	-Cancer -Liver
Dibromoethane, 1,2- [or EDB]	106-93-4	0.1	0.2	0.0001	0.07	0.07	-Cancer -Reproductive
Dibutyl phthalate	84-74-2	8200	170000	47	1.5	1.5	-Mortality

Dicamba	1918-00-9	2300	40000	2.6	2.4	2.4	-Developmental
Dichloroacetic acid	79-43-6	21	120	0.005	8.1	8.1	-Cancer -Liver -Neurological -Reproductive
Dichloroacetonitrile	3018-12-0	340	2900	0.03	NA	NA	-None Specified
Dichlorobenzene, 1,2-	95-50-1	880	5000	17	2.8	2.8	-Body Weight
Dichlorobenzene, 1,3-	541-73-1	380	2200	7	2.8	2.8	-None Specified
Dichlorobenzene, 1,4-	106-46-7	6.4	9.9	2.2	0.09	0.09	-Cancer -Liver
Dichlorobenzidine, 3,3'-	91-94-1	2.1	9.9	0.003	0.0009	0.0009	Cancer
Dichlorobenzophenone, 4,4'-	90-98-2	2500	51000	25	190	190	-None Specified
Dichlorodifluoromethane	75-71-8	77	410	44	NA	NA	-Liver
Dichlorodiphenyl-dichloroethane, p,p'- [or DDD, 4,4'-]	72-54-8	4.2	22	5.8	0.01	0.01	Cancer
Dichlorodiphenyl-dichloroethylene, p,p'- [or DDE, 4,4'-]	72-55-9	2.9	15	18	0.04	0.04	Cancer
Dichlorodiphenyl-trichloroethane, p,p'- [or DDT, 4,4'-]	50-29-3	2.9	15	11	0.06	0.06	-Cancer -Liver
Dichloroethane, 1,1-	75-34-3	390	2100	0.4	NA	NA	-Kidney
Dichloroethane, 1,2- [or EDC]	107-06-2	0.5	0.7	0.01	0.2	0.2	-Cancer -None Specified
Dichloroethene, 1,1-	75-35-4	95	510	0.06	0.03	0.03	-Liver
Dichloroethene, cis-1,2-	156-59-2	33	180	0.4	NA	NA	-Blood
Dichloroethene, trans-1,2-	156-60-5	53	290	0.7	75	75	-Blood -Liver
Dichlorophenol, 2,3-	576-24-9	230	4100	0.0008	1.2	1.2	-Immunological
Dichlorophenol, 2,4-	120-83-2	190	2400	0.003	0.1	0.1	-Immunological
Dichlorophenol, 2,5-	583-78-8	240	4600	0.02	4.3	4.3	-Immunological
Dichlorophenol, 2,6-	87-65-0	220	3600	0.007	2.5	2.5	-Immunological
Dichlorophenol, 3,4-	95-77-2	230	3700	0.01	2	2	-Immunological
Dichlorophenoxy acetic acid, 2,4-	94-75-7	770	13000	0.7	0.9	0.9	-Blood -Kidney -Liver
Dichloropropane, 1,2-	78-87-5	0.6	0.9	0.03	0.09	0.09	-Cancer -Nasal

Dichloropropene, 1,3-	542-75-6	1.4	2.2	0.002	0.09	0.09	-Cancer -Gastrointestinal -Nasal
Dichlorprop	120-36-5	370	5800	0.3	0.3	0.3	-None Specified
Dichlorvos	62-73-7	0.3	0.4	0.0006	0.00002	0.00002	-Cancer -Neurological
Dicofol [or Kelthane]	115-32-2	2.2	11	0.01	0.0008	0.0008	-Cancer -Adrenals
Dicrotophos [see Bidrin]							
Dieldrin	60-57-1	0.06	0.3	0.002	0.0001	0.0001	-Cancer -Liver
Diethyl phthalate	84-66-2	61000	*	86	5.9	5.9	-Body Weight
Diethylene glycol, monoethyl ether	111-90-0	130000	*	63	750	750	-Kidney
Diisopropyl methylphosphonate	1445-75-6	4500	49000	3.6	85	85	-None Specified
Dimethoate	60-51-5	13	170	0.006	0.0004	0.0004	-Neurological
Dimethoxybenzidine, 3,3'-	119-90-4	69	330	0.2	NA	NA	-Cancer
Dimethrin	70-38-2	24000	440000	2500	1.3	1.3	-Liver
Dimethylaniline, 2,4-	95-68-1	0.5	1	0.0005	19	19	-Cancer -Blood -Spleen
Dimethylaniline, N,N-	121-69-7	55	380	0.1	12	12	-Spleen
Dimethylbenzidine, 3,3'-	119-93-7	0.1	0.6	0.001	NA	NA	-Cancer
Dimethylformamide, N,N-	68-12-2	1400	8600	3	210	210	-Gastrointestinal -Liver
Dimethylphenol, 2,4-	105-67-9	1300	18000	1.7	1.9	1.9	-Blood -Neurological
Dimethylphenol, 2,6-	576-26-1	34	370	0.04	5.2	5.2	-Kidney -Liver -Spleen
Dimethylphenol, 3,4-	95-65-8	71	1000	0.06	3.4	3.4	-Kidney -Liver -Spleen
Dimethylphthalate	131-11-3	690000	*	380	7.8	7.8	-Kidney
Dinitrobenzene, 1,2- (o)	528-29-0	23	240	0.01	0.2	0.2	-Spleen
Dinitrobenzene, 1,3- (m)	99-65-0	5.8	64	0.004	0.4	0.4	-Spleen
Dinitrobenzene, 1,4- (p)	100-25-4	35	890	0.04	0.4	0.4	-Spleen
Dinitro-o-cresol, 4,6-	534-52-1	8.4	180	0.4	NA	NA	-Metabolic Disorders
Dinitrophenol, 2,4-	51-28-5	110	1200	0.06	0.01	0.01	-Eye

