FLORIDA DEPARTMENT OF Environmental Protection

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

Ron DeSantis
Governor

Jeanette Nuñez
Lt. Governor

Shawn Hamilton
Secretary

January 24, 2022

NOTICE OF PERMIT MODIFICATION

By-Email
RMontgomery@volusia.org

In the Matter of an
Application for Permit by:
Volusia County Solid Waste Division
1990 Tomoka Farms Road
Port Orange, Florida 32128
_____/

Volusia County
WACS # 27540
Tomoka Farms Road Landfill

Attention: Ms. Regina Montgomery

DEP File No: 0078767-044-SO-IM

Pursuant to Sections 403.061(14) and 403.707, Florida Statutes, the Department hereby issues modification number 0078767-044-SO-IM. The following conditions of permit number 0078767-030-SO-01 are modified as follows:

SPECIFIC CONDITIONS	FROM	TO	TYPE OF MODIFICATION
Page 1	Existing	Amended	Addition of Permit Modification No. 0078767-044-SO-IM
2.C.1.	Existing	Amended	Revised Reference to approved Operation Plan and date
2.C.6	Existing	Amended	Revised Reference to Closure Design Drawing
2.C.17		New	Addition of Specific Condition for Waste Tire Storage
2.G.4.e	Existing	Amended	Revised Reference to technical specifications
2.G.5	Existing	Amended	Revised References to Closure Design Drawings
2.G.6	Existing	Amended	Revised Reference to Closure Sequencing Drawing
2.G.7	Existing	Amended	Revised Reference to the CQA Plan
2.G.10.b	Existing	Amended	Revised Reference to Closure Sequencing Drawing

2.G.10.b.i	Existing	Amended	Revised Closure Sequence 1 acreage
2.G.10.b.ii	Existing	Amended	Revised Closure Sequence 2 acreage
2.G.10.b.iii	Existing	Amended	Revised Closure Sequence 3 acreage
Appendix 2	Existing	Amended	Addition of Documents 41 and 42 for Permit Modification No. 0078767-044-SO-IM

Attached is Permit Number 0078767-030-SO-01 as modified by this Order. The attached permit replaces all previous permits and permit modifications for this facility.

NOTICE OF RIGHTS

Judicial Review

Upon issuance of this final permit, any party to this order has the right to seek judicial review of it under Section 120.68, F.S. by the filing of a notice of appeal under Florida Rules of Appellate Procedure 9.110 and 9.190 with the Clerk of the Department of Environmental Protection in the Office of General Counsel (Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000) and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate district court of appeal. The notice must be filed within 30 days after this order is filed with the Clerk of the Department.

EXECUTION AND CLERKING

Executed in Tallahassee, Florida.
STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Kimberly A. Walker

Digitally signed by Kimberly A. Walker
Date: 2022.01.24 15:16:25 -05'00'

Kimberly A. Walker, Program Administrator
Permitting and Compliance Assistance Program

Attachment(s):

1. Permit No. 0078767-030-SO-01 as modified by 0078767-044-SO-IM

CERTIFICATE OF SERVICE
The undersigned duly designated deputy clerk hereby certifies that this document and all attachments were sent on the filing date below to the following listed persons:

Shane Fischer, P.E., SCS Engineers, sfischer@scsengineers.com
Bret Labram, Volusia County, blabram@volusia.org
Jeremy Hart, P.G., DEP Solid Waste, Jeremy.R.Hart@FloridaDEP.gov
El Kromhout, P.G., DEP Solid Waste, Elizabeth.Kromhout@FloridaDEP.gov
Central District, DEP_CD@FloridaDEP.gov

FILING AND ACKNOWLEDGMENT
FILED, on this date, pursuant to Section 120.52, F. S., with the designated Department Clerk, receipt of which is hereby acknowledged.

Tamela Starling
Clerk

1/24/2022
Date

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL DISTRICT
3319 MAGUIRE BOULEVARD, SUITE 232
ORLANDO, FLORIDA 32803-3767

RICK SCOTT
GOVERNOR

CARLOS LOPEZ-CANTERA
LT. GOVERNOR

HERSCHEL T. VINYARD JR.
SECRETARY

Permit Issued to:

Volusia County Solid Waste Division
3151 East New York Ave.
DeLand, Florida
(386) 943-7889

WACS Facility ID No.: 27540
Tomoka Farms Road Landfill – North Cell Class I
1990 Tomoka Farms Road
Port Orange, Volusia County, Florida

Contact Person:
Regina Montgomery, Director
rmontgomery@volusia.org

Solid Waste Operation Permit – Landfill
Permit No.: 0078767-030-SO-01
Permit Modification No.: 0078767-031-SO-MM
Permit Modification No.: 0078767-032-SO-MM
Permit Modification No.: 0078767-033-SO-MM
Permit Modification No.: 0078767-036-SO-MM
Permit Modification No.: 0078767-037-SO-MM
Permit Modification No.: 0078767-043-SO-MM
Permit Modification No.: 0078767-044-SO-IM

Permit Issued: June 28, 2013
Permit Renewal Application Due Date: 03/13/2033
Permit Expires: 05/13/2033

Permitting Authority
Florida Department of Environmental Protection
Central District Office
3319 Maguire Blvd., Ste 232
Orlando, Florida 32803
407-897-4100
DEP_CD@dep.state.fl.us

SECTION 1 - SUMMARY INFORMATION

A. Authorization

The permittee is hereby authorized to operate the facility described below in accordance with the specific and general conditions of this permit and any documents attached to this permit or specifically referenced in this permit and made a part of this permit.

This solid waste operation permit is issued under the provisions of Chapter 403, Florida Statutes, Florida Administrative Code Chapters 62-4 and 62-701.

This permit does not relieve the permittee from complying with any other appropriate local zoning or land use ordinances or with any other laws, rules or ordinances. Receipt of any permits from the Department does not relieve the applicant from obtaining other federal, state, and local permits and/or modifications required by law, including those from other Sections within the Department or of the Water Management District.

B. Facility Location

The facility is located at 1990 Tomoka Farms Road, Port Orange, in Section 09, Township 16S, Range 32E, in Volusia County, Florida (Latitude 29° 7’ 42.27” and Longitude 81° 4’ 54.49”).

C. Facility Description

The permittee is hereby authorized for the following operations:

- To continue disposal operations at the Tomoka Farms Road Landfill, North Cell Class I disposal area. Solid waste has been disposed of at the Tomoka Landfill site since 1969. The landfill receives residential, commercial, agricultural and industrial waste.

- The contiguous North Cell, Class I disposal area is comprised of the North Cell Phase I Expansion (65.64 acres), the North Cell Phase II Expansion (12.2 acres), and the North Cell Phase III Expansion (12.83 acres). Phase I is divided into Areas 1 and 2; Phase II is comprised of Area~~s~~ 3 (12.2 acres) and Phase III is comprised of Area 4 (12.83 acres). The total disposal area of the North Cell, Class I Landfill is 90.67 acres.

- The facility is authorized for waste disposal in the North Cell Phase I, Areas 1 and 2 (65.64 acres), in the North Cell Phase II, Area 3 (12.2 acres), and in the North Cell Phase III, Area 4 (12.83 acres). Disposal in the Phase I, Areas 1 and 2 was authorized on January 31, 2006 in FDEP letter OCD-SW-06-0047.

- The North Cell has an active landfill gas collection system (LGCS). The LGCS is installed in phases per the approved design to control air emissions, odor and migration of methane. The phased construction will include installation of additional horizontal collectors, vertical wells, laterals, and associated piping.

- To perform sequential partial closure activities at the North Cell, Class I Landfill as portions reach permitted final grade.

- To continue post-closure care of the South Cell, Class I Landfill. The 30-year long-term care period has not begun because the South Cell water quality cannot be monitored separately from the North Cell.

- The facility is authorized to operate a waste tire site as part of this permit. It also operates a Household Hazardous Waste (HHW) collection center and a white goods storage area at the facility. All are outside of the permitted footprint of the North Cell, Class I Landfill.

The following is additional information about the facility:

- Major features of the Class I, North Cell shared with the overall facility include site fencing and security, a scale house, a household hazardous waste facility, a tire and white goods facility, a Class III landfill (Permit Number 0078767-034-SO-T3 expiration date 9/24/2024), equipment maintenance facilities, ground water monitoring, borrow pits and administration facilities.

- At the North Cell, leachate is collected via the leachate collection system. The leachate is stored in the north surface impoundment which is then pumped to the on-site leachate sequential batch reactor (SBR). The leachate is treated and then used on site for dust control or transmitted to a 26-acre on-site spray irrigation field (IWP No. 64-FLA66356).

- The project incorporates a site-wide ground water and surface water monitoring plan included as APPENDIX 3. The Zone of Discharge for the facility is shown in Figure 1 as Attachment B of the MPIS.

