

**Lee County
Solid Waste Division**

**Lee County Solid Waste Energy Recovery Facility
Water Quality Monitoring Plan**

Revised – November 2024

Prepared by

Jones Edmunds & Associates, Inc.
730 NE Waldo Road
Gainesville, Florida 32641

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Section 1.0 GROUNDWATER MONITORING

1.1 SITE HYDROGEOLOGICAL SETTING

The geology of the Lee County Solid Waste Energy Recovery Facility (SWERF) is described in the November 2002 Supplemental Application for Power Plant Site Certification PA-90-30C (Malcolm Pirnie, 2002) and in the August 1992 Power Plant Siting Act Permit Application PA-90-30 (Malcolm Pirnie, 1992). Based on these site hydrogeological studies, there are three significant hydrologic strata beneath the facility including the shallow/water table surficial aquifer, the Hawthorn confining unit, and the sandstone aquifer. The shallow surficial aquifer is separated from the deeper sandstone aquifer by the upper Hawthorn confining unit which minimizes flow between the two aquifers.

1.2 GROUNDWATER FLOW DIRECTION

As established by previously submitted semiannual groundwater contour maps, the surficial/shallow aquifer at the facility generally shows a generally westerly flow while the sandstone/deep aquifer shows a southerly flow.

1.3 GROUNDWATER MONITORING NETWORK

The surficial/shallow aquifer at the SWERF is monitored by wells MW-1S, MW-2SR, MW-3SR (previously WTE-3SR), MW-4S, MW-5S, and MW-6S. Monitoring wells MW-1S and MW-2SR serve as upgradient wells and are located on the southeast and northeast corners of the SWERF, respectively. Monitoring wells MW-5S and MW-6S are on the west side of the property. MW-4S and MW-3SR are located approximately in the center of the property.

Although not currently monitored for water quality under the SWERF's GWMP, six deep wells (MW-1D, MW-2DR, MW-3DR, MW-4D, MW-5D, and MW-6D) were previously installed to monitor the sandstone aquifer at the SWERF. In accordance with the Department's approval of the SWERF's previous GWMP (October 2010), the sandstone aquifer monitoring wells are inspected and maintained and monitored for groundwater elevations on the same schedule as the shallow aquifer monitoring wells.

The CDDRF's groundwater monitoring network shares three wells from the SWERF's groundwater monitoring network. MW-2SR is designated as the background well for the CDDRF while MW-3SR and MW-4S are the CDDRF's designated detection wells.

In the event that the GWMN is modified (wells added or abandoned), the requirements of this GWMP will be applicable to the new GWMN without further revision of this document. Any required modifications of the groundwater monitoring system or program shall be modified in accordance with the provisions of Section A, Condition XXI of the SWERF's Conditions of Certification.

Table 1-1 Groundwater Monitoring Network

Testsite Name*	Testsite WACS ID	Designation	Aquifer	Facility
MW-1S	23402	Background	Surficial	SWERF
MW-2SR	31785	Detection/Background	Surficial	SWERF / CDDRF
MW-3SR	27415	Detection	Surficial	SWERF / CDDRF
MW-4S	23409	Detection	Surficial	SWERF / CDDRF
MW-5S	23411	Detection	Surficial	SWERF
MW-6S	23413	Detection	Surficial	SWERF
MW-1D	23403	Piezometer	Sandstone	SWERF
MW-2DR	31769	Piezometer	Sandstone	SWERF
MW-3DR	27416	Piezometer	Sandstone	SWERF
MW-4D	23410	Piezometer	Sandstone	SWERF
MW-5D	23412	Piezometer	Sandstone	SWERF
MW-6D	23414	Piezometer	Sandstone	SWERF

A site map indicating the locations of the monitoring network wells and piezometers is included as Attachment 1.

1.4 MONITORING WELL SAMPLING AND ANALYSIS

Initial sampling of any approved and newly installed wells shall be conducted within 30 days of final well development. Samples will be collected to determine background groundwater quality as described in Chapter 62-701.730(8)(d), FAC for the parameters listed in Table 1-2.

Table 1-2 Initial (Background) Groundwater Sampling Parameters

Field Parameters	Laboratory Parameters
Static Water Level	Total Ammonia-N
Specific Conductivity	Chlorides
pH	Iron
Dissolved Oxygen	Nitrate-N
Turbidity	Sodium
Temperature	Total Dissolved Solids (TDS)
Colors and Sheens (by observation)	Sulfate
	Aluminum
	40 CFR 258, Appendix II

Note: 40 CFR 258 – Chapter 40 Code of Federal Regulations Part 258.