Dinitrotoluene, 2,4-	121-14-2	1.2	4.3	0.0004	0.07	0.07	-Cancer -Liver -Neurological
Dinitrotoluene, 2,6-	606-20-2	1.2	3.8	0.0004	0.005	0.005	-Cancer -Blood -Kidney -Neurological
Di-n-octylphthalate	117-84-0	1700	39000	480000	NA	NA	-Kidney -Liver
Dinoseb	88-85-7	65	840	0.03	0.03	0.03	-Developmental
Dioxane, 1,4-	123-91-1	23	38	0.01	0.5	0.5	-Cancer
Dioxins, as total 2,3,7,8-TCDD equivalents (e)	1746-01-6	7E-6	3E-5	0.003	6E-7	6E-7	-Cancer
Diphenamid	957-51-7	2300	41000	2.6	20	20	-Liver
Diphenyl [see Biphenyl, 1,1-]							
Diphenylamine, N,N-	122-39-4	2000	40000	14	NA	NA	-Kidney -Liver
Diphenylhydrazine, 1,2-	122-66-7	1.1	4.8	0.002	0.007	0.007	-Cancer
Diquat	85-00-7	190	4300	800	60	60	-Eye
Disulfoton	298-04-4	3.3	66	0.09	0.1	0.1	-Neurological
Diuron	330-54-1	150	2300	0.3	0.2	0.2	-Blood
EDB [see Dibromoethane, 1,2-]							
EDC [see Dichloroethane, 1,2-]							
Endosulfan (alpha+beta+sulfate)	115-29-7	450	7600	3.8	0.005	0.0008	-Cardiovascular -Kidney
Endothall	145-73-3	1800	44000	0.4	0.4	0.4	-Gastrointestinal
Endrin	72-20-8	25	510	1	0.001	0.001	-Liver
EPEG [see Ethylphthalyl ethylglycolate]							
Epichlorohydrin	106-89-8	14	80	0.03	1.1	1.1	-Cancer -Kidney -Nasal
EPN [see Ethyl p-nitrophenyl phenylphosphorothioate]							
EPTC [see Ethyl dipropylthiocarbamate, S-]							
Ethanol	64-17-5	*	*	40	NA	NA	-Developmental
Ethion	563-12-2	42	920	1.7	0.003	0.003	-Neurological

Ethoprop	13194-48-4	7.4	120	0.005	0.002	0.002	-Neurological
Ethoxyethanol acetate, 2-	111-15-9	14000	130000	8.8	8.4	8.4	-Developmental
Ethoxyethanol, 2-	110-80-5	10000	72000	13	NA	NA	-Reproductive
Ethyl acetate	141-78-6	9100	53000	26	26	26	-Body Weight
Ethyl acrylate	140-88-5	2	3	0.002	0.6	0.6	-Cancer
Ethyl chloride [or Chloroethane]	75-00-3	3.9	5.4	0.06	NA	NA	-Cancer -Developmental
Ethyl dipropylthiocarbamate, S- [or EPTC]	759-94-4	1400	14000	11	15	15	-Cardiovascular
Ethyl ether	60-29-7	260	1400	5	850	850	-Body Weight
Ethyl methacrylate	97-63-2	630	3500	3.5	NA	NA	-Kidney
Ethyl p-nitrophenyl phenylphosphorothioate [or EPN]	2104-64-5	0.8	18	0.02	0.003	0.003	-Neurological
Ethylbenzene	100-41-4	1500	9200	0.6	12	12	-Developmental -Kidney -Liver
Ethylene diamine	107-15-3	1100	11000	0.6	3.2	3.2	-Blood -Cardiovascular
Ethylene glycol	107-21-1	110000	*	56	65	65	-Kidney
Ethylene oxide	75-21-8	0.3	0.4	0.0002	20	20	-Cancer
Ethylene thiourea [or ETU]	96-45-7	7	57	0.001	5.6	5.6	-Cancer -Thyroid
Ethylphthalyl ethylglycolate [or EPEG]	84-72-0	260000	*	1200	NA	NA	-Kidney
Ethyltoluene, o-	622-96-8	320	1900	8.1	NA	NA	-Body Weight -Liver
Ethyltoluene, p-	611-14-3	330	1900	8.1	NA	NA	-Body Weight -Liver
ETU [see Ethylene thiourea]							
Fenamiphos	22224-92-6	19	340	0.02	0.003	0.003	-Neurological
Fensulfothion	115-90-2	19	310	0.01	0.004	0.004	-Neurological
Fenvalerate [see Pydrin]							
Fluometuron	2164-17-2	980	16000	0.9	1.8	1.8	-None Specified
Fluoranthene	206-44-0	3200	59000	1200	1.3	1.3	-Blood -Kidney -Liver

Fluorene	86-73-7	2600	33000	160	17	17	-Blood
Fluoride	7782-41-4	840**	130000	6000	30000	15000	-Teeth mottling
Fluoridone	59756-60-4	7000	180000	2500	460	460	-Kidney -Reproductive
Fonofos	944-22-9	140	2100	0.4	0.003	0.003	-Liver -Neurological
Formaldehyde	50-00-0	23	31	2.4	0.4	0.4	-Cancer -Gastrointestinal
Furan	110-00-9	4.8	26	0.09	NA	NA	-Liver
Furfural	98-01-1	190	2400	0.09	2.7	2.7	-Liver -Nasal
Glycidaldehyde	765-34-4	15	120	0.01	NA	NA	-Adrenals -Blood -Kidney
Glyphosate [or Roundup]	1071-83-6	8800	220000	3.3	0.5	0.5	-Kidney
Guthion [or Methyl azinphos]	86-50-0	120	2400	0.2	0.0002	0.0002	-Neurological
Heptachlor	76-44-8	0.2	1	23	0.01	0.01	-Cancer -Liver
Heptachlor epoxide	1024-57-3	0.1	0.5	0.6	0.0001	0.0001	-Cancer -Liver
Hexachloro-1,3-butadiene	87-68-3	6.2	13	1	110	110	-Cancer -Kidney
Hexachlorobenzene	118-74-1	0.4	1.2	2.2	0.0006	0.0006	-Cancer -Liver
Hexachlorocyclohexane, alpha- [or BHC, alpha-]	319-84-6	0.1	0.6	0.0003	0.0003	0.0003	-Cancer
Hexachlorocyclohexane, beta- [BHC, beta-]	319-85-7	0.5	2.4	0.001	0.003	0.003	-Cancer
Hexachlorocyclohexane, delta- [or BHC, delta-]	319-86-8	24	490	0.2	NA	NA	-Kidney -Liver
Hexachlorocyclohexane, gamma- [or Lindane or BHC, gamma-]	58-89-9	0.7	2.5	0.009	0.003	0.003	-Cancer -Kidney -Liver
Hexachlorocyclopentadiene	77-47-4	9.5	50	400	24	24	-Gastrointestinal
Hexachloroethane	67-72-1	38	87	0.2	0.2	0.2	-Cancer -Kidney
Hexachlorophene	70-30-4	26	670	53	26	26	-Neurological
Hexahydro-1,3,5-trinitro-1,3,5- triazine [or RDX]	121-82-4	7.7	28	0.002	1.3	1.3	-Cancer -Reproductive
Hexane, n-	110-54-3	680	3900	2.1	1200	1200	-Neurological
Hexanone, 2- [or Methyl butyl ketone]	591-78-6	24	130	1.4	NA	NA	-None Specified