- Household Hazardous Waste (HHW) – A HHW collection center is located at the facility. The collection center minimizes the quantities of these materials from being disposed in the landfill. The HHW center shall operate in accordance with Section 403.7265, F.S., addressing the need for local governments to establish local hazardous waste management programs and local collection centers throughout the state. The HHW collection center is operated for the collection of household hazardous waste and does not accept waste from small businesses. The HHW materials are removed by an independent contractor for proper disposal twice a year or when the storage facility reaches 75% of its capacity.

- Citizen's Convenience Center - A Citizen's Convenience Center is located at the facility outside of the permitted footprint of the North Cell, Class I Landfill. The Convenience Center serves as a drop off point for residents. The Center only accepts household waste, which may include yard trash. All waste which may produce leachate is containerized. The Citizen's Convenience Center will be run in accordance with APPENDIX C of the approved Operation Plan.

D. Appendices Made Part of This Permit

APPENDIX 1 - General Conditions

APPENDIX 2 – List of Documents Incorporated into this Permit

APPENDIX 3 – Water Quality Monitoring Plan

E. Attachments for Informational Purposes Only

ATTACHMENT 1 - Time Sensitive Action Chart - If any of the time deadlines in the Time Sensitive Action Chart are inconsistent with the time deadlines in the permit conditions, the time deadlines in the permit condition shall be followed.

SECTION 2 - SPECIFIC CONDITIONS

A. Administrative Requirements

1. Documents Part of This Permit. The permit application **as revised in final form replaced or amended** in response to the Department's Request(s) for Additional Information are contained in the Department's files and are made a part of this permit. Those documents that make up the complete permit application are listed in APPENDIX 2.

2. Permit Modification. Any change to construction, operation, monitoring, or closure requirements of this permit may require a modification to this permit, in accordance with the provisions of Rule 62-701.320(4), F.A.C.

3. Permit Renewal. In order to ensure uninterrupted operation of this facility, a timely and sufficient permit renewal application must be submitted to the Department in accordance with Rule 62-701.320(10), F.A.C. A permit application submitted at least 61 days prior to the expiration of this permit is considered timely and sufficient.

4. Transfer of Permit or Name Change. In accordance with Rule 62-701.320(11), F.A.C., the Department must be notified by submitting Form 62-701.900(8) within 30 days: (a) of any sale or conveyance of the facility; (b) if a new or different person takes ownership or control of the facility; or (c) if the facility name or permittee's legal name is changed.

5. Air Permit Requirements
   a. The facility has a Title V permit #1270117-011AV. It expires on May 23, 2021. The facility must comply with its air permit and all applicable air requirements.
   b. Consult with the Division of Air Resource Management, Department of Environmental Protection, Mail Station 5500, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, regarding any air permitting requirements.

6. Permit Fees. The total permit fee required for this permit is $40,000. The applicant has elected to pay this fee in installments in accordance with Rule 62-701.315(13), F.A.C., and submitted a fee of $10,000 with this application. No later than May 13, 2018, May 13, 2023 and May 13, 2028 the permittee shall submit to the Department an installment payment of this fee in the amount of $10,000. This fee is due to the State regardless of whether the permittee closes the facility, surrenders the permit, has the permit revoked, or transfers the permit before it expires. If the permittee elects to transfer the permit, it must include with the transfer application a signed agreement from the proposed transferee to accept responsibility for the remainder of the permit fee due.

7. 5 Year Submittal Report. No later than May 13, 2018, May 13, 2023, and May 13, 2028 the permittee shall submit a report to the Department that contains the following:
   a. An updated closure plan to reflect changes in closure design, long-term care requirements, and financial assurance requirements.
   b. A revised closure cost estimate, made by recalculating the total cost of closure or long-term care, in current dollars.
   c. A demonstration that the leachate collection system has been water pressure cleaned or inspected by video recording.
   d. An updated operation plan, if operational procedures have changed.
   e. An updated site plan or topographic survey if current conditions at the facility are not reflected in the existing plan.

B. Construction Requirements

1. Construction Authorized. This permit does not authorize any bottom liner construction activities.
   a. 0078767-041-SC-01 (expiration date 7/20/2023) authorizes the construction of North Cell, Phase III Area 4, Class I Disposal Area (approximately 12.83 acres).
   b. Landfill Gas Collection System (LGCS) construction activities are outlined in Section 2.E below and partial closure construction activities are outlined in Section 2.G below.

C. Operation Requirements

1. General Operating Requirements. The permittee shall operate the landfill in accordance with the most recently approved Operation Plan (dated ~~June 2020~~ November 2021) Appendix 2, Document ~~40~~ 42. The Department shall be notified before any changes, other than minor deviations, to the approved Operation Plan are implemented in order to determine whether a permit modification is required.

2. Operation Plan. A copy of the approved Operation Plan, including the operating record as defined in Rule 62-701.500(3), F.A.C., shall be kept at the facility and shall be accessible to landfill operators.

3. Authorized Waste Types. The North Cell, Class I Landfill is authorized to manage only the following waste types:
   a. Waste types defined in Rule 62-701.200, F.A.C.:
      1) Class I waste.
      2) Commercial waste
      3) Water treatment sludge
      4) Industrial waste
      5) Shredded/cut tires.
      6) Agricultural waste
      7) Industrial sludge
      8) Domestic sludge
   b. Other wastes specifically authorized for disposal at the North Cell, Class I Landfill:
      1) Asbestos
   c. Other wastes authorized to be handled at the facility but not authorized for disposal at the North Cell, Class I Landfill:
      1) Waste tires – The facility may operate a waste tire site in accordance with the Waste Tire Rule, Chapter 62-711, F.A.C.
      2) White goods – The white goods storage area shall be policed on a daily basis to insure white goods are properly stored and handled. An independent contractor is used on an “as needed” basis to transport these materials off-site for recycling.

4. Unauthorized Waste Types. The North Cell, Class I Landfill is not authorized to accept, process, or dispose any waste types not listed in C.3 above. Any unauthorized waste inadvertently received by the facility shall be managed in accordance with the approved Operation Plan.

5. Waste Management and Handling
   a. Solid waste shall be formed into cells to construct horizontal lifts. The working face of the cell, and side grades above land surface, shall be at a slope no greater than three feet horizontal to one-foot vertical rise or as authorized by this permit in accordance with the approved operation plan.
   b. No solid waste shall be disposed of outside of the permitted footprint of the solid waste disposal units.
   c. The sequence of waste filling shall be as specified in the approved operation plan.

6. Landfill Elevation. The final (maximum) elevation of the North Cell, Class I Landfill shall not exceed 193 feet NGVD as shown on Drawing ~~3~~ 06, Final Cover / Closure Site Plan, reference ~~1~~ 41, APPENDIX 2.

7. Initial Waste Placement. The first layer of waste placed above the liner and leachate collection system shall be a minimum of four feet in compacted thickness and consist of selected wastes containing no large rigid objects that may damage the liner or leachate collection system.

8. Cover Requirements:
   Cover shall be applied as follows:
   a. Initial Cover: Initial cover shall be applied at the end of each working day unless waste will be placed in the area within 18 hours in which case a temporary cover may be used, Rule 62-701.500(7)(e)2, F.A.C. A mixture of clean soil and vegetative waste (mulched yard trash and land clearing debris) may be used for initial cover, when available. This mixture may contain no more than 50% by volume of mulched vegetative waste.
   b. Alternate initial cover material not identified herein shall be approved by the Department prior to use at the facility. Alternate initial cover materials approved for use at this facility are:
      - A mixture of clean soil, mulch, and inert glass cullet containing no more than 10% by volume of glass cullet. The mixture containing glass cullet is limited to interior areas of the landfill away from the outside slopes.
   c. Intermediate Cover: Stabilization of the fill areas using intermediate cover of one (1) foot of compacted earth in addition to the six (6) inch initial cover shall be applied within seven (7) days of cell completion. All or part of the intermediate cover may be removed prior to placing additional waste or installing final cover, Rule 62-701.500(7)(f), F.A.C.

9. Erosion Control: Erosion control measures shall be employed to correct any erosion which exposes waste or causes malfunction of the storm water management system. Such measures shall be implemented within three days of occurrence. If the erosion cannot be corrected within seven days of occurrence, the landfill operator shall notify the Department and propose a correction schedule.

10. Contingency Plan and Notification of Emergencies. The permittee shall notify the Department in accordance with the approved Contingency Plan. Notification shall be made to the Solid Waste Section of DEP's Central District at (407) 897-4100.

11. Housekeeping. The facility shall be operated to control dust, vectors, litter and objectionable odors. If objectionable odors are confirmed beyond the landfill property boundary, the owner or operator shall comply with the gas management requirement in Section 2, Part E.