Routine semiannual groundwater samples shall be collected from monitoring wells MW-1S, MW-2SR, MW-3SR, MW-4S, MW-5S, and MW-6S (and any subsequently approved monitoring wells) during February and August each year. Samples will be analyzed for the parameters listed in Rule 62-701.730(8)(c), FAC (see Table 1-3).

Table 1-3 Routine Semiannual Monitoring Parameter List

Field Parameters	Laboratory Parameters
pH	Aluminum
Turbidity	Chloride
Temperature	Nitrate-N
Specific conductivity	Sulfate
Dissolved oxygen	Total Dissolved Solids (TDS)
Water elevations before purging	Iron
Colors and sheens	Sodium
	Arsenic
	Cadmium
	Chromium
	Lead
	Mercury
	Total Ammonia-N
	Xylenes
	Those parameters listed in EPA Methods 601 and 602

In addition to collecting water elevations before purging in the sampled wells, a “continuous round” of water levels will be collected within a 24-hour period from all monitoring wells and piezometers to a precision of 0.01 foot to be used in preparing groundwater contour maps for each sampling event. The groundwater contour maps will be submitted to FDEP in conjunction with the routine semiannual groundwater monitoring results.

All sampling and analyses will be conducted in accordance with Chapter 62-160, FAC; Chapter 62-701.510(2)(b), FAC; FDEP *Standard Operating Procedures for Field Activities* (DEP-SOP-001/01); and FDEP *Standard Operating Procedures for Laboratory Activities* (DEP-SOP-002/01). All analyses will be performed by a laboratory certified by the Florida Department of Health under the National Environmental Laboratory Accreditation Program.

Section 2.0 SURFACE WATER MONITORING

Section B, Specific Condition II.C.3.c of the SWERF’s Conditions of Certification requires a surface water quality monitoring program which monitors all discharges from the surface water management system into the Buckingham Road drainage system. Surface water monitoring at the SWERF is conducted in accordance with FDEP NPDES Stormwater Program Permit FLR05B588.

No additional surface water sampling at the SWERF, beyond that already regulated under Permit FLR05B588-005, should be necessary.

Section 3.0 WATER-QUALITY REPORTING

3.1 WATER-QUALITY MONITORING REPORTS

Results of all sampling events shall be submitted to FDEP within 60 days from completion of laboratory analyses in accordance with the GWMP and Chapter 62-701.510(8)(a), FAC unless an extension of the reporting deadline is requested from and approved by FDEP.

Water-quality data shall be provided to FDEP in an electronic format consistent with the requirements for importing into FDEP databases. FDEP Form 62-701.900(31) (Attachment 3), *Water Quality Monitoring Certification*, shall be used to certify that the laboratory results have been reviewed and approved by the permittee (Lee County or their authorized representative). At a minimum, the report shall include the following:

1. The facility name and identification number, sample collection dates, and analysis dates.
2. All analytical results.
3. Identification number and designation of all groundwater monitoring points.
4. Applicable water-quality standards.
5. Quality assurance and quality control notations.
6. Method detection limits.
7. STORET code numbers for all parameters.
8. Water levels recorded before purging the groundwater monitoring wells for sample collection.
9. An updated groundwater table contour map signed and sealed by a Professional Geologist (PG) or Professional Engineer (PE).
10. A summary of any water-quality standards or criteria that are exceeded.

3.2 WATER-QUALITY MONITORING TECHNICAL REPORT

A Water-Quality Monitoring Technical Report is not required for the SWERF under FDEP Conditions of Certification document PA90-30H.

In addition, Chapter 62-701.710(1)(d), FAC for Waste Processing Facilities notes the following:

2. Waste processing facilities that accept only construction and demolition debris are exempt from the requirement to provide a leachate control system set forth in paragraph (3)(b) of this rule, provided that all areas where waste is stored or processed are covered by a ground water monitoring system which meets the requirements of subsection 62-701.730(8), F.A.C., except the technical report of paragraph 62-701.510(8)(b), F.A.C., is not required.

The CDDRF is a waste processing facility that falls under the above rule section. As such, a Water-Quality Monitoring Technical Report is not required for the CDDRF under the current Chapter 62-701.710 FAC rule.