Hexazinone	51235-04-2	2300	32000	1.1	120	120	-Body Weight
Hydroquinone	123-31-9	2600	35000	1.4	0.02	0.02	-Blood
Indeno(1,2,3-cd)pyrene	193-39-5	##	##	6.6	NA	NA	-Cancer
Iron	7439-89-6	53000	*	***	***	***	-Gastrointestinal
Isobutyl alcohol	78-83-1	6400	42000	8.9	200	200	-Neurological
Isophorone	78-59-1	540	1200	0.2	3.8	3.8	-Cancer -None Specified
Isopropyl benzene [see Cumene]							
Isopropyl toluene [see p-Cymene]							
Karate [see Cyhalothrin, lambda]							
Kelthane [see Dicofol]							
Lead (d)	7439-92-1	400	1400	***	(k)	***	-Neurological
Limonene	138-86-3	640	3600	42	NA	NA	-Kidney -Liver
Lindane [see Hexachlorocyclohexane, gamma-]							
Linuron	330-55-2	160	3100	0.04	1.4	1.4	-Blood
Lithium	7439-93-2	1700	44000	***	NA	NA	-None Specified
Malathion	121-75-5	1500	24000	4.2	0.003	0.003	-Neurological
Maleic anhydride	108-31-6	3200	24000	2.8	NA	NA	-Kidney
Maleic hydrazide	123-33-1	1000	5400	16	3.4	3.4	-Kidney
Malonitrile	109-77-3	1.2	13	0.0006	NA	NA	-Liver -Spleen
Maneb	12427-38-2	410	8400	2.9	0.5	0.5	-Thyroid
Manganese	7439-96-5	3500	43000	***	NA	NA	-Neurological
MCPA [see Methyl-4- chlorophenoxy acetic acid, 2-]							

MCPP [see Propionic acid, 2-(2-methyl-4-chlorophenoxy)]							
Mercury (c)	7439-97-6	3	17	2.1	0.01	0.03	-Neurological
Mercury, methyl- [see Methylmercury]							
Merphos	150-50-5	2.5	52	0.5	NA	NA	-Neurological
Merphos oxide	78-48-8	2.5	56	0.3	0.3	0.3	-Neurological
Methacrylonitrile	126-98-7	1	5.9	0.003	NA	NA	-Liver
Methamidophos	10265-92-6	3.1	36	0.001	0	0	-Neurological
Methanol	67-56-1	13000	90000	14	180	180	-Developmental -Eye -Neurological
Methidathion	950-37-8	68	950	0.003	0.0001	0.0001	-Liver
Methomyl	16752-77-5	38	200	1.2	0.007	0.007	-Kidney -Spleen
Methoxy-5-nitroaniline, 2-	99-59-2	19	71	0.006	NA	NA	-Cancer
Methoxychlor	72-43-5	420	8800	160	0.1	0.1	-Developmental -Reproductive
Methyl acetate	79-20-9	6800	38000	16	NA	NA	-Liver
Methyl acrylate	96-33-3	260	1500	0.9	NA	NA	-None Specified
Methyl azinphos [see Guthion]							
Methyl bromide [see Bromomethane]							
Methyl butyl ketone [see Hexanone, 2-]							
Methyl chloride [or Chloromethane]	74-87-3	4	5.7	0.01	2.3	2.3	-Cancer -Neurological
Methyl chloroform [see Trichloroethane, 1,1,1-]							
Methyl ethyl ketone [or Butanone, 2-]	78-93-3	16000	110000	17	490	490	-Developmental
Methyl isobutyl ketone [or MIBK]	108-10-1	4300	44000	2.6	110	110	-Kidney -Liver
Methyl methacrylate	80-62-6	1900	10000	0.1	32	32	-Nasal
Methyl parathion [or Parathion, methyl]	298-00-0	20	370	0.06	0.0003	0.0003	-Blood -Neurological

Methyl styrene (mixed)	25013-15-4	120	770	0.8	NA	NA	-Nasal
Methyl styrene, alpha	98-83-9	1500	10000	11	NA	NA	-Kidney -Liver
Methyl tert-butyl ether [or MTBE]	1634-04-4	4400	24000	0.09	150	150	-Eye -Kidney -Liver
Methyl-4-chlorophenoxy acetic acid, 2- [or MCPA]	94-74-6	35	500	0.02	0.4	0.4	-Kidney -Liver
Methylaniline, 2-	95-53-4	2.6	6.4	0.0009	0.2	0.2	-Cancer
Methylene bis(2-chloroaniline), 4,4-	101-14-4	6.4	23	0.001	NA	NA	-Cancer -Liver -Bladder
Methylene bromide	74-95-3	96	550	0.3	NA	NA	-Blood
Methylene chloride	75-09-2	17	26	0.02	7.3	7.3	-Cancer -Liver
Methylene diphenyl diisocyanate	101-68-8	400	2100	NA	NA	NA	-Nasal
Methylmercury [or Mercury, methyl]	22967-92-6	1.1	6.1	0.002	NA	NA	-Neurological
Methylnaphthalene, 1-	90-12-0	200	1800	3.1	10	10	-Nasal
Methylnaphthalene, 2-	91-57-6	210	2100	8.5	9.1	9.1	-Nasal
Methylphenol, 2- [or Cresol, o-]	95-48-7	2900	31000	0.3	1.9	1.9	-Neurological
Methylphenol, 3- [or Cresol, m-]	108-39-4	2900	33000	0.3	3.3	3.3	-Neurological
Methylphenol, 4- [or Cresol, p-]	106-44-5	300	3400	0.03	0.5	0.5	-Neurological -Respiratory
Metolachlor	51218-45-2	12000	200000	1.2	0.01	0.01	-Body Weight
Metribuzin	21087-64-9	54	290	2.2	0.8	0.8	-Kidney -Liver
Metsulfuron, methyl [see Ally]							
Mevinphos	7786-34-7	18	270	0.01	0.0003	0.0003	-Neurological
MIBK [see Methyl isobutyl ketone]							
Molinate	2212-67-1	120	1300	0.1	0.1	0.1	-Reproductive
Molybdenum	7439-98-7	440	11000	***	NA	NA	-Gout
MTBE [see Methyl tert-butyl ether]							

Naled	300-76-5	150	2400	0.1	0.0002	0.0002	-Neurological
Naphthalene	91-20-3	55	300	1.2	2.2	2.2	-Nasal
Nickel (b,c)	7440-02-0	340**	35000	130	(k)	11	-Body Weight
Nitrate	14797-55-8	140000	*	***	NA	NA	-Blood
Nitrite	14797-65-0	8700	220000	***	NA	NA	-Blood
Nitroaniline, m-	99-09-2	21	130	0.01	NA	NA	-Cancer -Blood
Nitroaniline, o-	88-74-4	24	130	0.1	NA	NA	-Blood
Nitroaniline, p-	100-01-6	17	96	0.008	5.9	5.9	-Cancer -Blood
Nitrobenzene	98-95-3	18	140	0.02	0.6	0.6	-Adrenals -Blood -Kidney -Liver
Nitroglycerin	55-63-0	27	54	0.03	NA	NA	Cancer -Cardiovascular
Nitrophenol, 4-	100-02-7	560	7900	0.3	0.3	0.3	-None Specified
Nitroso-di-ethylamine, N-	55-18-5	0.003	0.005	0.000001	0.00003	0.00003	-Cancer
Nitroso-dimethylamine, N-	62-75-9	0.009	0.02	0.000003	0.01	0.01	-Cancer
Nitroso-di-n-butylamine, N-	924-16-3	0.05	0.08	0.00009	0.0005	0.0005	-Cancer
Nitroso-di-n-propylamine, N-	621-64-7	0.08	0.2	0.00005	0.005	0.005	-Cancer
Nitroso-diphenylamine, N-	86-30-6	180	730	0.4	0.3	0.3	-Cancer
Nitroso-N-methylethylamine, N-	10595-95-6	0.02	0.04	0.000006	0.0002	0.0002	-Cancer
Nitrotoluene, m-	99-08-1	640	4700	1.4	3.6	3.6	-Spleen
Nitrotoluene, o-	88-72-2	400	3300	0.9	7.3	7.3	-Spleen
Nitrotoluene, p-	99-99-0	750	12000	0.9	7.3	7.3	-Spleen
Nonylphenol	25154-52-3	100	2200	20	14	3.4	-Kidney
Octamethylpyro-phosphoramidate	152-16-9	130	1600	0.06	NA	NA	-Neurological
Oxamyl	23135-22-0	1700	22000	0.9	0.04	0.04	-Body Weight