12. Leachate Management.
    a. The permittee shall operate the leachate management system (including the collection, removal, storage, and on-site treatment systems), and maintain the system as designed, so that leachate is not discharged from the system except as provided for in the Operation Plan.
    b. Routine inspections and maintenance of the leachate management system shall be conducted.
    c. The leachate collection pipes shall be cleaned or video inspected at least once every five years. A summary of the results shall be submitted to the Department.
    d. The permittee shall record quantities of leachate generated on a weekly basis in gal/week, shall record precipitation at the facility, and shall compare these measurements. The information shall be included in the operating record.
    e. Recirculation: Leachate may be recirculated in accordance with the Operation Plan. Leachate may only be recirculated on inside slopes of areas of the landfill which have not undergone final closure.
    f. Leachate Collection and Detection System Repairs. As described in reference 1, APPENDIX 2, retrofits of leachate sumps 1, 2, 3, 4, 5, and 6 have been completed.
    g. Leachate Quantity Analysis Report. The permittee shall annually provide the Department a graphical representation of the monthly leachate generation rate for each of the 6 pumps and an analysis of the data. Any significant drop in leachate generation shall be explained or the root cause determined. The report must be submitted not later than January 31 following the reporting year.

13. Spotters and Operators. The facility shall have the minimum number of spotters present when waste is accepted as specified in the operation plan, to be located as specified in the operation plan. A trained operator shall be on duty at the facility at all times the facility is operating. Approved training courses can be found at the following web site: http://www.treeo.ufl.edu/sw/.

14. Record Keeping Requirements.
    a. Waste Quantity Records. Waste records shall be compiled monthly, and copies shall be provided to the Department no less than annually by February 1, in accordance with Rule 62-701.500(4)(a), F.A.C. This information shall be reported to the Department through the DEP Business Portal located at: http://www.fldepportal.com/go.

b. Estimate of Remaining Life. The permittee shall submit the annual estimate of the remaining life and capacity annually by November 1. The report is required by Rule 62-701.500(13)(c), F.A.C. and must be submitted to the Central District Office (DEP_CD@dep.state.fl.us) and to:

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

15. Hazardous Waste. If any regulated hazardous wastes are discovered to be deposited at the facility, the facility operator shall promptly notify the Department, the person responsible for shipping the wastes to the facility, and the generator of the wastes, if known. The area where the wastes are deposited shall immediately be cordoned off from public access. If the generator or hauler cannot be identified, the facility operator shall assure the cleanup, transportation, and disposal of the waste at a permitted hazardous waste management facility. In the event that hazardous wastes are discovered they shall be managed in accordance with the procedures provided in facility Operation Plan.

16. Stormwater. Leachate shall not be discharged into the stormwater management system. Stormwater or other surface water which comes into contact with or mixes with the solid waste or leachate shall be considered leachate and is subject to the requirements of Rule 62-701.500(8), F.A.C.

17. Waste Tire Storage. All waste tire acceptance, storage, and reporting shall be done in accordance with Chapter 62-711, F.A.C. Waste tire storage shall be done in accordance with the approved Operation Plan, Appendix 2, Document 42.
    a. Waste Tire Processing Location: Waste tire storage shall be located east of the Citizen Convenience Center (CCC) as shown on Sheet 1 in the approved Operation Plan (Appendix 2, Document 42).
    b. Maximum Storage: The facility shall not accept any waste tires for storage if it has reached its permitted storage limit. As stated in the approved Operation Plan, no more than 10,000 tires will be stored at one time per Rule 62-711.530 (1)(b), F.A.C.

D. Water Quality Monitoring Requirements

1. Zone of Discharge. There is one zone of discharge for the entire Tomoka Farms Road Landfill (TFRL) facility (both Class I and Class III landfills). The zone of discharge for this facility shall be a three dimensional volume, defined in the horizontal plane by the coordinates shown below and as depicted in Attachment B of the Monitoring Plan Implementation Schedule (APPENDIX 3), and defined in the vertical plane as extending from the top of the ground to the bottom of the casing of the lower surficial monitoring wells (that is, Zone 4). Class G-II water quality standards must be met at the boundary of the zone of discharge in accordance with Rule 62-522.410, F.A.C.

a. The zone of discharge horizontal boundary coordinates are depicted in Attachment B of the MPIS and defined with the latitude and longitude as follows:

Point	Latitude	Longitude
A	N 29° 07’ 41.29”	W 81° 04’ 58.76”
B	N 29° 08’ 08.20”	W 81° 05’ 00.06”
C	N 29° 08’ 07.87”	W 81° 05’ 08.90”
D	N 29° 08’ 23.21”	W 81° 05’ 20.30”
E	N 29° 08’ 23.21”	W 81° 06’ 14.76”
F	N 29° 07’ 53.70”	W 81° 06’ 14.21”
G	N 29° 07’ 39.32”	W 81° 06’ 04.89”

2. Electronic Reporting. Required water quality monitoring reports and all ground water and surface water shall be submitted electronically. Water quality monitoring reports shall be submitted in Adobe 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:
   a. Cover letter;
   b. Summary of exceedances and sampling problems, if any (e.g., variation from SOP field criteria);
   c. Conclusions and recommendations;
   d. Ground water contour maps;
   e. Chain of custody forms;
   f. Water levels, water elevation table;
   g. Ground Water Monitoring Report Certification, using the appropriate Department form;
   h. Appropriate sampling information on Form FD 9000-24 (DEP-SOP-001/01); and,
   i. Laboratory and Field EDDs and error logs, as applicable.

   All submittals in response to this specific condition shall be sent to the District Office and to:

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

3. Water Quality Monitoring Plan. The water quality monitoring plan is called the Monitoring Plan Implementation Schedule (MPIS). There is one MPIS for the entire TFRL solid waste management facility. The newest version (dated 7/27/2015) is included as APPENDIX 3. It is made a part of this permit and all other permits for the TFRL solid waste management facility.

The MPIS or its attachments may be revised or updated at any time. The revised/updated documents will be issued with a new date and effective for the next sampling event.

E. Gas Management System Requirements

1. Gas System Construction Requirements. All construction shall be done in accordance with the approved gas management system design, drawings, and specifications. The Department shall be notified before any changes, other than minor deviations, to the approved design are implemented in order to determine whether a permit modification is required.
   a. Locations of gas extraction wells are specified in Attachment G, LFG Management Master Plan and North Cell, Class I Landfill (reference 26, APPENDIX 2).
   b. The approval of the referenced landfill gas management system in this solid waste permit does not relieve the permittee from ensuring compliance with Air program permitting requirements.

2. Gas System Construction Disturbed Waste/Final Cover. Any waste or final cover disturbed during construction or maintenance of the gas system control devices shall be handled as follows:
   a. Disturbed waste shall be protected from stormwater intrusion.
   b. All disturbed waste shall be disposed of in the Class I active working face or hauled to a permitted Class I landfill within 24 hours.
   c. Disturbed final cover shall be repaired per the current CQA plan.

3. Gas System Maintenance. The facility shall conduct on-going maintenance of the LGCS as needed including: replacement, re-drilling, relocation, raising and decommissioning of existing wells as needed to achieve overall gas control.

4. Gas System Certification of Construction Completion. After each gas system construction event is completed the engineer of record shall certify to the Department in accordance with Rule 62-701.320(9)(b), F.A.C., that the permitted construction is complete and was performed in substantial conformance with the approved construction plans except where minor deviations were necessary. All deviations shall be described and the reasons therefore enumerated.

5. Operational Requirements. Gas controls shall be operated and maintained so that they function as designed.

6. Monitoring Requirements. Monitoring for methane gas at the property boundary and within structures on the property shall be performed quarterly to determine the effectiveness of the gas migration controls. The gas monitoring results shall be reported as a percent of the lower explosive limit (LEL), calibrated to methane. The report shall be submitted to the Central District Office (DEP_CD@dep.state.fl.us) under separate cover no later than 15 days after the monitoring occurred.

7. Gas Remediation Plan. The facility landfill gas management system shall be operated to prevent the concentration of combustible gases from exceeding 25% of the lower explosive limit in structures, excluding gas control or recovery components, and from exceeding the lower explosive limit at or beyond the property boundary. If either of these limits is exceeded then a gas remediation plan shall be designed and implemented in accordance with Rule 62-701.530(3)(a), F.A.C.

8. Odor Remediation Plan. The facility shall be operated to control objectionable odors. If objectionable odors are confirmed beyond the property boundary then upon notification by the Department the permittee shall develop and implement an odor remediation plan in accordance with the requirements of Rule 62-701.530(3)(b), F.A.C.

F. Financial Assurance and Cost Estimates

1. Financial Assurance Mechanism. The permittee may not receive waste for disposal or storage in any disposal unit for which financial assurance has not been approved. Proof that the financial mechanisms are established and funded in accordance with Rule 62-701.630, F.A.C. shall be submitted to the Department at least sixty (60) days prior to the planned acceptance of solid waste in any disposal unit. When established, the permittee shall maintain, in good standing, the financial assurance mechanisms. Supporting documentation and evidence of increases associated with cost estimate increases shall be submitted within the time frames specified in Rule 62-701.630, F.A.C.