Attachment 1
Monitoring Well Network Site Map

Groundwater Monitor Wells

Lee County Resource Recovery Facility



JonesEdmunds

Attachment 2

**FDEP Form 62-701.900(30) –
Monitoring Well Completion Report**



Florida Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

DEP Form # 62-701.900(30)

Form Title: Monitoring Well Completion Report

Effective Date: January 6, 2010

Incorporated in Rule 62-701.510(3), F.A.C.

MONITORING WELL COMPLETION REPORT

DATE: _____

FACILITY NAME: _____

DEP PERMIT NO.: _____ WACS FACILITY ID NO.: _____

WACS MONITORING SITE NUM.: _____ WACS WELL NO.: _____

WELL TYPE: BACKGROUND ☐ DETECTION ☐ COMPLIANCE ☐

LATITUDE: _____ ° _____ ' _____ " LONGITUDE: _____ ° _____ ' _____ "

(see back for LAT / LONG requirements):

Coordinate Accuracy _____ Datum _____ Elevation Datum _____

Collection Method _____ Collection Date _____

Collector Name _____ Collector Affiliation _____

AQUIFER MONITORED: _____

DRILLING METHOD: _____ DATE INSTALLED: _____

INSTALLED BY: _____

BORE HOLE DIAMETER: _____ TOTAL DEPTH: _____ (BLS)

CASING TYPE: _____ CASING DIAMETER: _____ CASING LENGTH: _____

SCREEN TYPE: _____ SCREEN SLOT SIZE: _____ SCREEN LENGTH: _____

SCREEN DIAMETER: _____ SCREEN INTERVAL: _____ TO _____ (BLS)

FILTER PACK TYPE: _____ FILTER PACK GRAIN SIZE: _____

INTERVAL COVERED: _____ TO _____ (BLS)

SEALANT TYPE: _____ SEALANT INTERVAL: _____ TO _____ (BLS)

GROUT TYPE: _____ GROUT INTERVAL: _____ TO _____ (BLS)

TOP OF CASING ELEVATION (NGVD): _____ GROUND SURFACE ELEVATION (NGVD): _____

DESCRIBE WELL DEVELOPMENT: _____

POST DEVELOPMENT WATER LEVEL ELEVATION (NGVD): _____

DATE AND TIME MEASURED: _____

REMARKS: _____

NAME OF PERSON PREPARING REPORT: _____

(Name, Organization, Phone No., E-mail)

Northwest District
160 Government Center
Pensacola, FL 32501-5794
850-595-8360

Northeast District
7825 Baymeadows Way Ste 200B
Jacksonville, FL 32256-7590
904-807-3300

Central District
3319 Maguire Blvd., Ste. 232
Orlando, FL 32803-3767
407-894-7555

Southwest District
13051 N. Telecom Pky.
Temple Terrace, FL
813-632-7600

South District
2295 Victoria Ave., Ste. 364
Fort Myers, FL 33901-3881
239-332-6975

Southeast District
400 North Congress Ave.
West Palm Beach, FL 33401
561-681-6600

Attachment 3

**FDEP Form 62-701.900(31) –
Water Quality Monitoring Certification**



Florida Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

DEP Form #: 62-701.900(31), F.A.C

Form Title: Water Quality Monitoring Certification

Effective Date: January 6, 2010

Incorporated in Rule 62-701.510(9), F.A.C.

WATER QUALITY MONITORING CERTIFICATION

PART I GENERAL INFORMATION

- (1) Facility Name Lee County Resource Recovery Facility And Construction & Demolition Debris Recycling Facility
Address 10500 Buckingham Road
City Fort Myers, Florida Zip 33905 County Lee
Telephone Number (239) 533-8000
- (2) WACS Facility ID 93715
- (3) DEP Permit Number PA90-30H Groundwater Monitoring Plan
- (4) Authorized Representative's Name _____ Title _____
Address _____
City _____ Zip _____ County _____
Telephone Number (_____) _____
Email address (if available) _____

CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submission of false information including the possibility of fine and imprisonment.

(Date)

(Owner or Authorized Representative's Signature)

PART II QUALITY ASSURANCE REQUIREMENTS

Sampling Organization _____
Analytical Lab NELAC / HRS Certification # _____
Lab Name _____
Address _____
Phone Number (_____) _____
Email address (if available) _____