Paraquat	1910-42-5	340	5500	16	230	230	-Respiratory
Parathion	56-38-2	500	11000	1	0.01	0.01	-Neurological
Parathion, methyl [see Methyl parathion]							
PCBs [or Aroclor mixture]	1336-36-3	0.5	2.6	17	0.002	0.002	-Cancer -Immunological
PCE [see Tetrachloroethene]							
Pebulate	1114-71-2	2000	17000	8.5	7.4	7.4	-Blood
Pendimethalin	40487-42-1	3200	58000	28	1	1	-Liver
Pentachlorobenzene	608-93-5	45	480	3.9	1.2	1.2	-Kidney -Liver
Pentachloronitrobenzene	82-68-8	3.3	12	0.2	0.03	0.03	-Cancer -Liver
Pentachlorophenol	87-86-5	7.2	28	0.03	0.2	0.2	-Cancer -Kidney -Liver
Permethrin	52645-53-1	4200	96000	2500	0.007	0.007	-Liver
Phenanthrene	85-01-8	2200	36000	250	NA	NA	-Kidney
Phenmedipham [or Betanal]	13684-63-4	21000	450000	150	18	18	-None Specified
Phenol	108-95-2	500**	220000	0.05	0.03	0.03	-Developmental
Phenylenediamine, m-	108-45-2	360	4000	0.2	NA	NA	-Liver
Phenylenediamine, o-	95-54-5	17	54	0.004	NA	NA	-Cancer
Phenylenediamine, p-	106-50-3	12000	160000	6.2	NA	NA	-Whole Body
Phenylphenol, 2-	90-43-7	490	2100	0.4	0.8	0.8	-Cancer
Phorate	298-02-2	16	320	0.3	0.001	0.001	-Neurological
Phosmet	732-11-6	1600	33000	5	0.004	0.004	-Liver -Neurological
Phthalic acid, p-	100-21-0	8000	45000	110	NA	NA	-Bladder
Phthalic anhydride	85-44-9	11000	63000	76	NA	NA	-Kidney -Nasal -Respiratory
Polychlorinated dibenzo-p-dioxins [see Dioxins]							

Prometon	1610-18-0	1200	23000	2.4	14	14	-None Specified
Prometryn	7287-19-6	320	6100	0.7	0.5	0.5	-Bone Marrow -Kidney -Liver
Propachlor	1918-16-7	990	17000	1.1	0.1	0.1	-Liver
Propanil	709-98-8	390	6700	0.4	0.2	0.2	-Spleen
Propazine	139-40-2	1600	28000	0.2	2.7	2.7	-Body Weight
Propionic acid, 2-(2-methyl-4-chlorophenoxy) [or MCPP]	93-65-2	64	800	0.03	NA	NA	-Kidney
Propoxur [see Baygon]							
Propylbenzene, n-	103-65-1	340	1900	12	NA	NA	
Propylene glycol	57-55-6	*	*	560	140	140	-Blood -Bone Marrow
Propylene glycol monomethyl ether	107-98-2	38000	390000	20	NA	NA	-Kidney -Liver -Neurological
Propylene oxide	75-56-9	3.1	9.3	0.0006	NA	NA	-Cancer -Nasal -Respiratory
Pydrin [or Fenvalerate]	51630-58-1	2100	46000	70	0.0001	0.0001	-Neurological
Pyrene	129-00-0	2400	45000	880	1.3	1.3	-Kidney
Pyridine	110-86-1	20	130	0.03	5.4	5.4	-Liver
Quinoline	91-22-5	0.3	1.3	0.0009	NA	NA	-Cancer
RDX [see Hexahydro-1,3,5-trinitro-1,3,5-triazine]							
Resmethrin	10453-86-8	2500	56000	1200	0.01	0.01	-Reproductive
Ronnel	299-84-3	4200	88000	1300	0.2	0.2	-Liver
Roundup [see Glyphosate]							
Selenium (b,c)	7782-49-2	440	11000	5.2	0.5	7.4	-Hair Loss -Neurological -Skin
Sevin [see Carbaryl]							
Silver (b)	7440-22-4	410	8200	17	0.01	0.06	-Skin

Silvex [see Trichlorophenoxy propionic acid]							
Simazine	122-34-9	7.8	35	0.08	0.1	0.1	-Cancer -Blood
Strontium	7440-24-6	52000	*	***	NA	NA	-Bone
Strychnine	57-24-9	23	380	0.02	0.3	0.3	-Mortality
Styrene	100-42-5	3600	23000	3.6	16	16	-Blood -Liver -Neurological
TCDD, 2,3,7,8- [see Dioxins, as total 2,3,7,8-TCDD equivalents]							
TCE [see Trichloroethene]							
Temik [see Aldicarb]							
Terbacil	5902-51-2	920	14000	0.5	14	14	-Liver -Thyroid
Terbufos	13071-79-9	1.9	29	0.02	0.001	0.001	-Neurological
Terbutryn	886-50-0	88	2200	0.2	0.09	0.09	-Blood
Tetrachlorobenzene, 1,2,4,5-	95-94-3	12	100	0.5	0.4	0.4	-Kidney
Tetrachloroethane, 1,1,1,2-	630-20-6	2.9	4.3	0.01	NA	NA	-Cancer -Kidney -Liver
Tetrachloroethane, 1,1,2,2-	79-34-5	0.7	1.2	0.001	0.08	0.08	-Cancer -Liver
Tetrachloroethene [or PCE]	127-18-4	8.8	18	0.03	0.1	0.1	-Cancer -Liver
Tetrachlorophenol, 2,3,4,6-	58-90-2	2100	30000	3.2	0.07	0.07	Liver
Tetraethyl dithiopyrophosphate	3689-24-5	35	510	0.1	0.0004	0.0004	-Bone Marrow -Neurological
Thallium	7440-28-0	6.1	150	2.8	9	9	-Hair Loss -Liver
Thiobencarb	28249-77-6	810	16000	2.9	NA	NA	-Kidney
Thiram	137-26-8	400	7700	1.1	0.005	0.005	-Neurological
Tin	7440-31-5	47000	880000	***	NA	NA	-Kidney -Liver
Toluene	108-88-3	7500	60000	0.5	5.6	5.6	-Kidney -Liver -Neurological