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

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

2. Cost Estimates.
   a. The permittee shall submit closure cost estimates, including annual adjustments for inflation, in accordance with the requirements of Rule 62-701.630(3) and (4), F.A.C., and 40 CFR Part 264.142(a) and .144(a) using Form 62-701.900(28).
   b. An owner or operator using an escrow account shall submit the annual inflation adjusted estimate(s) between July 1 and September 1. An owner or operator using a letter of credit, guarantee bond, performance bond, financial test, corporate guarantee, trust fund or insurance shall submit the inflation adjusted cost estimate(s) between January 1 and March 1.
   c. A cost estimate covering disposal units not previously covered by financial assurance mechanisms must be submitted prior to submitting financial assurance for such disposal units.

d. All submittals in response to this specific condition shall be sent to the Central District Office (DEP_CD@dep.state.fl.us) and a copy to the address identified in Specific Condition 2.F.1. or to the following email address:
Financial.Assurance.Working.Group@FloridaDEP.gov

G. Closure Requirements

1. Closure Permit Requirements.
   a. Phased Closure activities for the North cell were authorized in Permit SF64-0078767-028. The references, requirements, and authorizations in permit SF64-0078767-028 are incorporated into this permit.
   b. Prior to initiating any closure action not covered by this permit, the permittee must schedule a meeting with the Department to determine whether a permit modification is necessary.

2. Notification of Closure Activities.
   a. At least 90 days prior to initiating any partial closure activity, submit to the Department:
      i. a statement that closure construction will be initiated, a drawing depicting the area of closure construction, a statement that the permitted closure design and plan are still current, and a statement that all current rule requirements are met; or
      ii. schedule a meeting with the Department to determine whether a permit modification is necessary.
   b. The permittee must receive written authorization from the Department prior to initiating closure activities. The written authorization will be either an authorization letter or a permit modification.
   c. The permittee shall notify the Department 30 days prior to commencing closure field activities such as constructing the cap, side slopes, and stormwater drainage facilities.

3. Closure Design. All closure construction shall be done in accordance with the approved closure design plan as described in the references associated with Permit Application SF64-0078767-028 list in APPENDIX 2. The Department shall be notified before any changes, other than minor deviations, to the approved closure design in order to determine whether a permit modification is required per Section 2.G.2.a above.

4. Final Cover System. The final cover system for the North Cell, Class I Landfill shall consist of in descending order:
   a. Six inches of topsoil
   b. 18 inches of compacted protective soil
   c. Double-sided geocomposite
   d. 40-mil linear low density polyethylene (LLDPE) geomembrane liner
   e. 12 inches of granular fill grading layer (intermediate cover)

Sod will be placed on top of the protective soil cover. The components of the final cover system shall meet the requirements of Rule 62-701.600(3)(g), F.A.C. as demonstrated by the technical specifications in Appendix ~~D~~ F of reference ~~8~~ 41, APPENDIX 2 and Attachment R19 of Reference 9, APPENDIX 2.

5. Final Cover Design – Side Slopes. The side slope design for the North Cell closure is shown on sheets ~~C-05~~ 08 and 09 of the Closure Design Drawings and detail sheets ~~C-06~~ 10 through ~~C-09~~ 13 of Reference ~~8~~ 41, APPENDIX 2. The maximum side slope is 3H:1V, Rule 62-701.600(3)(e), F.A.C. A series of 19-foot wide drainage terraces are located at approximate elevations of 69, 107, 145 and 185 feet NGVD, as a means of controlling stormwater flow down the side slopes. The terraces will be constructed with a 1% slope to direct stormwater to a series of 18-inch and 24-inch diameter downdrains. Downdrains will be constructed at approximately 400-foot intervals and discharge stormwater to the perimeter drainage channels. The top flat area on the North Cell will have a 4% slope to direct runoff to the downdrains.

6. Closure Sequencing. The final cover shall be constructed in three sequences, to allow the permittee to install final cover over areas which have reached final permitted elevation as shown on sheet ~~00C-04~~ 07 in reference 41, APPENDIX 2.

7. Construction Quality Assurance Plan. The Construction Quality Assurance (CQA) Plan submitted with the permit modification application in Appendix ~~C~~ E of reference ~~8~~ 41, APPENDIX 2 shall be followed for installing and testing the liner system and related components. The CQA engineer or his designee shall be on-site at all times during construction of the liner system to monitor the construction activities.

8. Post-Construction Survey. A survey shall be performed by an engineer or registered surveyor to verify that final contours and elevations of the facility are in accordance with the plans as approved in this permit. Aerial mapping techniques that provide equivalent survey accuracy may be substituted for the survey. Contours should be shown at no greater than five-foot intervals. The landfill owner or operator shall submit this information to the Department along with the Certification of Construction Completion required in Specific Condition 2.G.9.

9. Certification of Closure Construction Completion. After each sequence of closure construction has been completed, the engineer of record shall certify to the Department on Form 62-701.900(2) that the closure is complete and that it was done in accordance with the plans submitted to the Department except where minor deviation was necessary. All deviations shall be described in detail and the reasons therefore enumerated.

10. List of Closed Units Not in Long-Term Care. Closed sections of the landfill will continue to be monitored and maintained per the Operation Plan.
    a. The South Cell has been properly closed as acknowledged on December 17, 2003 in DEP letter OCD-SW-03-0397. The official date of closing has not been established and the

30-year long-term care period has not begun for the South Cell. Its post-closure care was permitted in SF64-0078767-028 and is incorporated into this permit.

b. The following three phases of closure activities have been permitted for the North Cell (SF64-0078767-028) as described on sheet ~~00C-04~~ 07, reference ~~8~~ 41, APPENDIX 2:
   i. Closure Sequence 1 – ~~28.2~~ 43 acres, North Cell, Class I Landfill western side slopes
   ii. Closure Sequence 2 – ~~35.0~~ 23acres, North Cell, Class I Landfill eastern side slopes
   iii. Closure Sequence 3 – ~~26.7~~ 32 acres, North Cell, Class I Landfill top deck

c. Post-closure Care Requirements:
   i. The permittee shall continue to monitor and maintain the integrity and effectiveness of the final cover as well as other appurtenances, control erosion, fill subsidence comply with the ground water monitoring plan and gas monitoring program and maintain the storm water system, landfill gas collection system, leachate collection system (when applicable) in accordance with an approved closure plan for all areas which have received final cover.
   ii. Stabilization Report. Every 5 years as part of the 5 year submittal report in section 2.A.7 above, the permittee shall submit a report to the Department that addresses stabilization of closed disposal mounds. The submittal shall include the technical report required in Rule 62-701.510(9)(b), F.A.C., and shall also address subsidence, barrier layer effectiveness, storm water management, gas production and management. It shall also address leachate collection and removal system effectiveness, leachate quality and leachate quantity (when applicable).

H. Long Term Care Requirements

[No areas in the Tomoka Farms Road Landfill solid waste management facility are in long-term care at this time. The South Cell is in post-closure care.]

Permit originally executed in Orange County, Florida, by Central District Director Jeff Prather, State of Florida Department of Environmental Protection on June 28, 2013.

APPENDIX 1
General Conditions

1. The terms, conditions, requirements, limitations and restrictions set forth in this permit, are "permit conditions" and are binding and enforceable pursuant to Sections 403.141, 403.161, 403.727, or 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

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

3. As provided in subsections 403.087(6) and 403.722(5), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of rights, nor any infringement of federal, State, or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in this permit.

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

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

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

7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law

and at reasonable times, access to the premises where the permitted activity is located or conducted to:

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

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

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

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

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

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

   (b) The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance.

   The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

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

10. The permittee agrees to comply with changes in Department rules and Florida Statues after a reasonable time for compliance; provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

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

12. The permittee shall comply with the following:

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

    (b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all

data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

(c) Records of monitoring information shall include:

1. the date, exact place, and time of sampling or measurements;
2. the person responsible for performing the sampling or measurements;
3. the dates analyses were performed;
4. the person responsible for performing the analyses;
5. the analytical techniques or methods used;
6. the results of such analyses.

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

APPENDIX 2
List of Documents Incorporated into this Permit

Documents Generated for this Permit Application:

1. FDEP Solid Waste Permit Application for the Operations of North Cell Class I Landfill, dated December 12, 2012. Received and stamped December 28, 2012, DEP – Central District.

2. First Request for Additional Information from DEP – Central District dated January 25, 2013.

3. Response to First Request for Additional Information dated February 20, 2013. Received and stamped February 22, 2013, DEP – Central District.

4. Second Request for Additional Information from DEP – Central District dated March 15, 2013.

5. Response to Second Request for Additional Information dated April 10, 2013. Received and stamped April 12, 2013, DEP – Central District.

List of Documents Associated with Closure Permit SF64-0078767-028:

6. Tomoka Farms Road Landfill Class I – Closure of North Cell Phase I and Post-Closure Care of South Cell "Application for Renewal of Existing Closure Permit", signed and sealed by Kanishka Perera, P.E. HDR Engineering, Inc. Jacksonville, Florida, dated December 6, 2011. Received and stamped December 7, 2011, DEP-Central District.