Toluene diisocyanate, 2,4/2,6-mixture	26471-62-5	1.3	15	NA	NA	NA	-Respiratory
Toluidine, p-	106-49-0	2.2	4.5	0.0009	NA	NA	-Cancer
Toxaphene	8001-35-2	0.9	4.5	31	0.002	0.002	-Cancer -Developmental
Triallate	2303-17-5	980	16000	8.4	6	6	-Liver -Spleen
Tributyltin oxide	56-35-9	25	570	7.6	0.2	0.2	-Immunological
Trichloro-1,2,2-trifluoroethane, 1,1,2- [or CFC 113]	76-13-1	18000	96000	11000	NA	NA	-Neurological
Trichloroacetic acid	76-03-9	770	8800	0.04	400	400	-None Specified
Trichlorobenzene, 1,2,3-	87-61-6	650	8200	4.6	5.6	5.6	-Adrenals
Trichlorobenzene, 1,2,4-	120-82-1	660	8500	5.3	1.7	1.7	-Adrenals
Trichlorobenzene, 1,3,5-	108-70-3	260	2300	16	NA	NA	-None Specified
Trichloroethane, 1,1,1- [or Methyl chloroform]	71-55-6	730	3900	1.9	2.6	2.6	-None Specified
Trichloroethane, 1,1,2-	79-00-5	1.4	2	0.03	0.09	0.09	-Cancer -Liver
Trichloroethene [or TCE]	79-01-6	6.4	9.3	0.03	0.9	0.9	-Cancer -None Specified
Trichlorofluoromethane	75-69-4	270	1500	33	NA	NA	-Cardiovascular -Kidney -Respiratory
Trichlorophenol, 2,4,5-	95-95-4	7700	130000	0.07	1.5	1.5	-Kidney -Liver
Trichlorophenol, 2,4,6-	88-06-2	70	230	0.06	0.1	0.1	-Cancer
Trichlorophenoxy acetic acid, 2,4,5-	93-76-5	690	9500	0.4	0.8	0.8	-Kidney
Trichlorophenoxy propionic acid, 2, (2,4,5-) [or Silvex]	93-72-1	660	14000	5.4	NA	NA	-Liver
Trichloropropane, 1,1,2-	598-77-6	76	460	0.3	NA	NA	-Kidney -Liver -Thyroid
Trichloropropane, 1,2,3-	96-18-4	0.06	0.1	0.0001	0.001	0.001	-Cancer -Kidney -Liver
Trichloropropene, 1,2,3-	96-19-5	18	98	0.4	NA	NA	-Eye
Triethylamine	121-44-8	41	270	NA	NA	NA	-Nasal
Trifluralin	1582-09-8	92	280	3.6	0.2	0.2	-Cancer -Blood -Liver
Trimethyl phosphate	512-56-1	19	57	0.004	NA	NA	-Cancer

Trimethylbenzene, 1,2,3-	526-73-8	18	96	0.3	NA	NA	-None Specified
Trimethylbenzene, 1,2,4-	95-63-6	18	95	0.3	7.2	7.2	-None Specified
Trimethylbenzene, 1,3,5-	108-67-8	15	80	0.3	6.7	6.7	-None Specified
Trinitrobenzene, 1,3,5-	99-35-4	2000	26000	1	0.09	0.09	-Blood -Spleen
Trinitrophenyl-methylnitramine	479-45-8	790	15000	1.4	NA	NA	-Kidney -Liver -Spleen
Trinitrotoluene, 2,4,6-	118-96-7	28	97	0.006	0.3	0.3	-Cancer -Liver
Trithion [see Carbophenothion]							
TRPH	NOCAS	460	2700	340	340	340	-Multiple Endpoints Mixed Contaminants
Uranium, soluble salts	7440-61-1	110	820	***	NA	NA	-Kidney
Vanadium (b)	7440-62-2	67**	10000	980	NA	NA	-Hair Loss
Vernam	1929-77-7	51	510	0.1	0.2	0.2	-Body Weight
Vinyl acetate	108-05-4	320	1700	0.4	3	3	-Kidney -Nasal
Vinyl chloride (i)	75-01-4	0.2	0.8	0.007	0.02	0.02	-Cancer -Liver
Xylenes, total	1330-20-7	130	700	0.2	3.9	3.9	-Neurological
Zinc (b,c)	7440-66-6	26000	630000	***	(k)	***	-Blood
Zinc phosphide	1314-84-7	26	660	***	NA	NA	-Body Weight
Zineb	12122-67-7	4100	82000	19	0.7	0.7	-Thyroid

CTLs are expressed in units of mg/kg (ppm) on a dry weight basis and rounded to two significant figures if >1 and to one significant figure if <1.

= These default Target Organ(s)/Systems or Effects are those reported to occur at the doses used to derive the referenced dose. Non-default Target Organ(s)/Systems or Effects may be justified through a detailed toxicological analysis of the chemicals present at a specific site.

* Contaminant is not a health concern for this exposure scenario.

** Direct exposure value based on acute toxicity considerations. This criterion is applicable in scenarios where children might be exposed to soils (e.g. residences, schools, playgrounds).

*** Leachability values may be derived using the SPLP Test to calculate site-specific SCTLs or may be determined using TCLP in the event oily wastes are present.

= Site concentrations for carcinogenic polycyclic aromatic hydrocarbons shall be converted to Benzo(a)pyrene equivalents before comparison with the appropriate direct exposure SCTL for Benzo(a)pyrene using the approach described in the DERM Technical Report: Development of Cleanup Target Levels (CTLs) for Chapter 24, of the Code of Miami-Dade County (September 2005).

(a) = See discussion on the development of SCTLs for Ammonia in the DERM Technical Report: Development of Cleanup Target Levels (CTLs) for Chapter 24 of the Code of Miami-Dade County (September 2005).

(b) = Leachability values derived from USEPA Soil Screening Guidance (1996). These values were derived assuming soil pH 6.8. These leachability values are dependent upon both the metal concentration in soil and soil characteristics. Thus, if site-specific soil characteristics are different than the defaults, these leachability values may not apply. If this is the case, site-specific leachability values may be derived using methods such as TCLP or SPLP.

(c) = Phytotoxicity must be considered.

(d) = Residential direct exposure value from USEPA Revised Interim Soil Guidance for CERCLA Sites and RCRA Corrective Action Facilities. OSWER Directive 9355.4-12 (1994). The industrial direct exposure value was derived using methodologies set forth in USEPA "Recommendations of the Technical Review Workgroup for Lead for an Interim Approach to Assessing Risks Associated with Adult Exposures to Lead in Soil", December 1996; and in 'Blood Lead Concentrations of U.S. Adult Females: Summary Statistics from Phases 1 and 2 of the NHANES III', March 2002.

(e) = The SCTL for Dioxins, as total 2,3,7,8-TCDD equivalents should be compared to the total dioxin equivalents for chlorinated dioxin and dibenzofuran congeners using the approach described in the DERM Technical Report: Development of Cleanup Target Levels (CTLs) for Chapter 24 of the Code of Miami-Dade County (September 2005).

(f) = The common name BHC is a misnomer for hexachlorocyclohexane.

(g) = Unless concentrations for both chromium III and VI are known, total chromium concentrations may be compared with direct exposures SCTLs for chromium VI.

(h) = Residential chronic SCTL for cadmium shall be used as a not-to-exceed value because the residential chronic SCTL for cadmium is indistinguishable from the SCTL based on acute toxicity.

(i) = Residential chronic SCTL for vinyl chloride calculated by adding prorated and non-prorated risks, as discussed in the DERM Technical Report: Development of Cleanup Target Levels (CTLs) for Chapter 24 of the Code of Miami-Dade County (September 2005).

(j) = 12789-03-6 or 57-74-9

(k) = Hardness-dependent fresh surface water CTLs shall be calculated using the site-specific hardness prior to calculating the leachability based upon fresh surface water CTLs or comparing the SPLP leachate concentrations.

None Specified = Target organ(s) not determined.

NA = Not available.

3. For contaminants not listed in Section 24-44(2)(f)(v), CTLs shall be established as set forth in Section 24-44(2)(f)(i) and Section 24-44(2)(f)(ii). The CTLs calculated pursuant to Section 24-44(2)(f)(v)3. shall be provided in a technical report approved by the Director or the Director's designee.

- (g) All technical plans, reports, proposals, or studies shall be submitted by the party or parties responsible for SRAs in accordance with the written orders of the Director, or the Director's designee, or as set forth herein. The Director, or the Director's designee, shall review each technical plan, report, proposal, or study and approve, approve with modifications or disapprove the aforesaid in writing within sixty (60) calendar days from receipt of the submittal.

To facilitate a phased risk-based assessment process that is iterative and that tailors site rehabilitation actions to site-specific conditions, the party or parties responsible for SRAs may submit to the Department for approval a proposal to establish applicable exposure factors and a risk management approach based upon land use at the site pursuant to the requirements set forth in Section 24-44(2)(k)(ii) and Section 24-44(2)(l)(ii).

- (h) Site rehabilitation actions shall neither be, nor reasonably be expected to be, a source of pollution, as herein defined, or cause, or reasonably be expected to cause, a nuisance as defined in Section 24-5, Section 24-27 or Section 24-28.
- (i) Emergency response actions may be performed without prior approval from the Director, or the Director's designee, provided that these actions do not cause any adverse effects upon human health, public safety or the environment. The party or parties responsible for SRAs and performing the emergency response actions shall notify the Director, or the Director's designee, within 24 hours of the commencement of any such emergency response actions.
- (j) Point of compliance, notification, source removal, and assessment procedures shall be as follows:
- (i) The sampling points to determine compliance with Section 24-44(2) shall be as set forth in Section 24-44.1 herein. However, contamination may exist beyond the property boundary while clean-up, including natural attenuation in conjunction with appropriate monitoring, is proceeding.
 - (ii) When contamination exists beyond the property boundary of the site from which SRAs have been initiated the party or parties responsible for SRAs shall commence notification in accordance with the following:
 1. Laboratory analytical results, which comply with appropriate quality assurance protocols pursuant to Chapter 62-160, F.A.C., that document the off-site contamination, shall be submitted to the Department no later than ten (10) calendar days from the date that the laboratory analyses are completed. A site sketch shall be submitted along with the laboratory analytical data which indicates the locations where the samples were obtained that resulted in the confirmation of the contamination.
 2. The property owners, residents, and tenants of any property onto or into which the contamination extends shall be notified within sixty (60) calendar days of the approval of the site assessment report. Notification shall include, but not be limited to, the following type of information: the type of contaminant and site remedy selected, a description of the location of the subject site, the name and address of the party or parties responsible for SRAs, and the name of a Department contact. Persons receiving notice shall have thirty (30) calendar days upon receipt of the notice to comment on the

assessment and the site remedy selected. Nothing herein shall preclude any persons from initiating a civil action as a result of said contamination.

- (iii) Prior to site closure as set forth in Section 24-44(2)(k), source removal of free product and soil saturated with contaminants or free product is required, unless demonstrated through a feasibility study approved by the Director, or the Director's designee, that the source removal is neither cost effective nor technically feasible. Source removal of free product from a new discharge shall be initiated as soon as possible but, in any event, no later than seven (7) calendar days after the discovery of free product. Source removal of free product from a previous discharge shall be initiated in accordance with the written orders of the Director, or the Director's designee, or the timeframes set forth in a source removal plan approved by the Director or the Director's designee.

Source removal of contaminated soils and saturated soils by excavation may be implemented at any time upon prior written notification by the party or parties responsible for SRAs to the Director or the Director's designee. Such notification shall be submitted to the Department at least three (3) calendar days prior to performing the source removal by excavation. Excavated soils shall be disposed of in accordance with 40 CFR 261, 40 CFR 761, Chapter 62-701, F.A.C., Chapter 62-713, F.A.C., and any other applicable federal, state and local regulations. A source removal report shall be submitted to the Department within sixty (60) calendar days of completion of the source removal. The source removal report shall describe all activities performed during the source removal including all analytical results as well as all disposal manifests.

When excavated soil is temporarily stored or stockpiled on site, the soil shall be secured in a manner which prevents human exposure to contaminated soil and prevents soil exposure to conditions which may facilitate the spread of contamination. Any excavation shall be secured to prevent accidental or intentional entry by the public and shall comply with applicable federal, state and local regulations. Contaminated soils may be stored on site for ninety (90) calendar days, unless otherwise ordered by the Director or the Director's designee. Prior to the expiration of the ninety (90) calendar day period, the soils shall be disposed of in accordance with this section.

- (iv) The site assessment report shall include, but not be limited to: an investigation of the source(s) of contamination; an identification of the types of contaminants present; a determination of the extent and degree of contamination in all media which are impacted; a determination of the physical and environmental conditions and characteristics of the site and the underlying aquifer(s), if applicable; an identification of potential human and environmental receptors; and an evaluation of the current exposure and potential risk of exposure to those identified receptors. Groundwater sampling shall be performed less than two hundred seventy (270) calendar days before the submittal of the site assessment report.

The summary and conclusions of the approved site assessment report shall propose one of the following: no further action, no further action with conditions, monitoring only, risk assessment, or a remedial action plan.

- (k) Site closure, in the form of a no further action or a no further action with conditions, shall be approved by the Director, or the Director's designee, when the CTLs or alternative CTLs established pursuant to Section 24-44(2)(f)(iii) and the requirements set forth in this section have been achieved.
 - (i) A no further action proposal shall be approved by the Director, or the Director's designee, if such proposal demonstrates that human health, public safety and the environment are protected and the following criteria are met:
 1. Concentrations of contaminants detected in soil shall not exceed the lower of the direct exposure residential soil CTLs or the applicable leachability-based soil CTLs set forth in Section 24-44(2)(f)(v)(ii).