7. Response to FDEP's 1st Request for Additional Information from Kanishka Perera, P.E. HDR Engineering, Inc. Jacksonville, Florida, dated January 27, 2012. Received and stamped January 30, 2012, DEP-Central District.

8. Tomoka Farms Road Landfill, North Cell Class I Closure, Intermediate Modification Permit Application, Prepared By: HDR Engineering, Inc., Jacksonville, Florida 32202, dated August 25, 2010. Received and stamped September 14, 2010, Central District – DEP.

9. Response to First Request for Additional Information from HDR Engineering, Inc., dated November 11, 2010 (Tomoka Farms Road Landfill, North Cell Class I Closure, Intermediate Modification Permit Application, dated November 2010). Received and stamped November 12, 2010, Central District – DEP.

10. Closure Permit Application, Tomoka Farms Road Landfill – North and East Class I Cell, November 15, 2006. Received and stamped December 1, 2006, Central District – DEP.

11. Tomoka Farms Road Landfill, North and East Cell Closure Permit Drawings dated October 2006 (included with November 15, 2006 Closure Permit Application, Tomoka Farms Road

Landfill – North and East Class I Cell). Received and stamped December 1, 2006, Central District – DEP.

12. Application for Intermediate Modification of Operation Permit to Construct and Operate a Landfill Gas Collection and Control System, dated October 2, 2003. Received and stamped October 15, 2003, Central District – DEP.

Referenced Historical Documents:

13. FDEP Application for Renewal of the Existing Closure Permit, Class I Landfill – North Cell, Tomoka Farms Road Landfill, dated December 6, 2011. Received and stamped December 7, 2011.

14. Response to First Request for Additional Information dated January 27, 2012. Received and stamped January 30, 2012, Central District – DEP.

15. FDEP Application for Intermediate Modification of the Existing Closure Permit, North Cell Class I, Tomoka Farms Road Landfill, dated August 25, 2010. Received and stamped September 14, 2010, Central District – DEP.

16. Tomoka Farms Road Landfill, North Cell – Phase II, Class I Construction Permit Renewal Application, dated August 1, 2012. Received and stamped August 2, 2012, Central District – DEP.

17. Response to First Request for Additional Information dated September 17, 2012. Received and stamped September 18, 2012, Central District – DEP.

18. Response to Second Request for Additional Information dated November 1, 2012. Received and stamped November 1, 2012, Central District – DEP.

19. Construction Permit Application, Operation Permit Modification, Tomoka Farms Road Landfill, East Cell Expansion, dated April 3, 2002. Received and stamped May 28, 2002, Central District – DEP.

20. Tomoka Farms Road Landfill, Landfill Gas Collection System Expansion Certification Report, dated May 12, 2010. Received and stamped May 17, 2010, Central District – DEP.

21. Tomoka Farms Road Landfill, Landfill Gas Collection System Expansion for Closure Notification, dated September 10, 2012. Received and stamped September 19, 2012, Central District – DEP.

22. Tomoka Farms Road Landfill, East Cell Expansion Geotechnical Report, dated November 14, 2000. Received and stamped May 28, 2002, Central District – DEP.

23. Landfill Gas Collection System Expansion, bid drawings and as-built survey, dated June 6, 2005. Received and stamped May 21, 2013, Central District – DEP.

Documents Regarding Permit Modification:

24. Application for a Minor Modification to Operation Permit, Tomoka Farms Road Landfill, North Cell Class I Landfill, dated March 05, 2014. Received March 17, 2014, DEP – Tallahassee Headquarters.
http://depedms.dep.state.fl.us/Oculus/servlet/shell?command=getEntity&[guid=8.198866.1]

25. Draft Department Comments Regarding March 05, 2014 Application for Minor Modification – DEP Tallahassee Headquarters dated April 1, 2014.
http://depedms.dep.state.fl.us/Oculus/servlet/shell?command=getEntity&[guid=8.200819.1]

26. Response to FDEP's Draft Comments from Cliff Koenig, P.E. HDR Engineering, Inc. Jacksonville, Florida, dated April 08, 2014. Received April 08, 2014, DEP – Tallahassee Headquarters.
http://depedms.dep.state.fl.us/Oculus/servlet/shell?command=getEntity&[guid=8.200820.1]

Documents Regarding -032 Permit Modification

27. Application for a Minor Modification to Operation Permit, Tomoka Farms Road Landfill, North Cell Class I Landfill prepared by Neel-Schaffer, Inc., dated April 4, 2014. Received April 4, 2014, DEP –Tallahassee Solid Waste.

http://depedms.dep.state.fl.us:80/Oculus/servlet/shell?command=getEntity&[guid=8.199888.1]&[profile=Permitting_Authorization

28. First Request for Additional Information from DEP Tallahassee Solid Waste dated April 17, 2014.

http://depedms.dep.state.fl.us:80/Oculus/servlet/shell?command=getEntity&[guid=8.200915.1]&[profile=Permitting_Authorization

29. Response to FDEP's First Request for Additional Information prepared by Ron Beladi, P.E., Neel-Schaffer, Inc., dated April 28, 2014. Received April 28, 2014, FDEP – Tallahassee Solid Waste.

http://depedms.dep.state.fl.us:80/Oculus/servlet/shell?command=getEntity&[guid=8.202452.1]&[profile=Permitting_Authorization

30. Approved Operations Plan, prepared by Neel-Schaffer, Inc., dated April 2014.

    http://depedms.dep.state.fl.us:80/Oculus/servlet/shell?command=getEntity&[guid=8.202453.1]&[profile=Permitting_Authorization

Documents Regarding -033 Permit Modification

31. Application for a Minor Modification to Operation Permit at the Tomoka Farms Road Landfill, Volusia County, Florida prepared by S2L, Inc., dated April 24, 2014. Received April 25, 2014, DEP –Tallahassee Solid Waste.

    http://depedms.dep.state.fl.us:80/Oculus/servlet/shell?command=getEntity&[guid=8.201920.1]&[profile=Permitting_Authorization

    Application:
    http://depedms.dep.state.fl.us:80/Oculus/servlet/shell?command=getEntity&[guid=8.201918.1]&[profile=Permitting_Authorization

    Drawings:
    http://depedms.dep.state.fl.us:80/Oculus/servlet/shell?command=getEntity&[guid=8.201919.1]&[profile=Permitting_Authorization

32. First Request for Additional Information from DEP Tallahassee Solid Waste dated May 2, 2014.

    http://depedms.dep.state.fl.us:80/Oculus/servlet/shell?command=getEntity&[guid=8.201934.1]&[profile=Permitting_Authorization

33. Response to FDEP's First Request for Additional Information prepared by S2L, Inc., dated June 10, 2014. Received June 10, 2014, FDEP – Tallahassee Solid Waste.

    http://depedms.dep.state.fl.us:80/Oculus/servlet/shell?command=getEntity&[guid=8.205114.1]&[profile=Permitting_Authorization

34. Approved Operations Plan, prepared by S2L, Inc., dated June 10, 2014.

    http://depedms.dep.state.fl.us:80/Oculus/servlet/shell?command=getEntity&[guid=8.205257.1]&[profile=Permitting_Authorization

Documents Regarding -036 Permit Modification

35. Application for a Minor Modification to Operation Permit for North Cell, Class I – Phase I and Phase II Area 3, Tomoka Farms Road Landfill, Volusia County, Florida prepared by HDR Engineering, Inc., dated May 27, 2015. Received by the Department May 28, 2015.

    http://depedms.dep.state.fl.us:80/Oculus/servlet/shell?command=getEntity&[guid=8.230191.1]&[profile=Permitting_Authorization

36. Supplemental information, prepared by HDR, Inc., submitted by email dated and received June 1, 2015.
    http://depedms.dep.state.fl.us:80/Oculus/servlet/shell?command=getEntity&[guid=8.230828.1]&[profile=Permitting_Authorization

Documents Regarding -037 Permit Modification

37. Application for Permit Modification to MPIS and Zone of Discharge to Operation Permit, Tomoka Farms Road Landfill North Cell Class I Disposal Area, prepared by HDR Engineering, Inc. for Volusia County, dated June 16, 2015. Received by the Department June 16, 2015.

    http://depedms.dep.state.fl.us:80/Oculus/servlet/shell?command=getEntity&[guid=8.231585.1]&[profile=Permitting_Authorization

38. Supplemental drawing of ZOD and monitoring wells, prepared by HDR Engineering, Inc., for Volusia County, dated June 2015. Received by the Department June 24, 2015.

    http://depedms.dep.state.fl.us:80/Oculus/servlet/shell?command=getEntity&[guid=8.231937.1]&[profile=Permitting_Authorization

    Documents for Permit Modification 0078767-043-SO-MM

39. Application for Minor Operations Permit Modification, prepared by HDR Engineering, Inc. for Volusia County Solid Waste Division, dated and received by the Department June 2, 2020.

    https://depedms.dep.state.fl.us:443/Oculus/servlet/shell?command=getEntity&[guid=8.313653.1]&[profile=Permitting_Authorization

40. Approved Operation Plan, dated June 2020.

    https://depedms.dep.state.fl.us:443/Oculus/servlet/shell?command=getEntity&[guid=8.313654.1]&[profile=Permitting_Authorization

Documents for Permit Modification 0078767-044-SO-IM

41. Application for Intermediate Permit Modification, prepared by SCS Engineers for Volusia County Solid Waste Division, dated November 19, 2021 and received by the Department December 1, 2021.

https://depedms.dep.state.fl.us:443/Oculus/servlet/shell?command=getEntity&[guid=8.332526.1]&[profile=Permitting_Authorization]

42. Approved Operation Plan, dated November 19, 2021.

https://depedms.dep.state.fl.us:443/Oculus/servlet/shell?command=getEntity&[guid=8.332885.1]&[profile=Permitting_Authorization]

APPENDIX 3

Tomoka Farms Road Landfill
WACS_FACILITY: 27540
MONITORING PLAN IMPLEMENTATION SCHEDULE (MPIS)
7/27/2015

GENERAL

1. This water quality monitoring plan (called the Monitoring Plan Implementation Schedule) is for the entire TFRL solid waste management facility. This MPIS is effective when the permit is issued. It replaces all previous MPIS issued for the Tomoka Farms Road Landfill solid waste management facility, WACS #27540. **[62.701-510(1)(b)&(c), 62-520.600(5), F.A.C.]**

2. The field testing, sample collection and preservation, and laboratory testing, including quality control procedures, shall be in accordance with Chapter 62-160, F.A.C. Approved methods as published by the Department or as published in Standard Methods, ASTM, or EPA Methods shall be used. **[62-701.510(2)(b), F.A.C.]**

3. The organization collecting samples at this site must use the Field and Laboratory Standard Operating Procedures (DEP-SOP-001/01) referenced in Chapter 62-160, F.A.C. Sampling personnel must have a copy of the SOP for purging and sampling in the field when sampling and must be knowledgeable of its contents, procedures and forms. The laboratory designated to conduct the chemical analyses must be certified by the Florida Department of Health Environmental Laboratory Certification Program (DoH ELCP). This Certification must be for the test method and analyte(s) that are reported. **[62-160.210(1), 62-160.300(1), F.A.C.]**

   NOTE: DEP-SOP-001/01 can be accessed at: http://www.dep.state.fl.us/water/sas/sop.sops.htm

4. If, at any time, analyses detect parameters which are significantly above background water quality, or which are at levels above the Department's water quality standards or criteria specified in Chapter 62-520, F.A.C., in the detection wells or at the edge of the Zone of Discharge, the Permittee, to confirm the data, shall resample the wells within thirty (30) days of receipt of the sampling data. Should the Permittee choose not to resample, the Department will consider the water quality analysis as representative of current ground water conditions at the facility. The Permittee must notify the Department within 14 days of receipt of the sampling data whether the original data will be accepted as representative of current ground water condition or whether resampling will be accomplished to confirm the data.

   If the resampling event detects parameters which are significantly above background water quality, or which are at levels above the Department's water quality standards or criteria specified in Chapter 62-520, F.A.C., the Permittee shall notify the Department in writing within 14 days of receipt of the sampling data. Confirmed data must be submitted to the Department within 60 days from completion of lab analyses. Use "CONF" (for confirmation data) in the report type column. **[62-701.510(6)(a), F.A.C.]**

Upon notification by the Department, the Permittee shall initiate evaluation monitoring in accordance with Rule 62-701.510(6), F.A.C. **[62-701.510(6)(a), F.A.C.]**

GROUND WATER QUALITY MONITORING

5. Fifty-eight (58) ground water monitoring wells are listed in on **Attachment A** and are shown on **Attachment** B. Fifty (50) ground water monitoring wells are designated for routine water quality testing and water level measurements. Sampling is suspended in eight (8) wells. **[62-701.510(3)(d)2&3, F.A.C.]**

6. Any initial sample collected from a ground water monitoring well shall be analyzed for the following Initial Sample Ground Water Monitoring Parameters. **[62-701.510(5)(b)2, F.A.C.]**

Initial Ground Water Monitoring Parameters	
Field Parameters	**Laboratory Parameters**
1. Static water level in wells before purging	1. Ammonia – N, Total
2. Dissolved oxygen	2. Chlorides
3. pH	3. Iron
4. Specific Conductivity	4. Nitrate
5. Temperature	5. Sodium
6. Turbidity	6. Total Dissolved Solids (TDS)
7. Colors and sheens (by observation)	7. Those parameters listed in 40 CFR Part 258, Appendix II*

*Mercury is not on the list because it is included in Appendix II, and Appendix I is a subset of Appendix II.

7. Semi-annual samples shall be collected in **May** for thirty-one (31) ground water monitoring wells. Samples shall be collected in **November** for an additional twenty (20) monitoring wells for a total of fifty-one (51) wells. (See **Attachment A** for which wells are to be sampled semi-annually / annually.) The samples shall be analyzed for the following Ground Water Monitoring Parameters. **[62-701.510(5)(c)&(7)(a), F.A.C.]**

Semi-Annual Ground Water Monitoring Parameters	
Field Parameters	**Laboratory Parameters**
1. Static water level in wells before purging	1. Ammonia – N, Total
2. Dissolved oxygen	2. Chlorides
3. pH	3. Iron
4. Specific Conductivity	4. Mercury
5. Temperature	5. Nitrate
6. Turbidity	6. Sodium
7. Colors and sheens (by observation)	7. Total Dissolved Solids (TDS)
	8. Those parameters listed in 40 CFR Part 258, Appendix I

8. Unless otherwise approved by the Department, wells with high turbidities must be remediated or reinstalled to reduce the turbidity value to less than 20 NTU prior to sample collection. Should any ground water sample exhibit dissolved oxygen concentrations greater than 20% of oxygen saturation at the field measured temperature, the sampled well must be repurged then resampled as soon as acceptable dissolved oxygen value has been attained unless it can be demonstrated that in situ ground water contains higher levels of dissolved oxygen. All water quality analyses will be performed on unfiltered samples unless approved by the Department.

9. Please confer with your consultant and analytical laboratory prior to sampling to ensure the analytical method is capable of achieving detection limits at or below the Groundwater Cleanup Target Levels (GCTLs) in Table I, Chapter 62-777, F.A.C., except those listed in Table C of the "FDEP Guidance for the Selection of Analytical Methods and for the Evaluation of Practical Quantitation Limits dated 10/12/2004". GCTLs that are not water quality standards are used as screening tools and interim guidelines for ground water criteria until standards are promulgated.

SURFACE WATER MONITORING

10. The seven (7) surface water sites included in this monitoring plan are SW-1, SW-2, SW-3, SW-4, SW-5, SW-11, and SW-12. They are listed on **Attachment A** and shown on **Attachment B**. **[62-701.510(4)(c), F.A.C.]**

11. Initial samples from any new surface water monitoring sites shall be collected within 30 days of the Department's approval of the sampling location. The samples shall be analyzed for the following Initial Surface Water Monitoring Parameters. **[62-701.510(5)(b)(3), F.A.C.]**

Initial Surface Water Monitoring Parameters	
Field Parameters	**Laboratory Parameters**
1. Surface water level	1. Unionized ammonia as N
2. Dissolved oxygen	2. Total hardness as CaCO3
3. pH	3. Biochemical oxygen demand (BOD_5)
4. Specific Conductivity	4. Iron
5. Temperature	5. Mercury
6. Turbidity	6. Nitrate
7. Colors and sheens (by observation)	7. Total dissolved solids (TDS)
	8. Total organic carbon (TOC)
	9. Fecal coliform
	10. Total phosphates as P
	11. Chlorophyll A
	12. Total nitrogen
	13. Chemical oxygen demand (COD)
	14. Total suspended solids (TSS)
	15. Those parameters listed in 40 CFR Part 258, Appendix I

12. Semi-annual samples from the seven (7) surface water monitoring sites shall be collected in May and November. The samples shall be analyzed for the following Surface Water Monitoring Parameters. **[62-701.510(5)(d)&(7)(b), F.A.C.]**

Semi-Annual Surface Water Monitoring Parameters	
Field Parameters	**Laboratory Parameters**
1. Surface water level	1. Unionized ammonia as N
2. Dissolved oxygen	2. Total hardness as CaCO3
3. pH	3. Biochemical oxygen demand (BOD_5)
4. Specific Conductivity	4. Iron
5. Temperature	5. Mercury
6. Turbidity	6. Nitrate
7. Colors and sheens (by observation)	7. Total dissolved solids (TDS)
	8. Total organic carbon (TOC)
	9. Fecal coliform
	10. Total phosphates (as mg/L P)
	11. Chlorophyll A
	12. Total nitrogen
	13. Chemical oxygen demand (COD)
	14. Total suspended solids (TSS)
	15. Those parameters listed in 40 CFR Part 258, Appendix I

13. Please confer with your consultant and analytical laboratory prior to sampling to ensure the analytical method is capable of achieving detection limits at or below the Freshwater Surface Water Criteria in Table I, Chapter 62-777, F.A.C., except those listed in Table C of the "FDEP Guidance for the Selection of Analytical Methods and for the Evaluation of Practical Quantitation Limits dated 10/12/2004". Freshwater Surface Water Criteria that are not water quality standards are used as screening tools and interim guidelines for ground water minimum criteria until standards are promulgated.