The applicable leachability-based soil CTLs shall be the groundwater leachability-based CTLs. If surface waters are, or are reasonably expected to be, affected by contaminated groundwater, as demonstrated using monitoring well data, groundwater flow rate and direction, or fate and transport modeling, then the applicable leachability-based soil CTLs shall be the lower of the groundwater or the applicable freshwater or marine surface water leachability-based CTLs.

Notwithstanding the foregoing provisions of Section 24-44(2)(k)(i)1, alternative residential direct exposure and leachability-based CTLs may be proposed in accordance with the procedures set forth in Section 24-44(2)(f)(iii)3. and Section 24-44(2)(f)(iii)4.

2. Concentrations of contaminants detected in groundwater shall not exceed the groundwater CTLs set forth in Section 24-44(2)(f)(v)1.

If surface waters are, or are reasonably expected to be, affected by contaminated groundwater, as demonstrated using monitoring well data, groundwater flow rate and direction, or fate and transport modeling, then the groundwater CTLs shall be the lower of the groundwater CTLs or the applicable freshwater or marine surface water CTLs set forth in Section 24-44(2)(f)(v)1.

3. Concentrations of contaminants detected in surface water shall not exceed the applicable freshwater or marine surface water CTLs set forth in Section 24-44(2)(f)(v)1.

Nothing herein shall supersede the rules governing Outstanding Florida Waters, aquatic preserves, areas of critical state concern and any other rules adopted pursuant to Section 403.061(34), Florida Statutes.

4. It is demonstrated that contaminants in sediments are not detected in concentrations, quantities, properties, levels or accumulations which are, or are reasonably expected to be, injurious to human, plant, animal, fish and other aquatic life, or property. This demonstration may be based, as applicable, on the Threshold Effects Levels published in the FDEP's guideline "Approach to the Assessment of Sediment Quality in Florida Coastal Waters" (dated November 1994), site specific bioassays, a site-specific risk assessment developed in accordance with Section 24-44(2)(1)(ii), or a combination thereof.

5. If more than one contaminant is present or contamination is present in more than one (1) medium, the human health-based CTLs shall be adjusted to achieve the following: for non-carcinogenic compounds affecting the same organ(s), the hazard index (sum of the hazard quotients) shall be one (1) or less; and for carcinogens, the cumulative lifetime excess cancer risk level (sum of the lifetime excess cancer risk levels for each carcinogenic contaminant) shall be 1.0E-06 or less.

- (ii) A no further action with conditions proposal shall be approved by the Director, or the Director's designee, provided the following: the property owner of the location elects to implement institutional and, if applicable, engineering controls; it is demonstrated, using site-specific data, modeling results, risk assessment studies, risk reduction techniques or a combination thereof, that human health, public safety and the environment are afforded protection equivalent to that provided in Section 24-44(2)(f)(i) and Section 24-44(2)(f)(ii); and the following criteria are met:

1. For contaminants detected in soil, a proposal for alternative soil CTLs shall be submitted to the Department and shall achieve one of the following or a combination of the following:
 - a. Concentrations of contaminants detected in soil shall not exceed the lower of the industrial direct exposure soil CTLs set forth in Section 24-44(2)(f)(v)2. or the applicable leachability-based soil CTLs, set forth in Section 24-44(2)(f).

The applicable leachability-based soil CTLs shall be the groundwater leachability-based CTLs or alternative groundwater leachability-based CTLs derived in accordance with Section 24-44(2)(k)(ii)1c and Section 24-44(2)(k)(ii)2. If surface waters are, or are reasonably expected to be, affected by contaminated groundwater, as demonstrated using monitoring well data, groundwater flow rate and direction, or fate and transport modeling, then the applicable leachability-based soil CTLs shall be the lower of the groundwater or the applicable freshwater or marine surface water leachability-based CTLs.

If a marine surface water is, or is reasonably expected to be, affected by contaminated groundwater, and no other property or fresh surface water bodies are located between the source property boundary and the marine surface water body and the groundwater on-site is not utilized, then the applicable leachability-based soil CTLs shall be the marine surface water leachability-based soil CTLs.

Notwithstanding the foregoing provisions of Section 24-44(2)(k)(ii)1a, alternative industrial direct exposure and leachability-based CTLs may be proposed in accordance with the procedures set forth in Section 24-44(2)(f)(iii)3 and Section 24-44(2)(f)(iii)4. In addition, the applicable leachability-based soil CTLs may be exceeded if it is demonstrated using groundwater monitoring data supported, if required, by site-specific modeling, that contaminants will not leach into groundwater at concentrations which exceed the applicable groundwater CTLs. The groundwater monitoring data shall be compiled for a minimum period of one (1) year and shall include four (4) quarterly sampling events.

- b. Concentrations of contaminants may exceed the soil CTLs if an engineering control, approved by the Director, or the Director's designee, in conjunction with the institutional control, is utilized to eliminate or control contaminant exposure and migration such that human health, public safety and the environment are afforded protection equivalent to that provided in Section 24-44(2)(f)(i) and Section 24-44(2)(f)(ii).
 - c. Concentrations of contaminants detected in soil shall not exceed the alternative soil CTLs derived in accordance with Section 24-44(2)(f)(iii) and Section 24-44(2)(1)(ii).
2. For contamination detected in groundwater, a proposal for alternative groundwater CTLs shall be submitted to the Department and shall provide the following:
- a. A complete evaluation of the current and projected use of the affected groundwater and documentation that the following conditions have been met:
 - (1) Source removal is completed as set forth in Section 24-44(2)(j)(iii).
 - (2) Groundwater contamination is not migrating away from a localized source.
 - (3) Groundwater concentrations at the property boundary, as determined by groundwater monitoring data supported, if required, by site-specific modeling, do not, and are not reasonably expected to, exceed the groundwater CTLs set forth in Section 24-44(2)(f)(v)1. The groundwater monitoring data shall be compiled for a minimum period of one (1) year and shall include four (4) quarterly sampling events.

If surface waters are, or are reasonably expected to be, affected by contaminated groundwater, as demonstrated using monitoring well data, groundwater flow rate and direction, or fate and transport modeling, then the groundwater CTLs shall be the lower of the groundwater CTLs or the applicable freshwater or marine surface water CTLs set forth in Section 24-44(2)(f)(v)1.

If a marine surface water is, or is reasonably expected to be, affected by contaminated groundwater, and no other property or fresh surface water bodies are located between the source property boundary and the marine surface water body and the groundwater on-site is not utilized, then the groundwater CTLs shall be the marine surface water CTLs.

- b. If there is a receptor which may potentially be exposed to on-site groundwater and such exposure has not been eliminated by the implementation of institutional and, if applicable, engineering controls, then concentrations of contaminants detected in groundwater shall not exceed the alternative groundwater CTLs derived in accordance with Section 24-44(2)(f)(iii) and Section 24-44 (2)(1)(ii).
3. Concentrations of contaminants detected in surface water shall not exceed the applicable freshwater or marine surface water CTLs set forth in Section 24-44(2)(f)(v)1.