MONITORING WELL REQUIREMENTS

14. If a monitoring well or piezometer becomes damaged or inoperable, the Permittee shall notify the Department in writing within seven (7) days. The written report shall describe what problem has occurred and the remedial measures that have been taken to prevent a recurrence. The Department can require the replacement of inoperable monitoring wells or piezometers. **[62-4.070(3), F.A.C.]**

15. New or replacement monitoring well design or placement must be approved by the Department. Either:

    a. Proposed well construction details based on site-specific borings must be submitted with all supporting data (grain size distribution analyses, in-situ hydraulic conductivity testing, depth to water, etc.) for the Department's approval prior to well installation. Or

b. The Department approves in advance of installation that the anticipated lithology and the proposed well construction is similar to close wells in the MPIS and that the final determination of this information (grain size distribution analyses, in-situ hydraulic conductivity testing, depth to water, etc.) can be evaluated by an engineer or geologist at the time of well installation and submitted with the well completion information.

16. Use of hollow stem auger equipment is recommended. Other drilling methods must be approved by the Department prior to well installation. **[62-520.600(3), F.A.C.]**
17. All wells and piezometers shall be clearly and permanently labeled and the well site maintained so that the well is visible at all times. Unless otherwise authorized in a Department permit, new monitoring wells and existing monitoring wells at the time of permit renewal, shall have protective bollards or other devices installed around them if they are located in areas of high traffic flow to prevent damage from passing vehicles. **[62-701.510(3)(d)5, F.A.C.]**

18. An abandonment plan for abandoning any well that is unsuitable for ground water monitoring or for any piezometer must be approved by the Department prior to abandonment. **[62-701.510(3)(d)6, F.A.C.]**

REPORTING REQUIREMENTS

FIELD ACTIVITIES

19. The Department must be notified in writing, hard copy, or e-mail, at least fourteen (14) days prior to the installation and/or sampling of any monitoring well(s). **[62-701.510(8)(a), F.A.C.]**

MONITORING WELL COMPLETION

20. One (1) paper copy and one (1) electronic copy (Adobe pdf format) of **Attachment C Monitoring Well Completion Report** (as modified by the Central District) and required Attachments (for example, construction diagram and lithologic log), must be submitted to the Department within thirty (30) days after installation of any new or replacement well(s). In addition, as-built well construction diagrams and soil boring logs that cover the entire depth of the monitoring well(s) must be submitted to the Department.

    NOTE: The top of casing elevation of each well, to an accuracy of 0.01 feet, and the latitude and longitude of each well in degrees, minutes and seconds to two (2) decimal places, with an accuracy of 15 feet, must be determined and certified by a Florida Licensed Surveyor and Mapper and provided on the form. **[62-701.510(3)(d)1 & 62-532.410, F.A.C.]**

SURVEYING

21. One (1) paper copy and one (1) electronic copy (Adobe pdf format) of a drawing must be submitted within thirty (30) days following monitoring well installation showing the location of all monitoring sites (active, abandoned, and Evaluation Monitoring), piezometers, water bodies and waste filled areas. The location of features on the drawing must be horizontally and vertically located by standard surveying techniques. The drawing shall include all monitoring well locations, each monitoring well name and identification (WACS) number, the top of casing, pad elevation, permanent benchmark(s) and/or corner monument marker(s) referenced to NGVD 1929 with an accuracy of 0.01 feet. The latitude and longitude of each well in degrees, minutes and seconds, to two (2) decimal places, with an accuracy of 15 feet, must be determined and provided on the drawing. The survey shall be conducted and certified by a Florida Licensed Surveyor and Mapper. **[62-701.510(1)(c) & (3)(d)1, F.A.C.]**

22. If a monitoring well is being replaced or new wells are being added to an existing ground water monitoring plan, only the new wells need to be surveyed as long as all other monitoring wells in the MPIS have been surveyed and certified by a Florida Licensed Surveyor and Mapper, and there is no reason to believe the elevations have changed. The location and elevation determinations must be provided with the Monitoring Well Completion Form for the new well.

INITIAL AND SEMI-ANNUAL SAMPLING

23. Required monitoring reports must be submitted to the Department within sixty (60) days from completion of laboratory analyses. Requirements for submitting the reports is outlined in **Attachment D (ADaPT Electronic Reporting Requirement). [62-701.510(8), F.A.C.]**

WATER ELEVATIONS

24. Water levels in all monitoring wells, whether sampled or not, all piezometers and all surface water sites must be measured to the nearest 0.01 foot. The depth to water shall be converted to feet NGVD, and this elevation shall be reported semi-annually.

25. Surface water elevations at sampling locations must be measured to the nearest 0.01 foot on the same day as ground water levels in the wells and piezometers and reported semi-annually.

26. All water level measurements must be made within a one-day period.

27. These measurements should be reported in a table that includes well or surface water point name, date water level measured, measuring point elevation references to NGVD 1929, depth to water and calculated water level elevation referenced to NGVD 1929. The ground water and surface water elevations shall be reported in the ADaPT data for the upload into WACS. **[62-701.510(8)(a)8, F.A.C.]**

GROUND WATER CONTOUR MAPS

28. Ground water elevation contour maps for each monitored aquifer zone must be submitted semi-annually to the Department. Ground water elevation contour map(s) should include monitoring well and piezometer locations, ground water elevation at each monitoring well or piezometer location references to NGVD 1929, a bar scale, north arrow, ground water contour interval, date of measurement and ground water flow direction. The map(s) must incorporate adjacent and on-site surface water elevations where appropriate. These maps shall be signed and sealed pursuant to Florida Statutes (F.S.) Chapters 471 and 792 which require that documents requiring the practice of professional engineering or professional geology, as described in Chapter 471 or 492, F.S., be signed and sealed by the professional(s) who prepared or approved them. This certification must be made by a licensed professional who is able to demonstrate competence in this subject area. **[62-701.510(8)(a)9, F.A.C.]**

MPIS Technical Report (formerly Biennial Report)

29. A technical report, signed and sealed by a professional geologist or professional engineer with experience in hydrogeologic investigations, shall be submitted to the Department approximately every two and one-half years during the active life of the facility, and every five years during the long-term care period. The report shall summarize and interpret the water quality monitoring results and water level measurements collected since the last Technical Report. The report shall contain, at a minimum, the following [62-701.510(8)(b), F.A.C.]:

    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 hydrographs for all monitor wells;
    b. Trend analyses of any monitoring parameters consistently detected;
    c. Comparisons among shallow, middle, and deep zone wells;
    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.

30. One (1) electronic copy (Adobe pdf format) of the MPIS Technical Report shall be submitted to the Department:

Report	Sampling Periods Covered	Number of Semi-Annual Sampling Events in Report	MPIS Technical Report Due
1	November 2014 through November 2016	5	March 2017
2	May 2017 through May 2019	5	September 2019
3	November 2019 through November 2021	5	March 2022
Renewal Report	May 2022 through May 2024	5	At the time of permit renewal for Renewal of the Class III Permit 0078767-034-SO-T3 (9/24/2024)
5	November 2024 through November 2026	5	March 2027
6	May 2027 through May 2029	5	September 2029
Renewal Report	November 2029 through November 2032	7	At the time of permit renewal for Renewal of the Class I Permit 0078767-030-SO-01 (3/13/2033)

Requirements for Electronic Reporting of Water Quality Data

31. Required water quality monitoring reports and all ground water and surface water analytical results shall be submitted as described in **Attachment D (ADaPT Electronic Reporting Requirement)**. Required monitoring reports must be submitted to the Department within sixty (60) days from completion of the laboratory analyses. **[62-160.240 & 62-160.340, F.A.C.]**