Nothing herein shall supersede the rules governing Outstanding Florida Waters, aquatic preserves, areas of critical state concern and any other rules adopted pursuant to Section 403.061(34), Florida Statutes.

4. It is demonstrated that contaminants in sediments are not detected in concentrations, quantities, proportions, levels or accumulations which are, or are reasonably expected to be, injurious to human, plant, animal, fish and other aquatic life, or property. This demonstration may be based, as applicable, on the Threshold Effects Levels published in the FDEP's guideline "Approach to the Assessment of Sediment Quality in Florida Coastal Waters" (November 1994), site specific bioassays, a site-specific risk assessment developed in accordance with Section 24-44(2)(l)(ii), or a combination thereof.
5. If more than one (1) contaminant is present or contamination is present in more than one (1) media, the human health-based CTLs or alternative human health-based CTLs shall be adjusted to achieve the following: for non-carcinogenic compounds affecting the same organ(s), the hazard index (sum of the hazard quotients) shall be one (1) or less; and for carcinogens, the cumulative lifetime excess cancer risk level (sum of the lifetime excess cancer risk levels for each carcinogenic contaminant) shall be 1.0E-06 or less.
6. The property owner of the location at which site rehabilitation actions are being conducted elects to implement an institutional and, if applicable, engineering control to eliminate or control exposure of human and environmental receptors to contaminants. When an engineering control is used in conjunction with institutional controls, an engineering control plan shall be submitted to the Department. The engineering control plan shall provide details of the design and construction of the engineering control and shall demonstrate that the engineering control is effective, reliable and capable of being monitored and maintained.

The no further action with conditions proposal shall include a copy of the proposed institutional control, in a form prescribed by the Director, or the Director's designee, and approved by the Board of County Commissioners, with site-specific closure conditions. Upon written approval by the Director, or the Director's designee, of the institutional control and, if applicable, the engineering control plan, the institutional control shall be recorded in the public records of Miami-Dade County. A copy of the recorded instrument shall be submitted to the Department and the engineering control, if applicable, shall be implemented prior to approval of the no further action with conditions proposal.

Upon demonstration to the satisfaction of the Director, or the Director's designee, by the party or parties responsible for SRAs that institutional and, if applicable, engineering controls are no longer required because the conditions set forth in

Section 24-44(2)(k)(i) have been achieved, the Director, or the Director's designee, shall release the institutional control.

7. An operating permit in accordance with Section 24-18 shall be required for all sites for which site rehabilitation actions have been completed in accordance with the provisions set forth in Section 24-44(2)(k)(ii). The Director, or the Director's designee, shall approve, deny, or approve with conditions, restrictions or limitations any application for an operating permit.
- (l) For sites which do not qualify for site closure in accordance with Section 24-44(2)(k), one (1) of the following, or a combination of the following, shall be submitted for approval by the Director, or the Director's designee, to achieve site closure pursuant to Section 24-44(2)(k): a monitoring only plan, a risk assessment report, or a remedial action plan.
- (i) The monitoring only plan:
 1. The monitoring only plan for natural attenuation shall include, but shall not be limited to, an evaluation of the contaminant plume history, site conditions and aquifer chemical characteristics to demonstrate that the applicable CTLs will be attained in accordance with the approval by the Director, or the Director's designee, and that monitoring only is the most cost-effective remedial approach. The monitoring period shall be a minimum of one (1) year, unless two (2) consecutive quarterly samplings have indicated that applicable CTLs have been met. The monitoring only plan shall also demonstrate that human health, public safety, and the environment will be protected. Upon completion of the approved monitoring, a proposal for a no further action, a no further action with conditions, an extension of the monitoring only plan, risk assessment, or a remedial action plan, in accordance with the requirements herein, shall be submitted to the Department.
 2. The monitoring only plan to verify that compliance with the approved remedial action as set forth in Section 24-44(2)(l)(iii) has been achieved shall be for a minimum of a one (1) year period and shall include four (4) quarterly sampling events. However, if contamination was only present in the unsaturated zone during the site assessment and remediation tasks, only one groundwater sampling event approved by the Director, or the Director's designee, shall be required. Upon completion of the approved monitoring, a proposal for a no further action, a no further action with conditions, an extension of the monitoring only plan, risk assessment, or a remedial action plan modification, in accordance with the requirements herein, shall be submitted to the Department for approval.
 - (ii) The risk assessment shall include, but shall not be limited to, a human and environmental exposure assessment, toxicity assessment, cumulative risk characterization, and supporting documentation for the development of alternative CTLs. Alternative health-based CTLs shall be calculated using the risk equations set forth in the DERM Technical Report: "Development of Clean-up Target Levels (CTLs) for Chapter 24 of the Code of Miami-Dade County, Florida" (dated September, 2005), and site-specific exposure scenarios and input parameters. Upon approval of the risk assessment, a proposal for a no further action, no further action with conditions, monitoring only plan for natural attenuation or remedial action, in accordance with the requirements herein, shall be submitted to the Department.
 - (iii) The remedial action plan shall include, but not be limited to, all supporting documentation for the remedial technique proposed to achieve CTLs or alternative CTLs, or to qualify for natural attenuation in all contaminated media. Groundwater sampling shall be performed less than two hundred seventy (270) calendar days before the submittal of the remedial action plan to the Department. Detailed technical documentation shall be provided for all elements of the proposed remedial process. Pilot testing may be required to support the design. A monitoring schedule shall be included to evaluate the performance of the clean-up. Within one hundred twenty (120) calendar days after the approval of the remedial action plan, the approved remedial action plan shall be implemented and record drawings of the

operating remedial system shall be submitted. Upon achieving the CTLs or alternative CTLs, or qualifying for natural attenuation in all contaminated media, a monitoring only plan, prepared in accordance with the requirements set forth in Section 24-44(2)(l)(i), shall be submitted to the Department.

If implementation of the approved remedial action plan does not achieve the CTLs or alternative CTLs, or does not qualify for natural attenuation in all contaminated media a proposal for a monitoring only plan for natural attenuation, a risk assessment, or a remedial action plan modification, in accordance with the requirements herein, shall be submitted to the Department.

- (m) All sampling and analyses shall be performed in accordance with Chapter 62-160, F.A.C., Quality Assurance. Reports submitted to the Department which contain analytical data shall include, at a minimum, the following: original laboratory reports which include all information required in Chapter 62-160.670, F.A.C.; copies of the completed chain of custody records; copies of the completed water sampling log forms; and results from screening tests or on-site analyses.

(Ord. No. 04-214, §§ 1, 5, 12-2-04; Ord. No. 06-34, §§ 1—8, 3-7-06; Ord. No. 08-55, § 2, 5-6-08)

Arcadis U.S., Inc.
2811 Ponce De Leon Blvd
Suite 200
Coral Gables
Florida 33134
Phone: 786 268 3200

www.arcadis.com