32. Monitoring Plan Implementation Schedule – Tracking versions for current permit period:

Date	Type	Notation
11/3/2009	Update	• Added ADaPT electronic reporting requirement language. • Changed Biennial Report to MPIS Technical Report per pending Chapter 62-701, F.A.C. revision • Added reporting of water level in leachate basins.
3/12/2012	Permit Renewal	• Current ADaPT electronic reporting requirement language. • Changed Biennial Report to MPIS Technical Report per Chapter 62-701, F.A.C. revision.
5/22/2013	Permit Renewal Class I	• Updated per Chapter 62-701, F.A.C. revision 8/12/2012 • Removed Leachate Sampling per rule revision • Include EM wells on Att B Monitoring Locations Map • Include Att G Evaluation Monitoring Plan Status
4/17/2014	Minor Mod Operating Permit	• Updated MPIS Technical Report Section with the addition of paragraph 30 and renumbered the paragraphs following.
9/24/2014	Permit Renewal Class III	• Suspended 6 monitoring wells. • 20 wells in Zone 4 reduced to annual sampling.
7/27/2015	ZOD Modification	• Modification to expand the ZOD as shown in Attachment B • Discontinuation of the Benzene Evaluation Monitoring Program • Suspension of monitoring wells B41-1 and B-45-1 • Add the following wells to semi-annual monitoring: B82-1, B87-6, B85, and B85-6

List of Attachments

Attachment A – Monitoring Well, Surface Water Sampling Point Lists

Attachment B – Monitoring Locations Map (Figure 1 - Site Plan with Zone of Discharge Boundary)

Attachment C – Monitoring Well Completion Report Form

Attachment D – ADaPT Electronic Reporting Requirements

Attachment E – Ground Water Monitoring Report Certification Form

Attachment F – Water Sampling Log

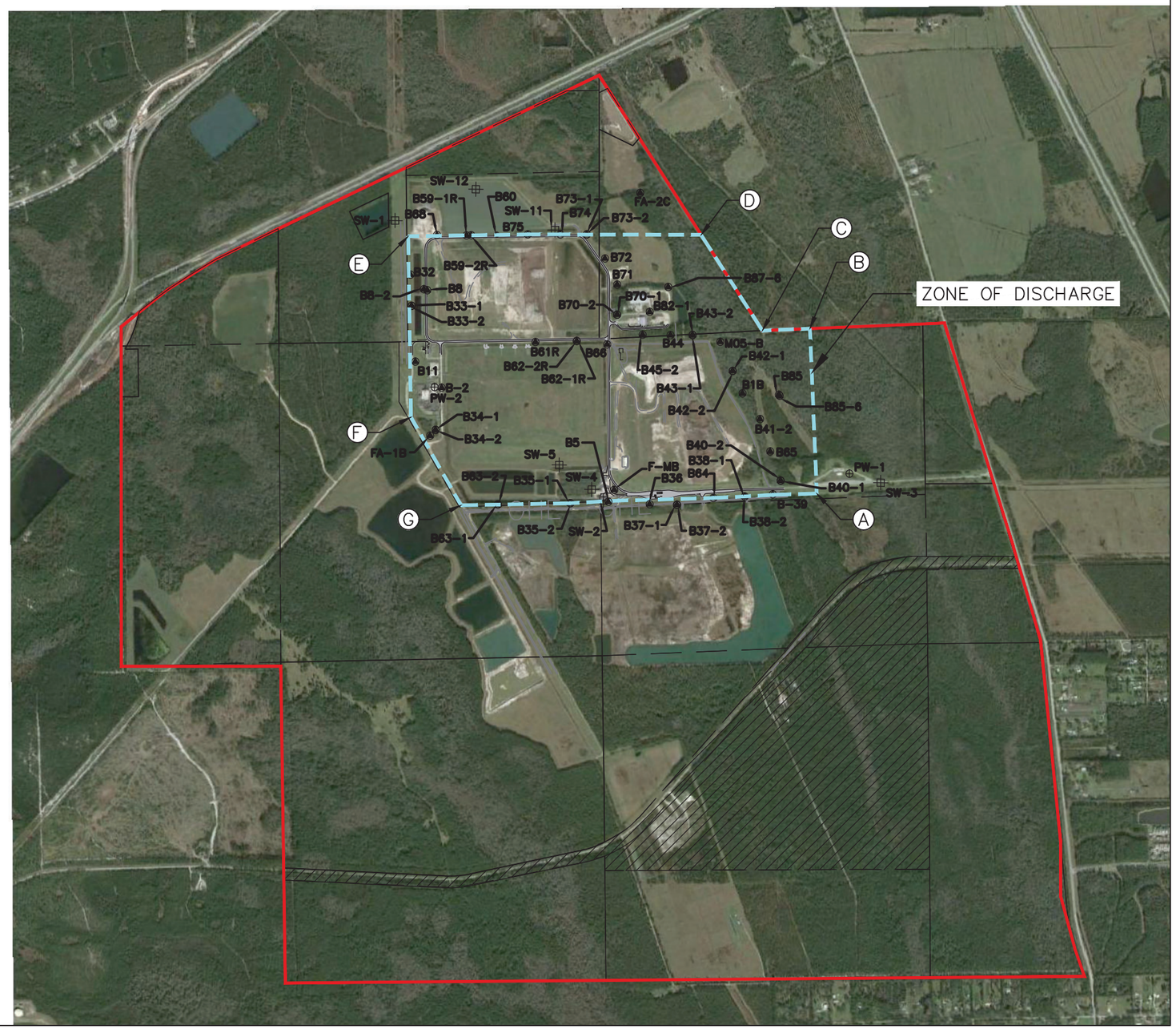
ATTACHMENT A
TOMOKA FARMS ROAD LANDFILL
WACS_FACILITY: 27540
MONITORING SITES

Count Total	Count By Type	Monitoring Site Number	WACS Well Number	Well Type	Zone/ Screen	GW/SW Class	WACS Report Type
Semi-Annual Monitoring Wells (Sampled in May & November)							
1.	1.	B11	15679	BG	ZONE 1-2	G-II	SEMGW
2.	2.	B33-2	15793	CO	ZONE 1-2	G-II	SEMGW
3.	3.	B34-2	15795	BG	ZONE 1-2	G-II	SEMGW
4.	4.	B35-2	15797	BG	ZONE 1-2	G-II	SEMGW
5.	5.	B37-2	15800	CO	ZONE 1-2	G-II	SEMGW
6.	6.	B38-2	15802	CO	ZONE 1-2	G-II	SEMGW
7.	7.	B-39	15803	CO	ZONE 1-2	G-II	SEMGW
8.	8.	B40-2	15805	CO	ZONE 1-2	G-II	SEMGW
9.	9.	B41-2	15807	CO	ZONE 1-2	G-II	SEMGW
10.	10.	B42-2	15809	CO	ZONE 1-2	G-II	SEMGW
11.	11.	B43-1	15810	CO	ZONE 3-4	G-II	SEMGW
12.	12.	B43-2	15811	CO	ZONE 1-2	G-II	SEMGW
13.	13.	B44	15812	CO	ZONE 1-2	G-II	SEMGW
14.	14.	B45-2	15814	CO	ZONE 1-2	G-II	SEMGW
15.	15.	B59-2R	15818	CO	ZONE 1-2	G-II	SEMGW
16.	16.	B63-2	15824	CO	ZONE 1-2	G-II	SEMGW
17.	17.	B64	15825	CO	ZONE 1-2	G-II	SEMGW
18.	18.	B65	15826	CO	ZONE 1-2	G-II	SEMGW
19.	19.	B70-2	19801	DE	ZONE 1-2	G-II	SEMGW
20.	20.	B71	19802	CO	ZONE 1-2	G-II	SEMGW
21.	21.	B72	19803	CO	ZONE 1-2	G-II	SEMGW
22.	22.	B73-2	19805	CO	ZONE 1-2	G-II	SEMGW
23.	23.	B74	19806	CO	ZONE 1-2	G-II	SEMGW
24.	24.	B75	19807	CO	ZONE 1-2	G-II	SEMGW
25.	25.	B82-1	28776	CO	ZONE 4	G-II	SEMGW
26.	26.	B87-6	29069	CO	ZONE 6	G-II	SEMGW
27.	27.	B85	28779	CO	ZONE 4	G-II	SEMGW
28.	28.	B85-6	29067	CO	ZONE 6	G-II	SEMGW
29.	29.	FA-1B	15639	BG	FLORIDAN	G-II	SEMGW
30.	30.	FA-2C	15836	CO	FLORIDAN	G-II	SEMGW
31.	31.	F-MB	22777	CO	FLORIDAN	G-II	SEMGW
Annual Monitoring Wells (Sampled Only in November)							
32.	1.	B1-B	15636	CO	ZONE 4	G-II	ANNGW
33.	2.	B-2	15402	BG	ZONE 4	G-II	ANNGW
34.	3.	B-5	15403	CO	ZONE 4	G-II	ANNGW
35.	4.	B8-2	15790	IM	ZONE 4	G-II	ANNGW
36.	5.	B33-1	15792	BG	ZONE 4	G-II	ANNGW
37.	6.	B34-1	15794	BG	ZONE 4	G-II	ANNGW
38.	7.	B35-1	15796	BG	ZONE 4	G-II	ANNGW
39.	8.	B36	15798	BG	ZONE 4	G-II	ANNGW
40.	9.	B37-1	15799	CO	ZONE 4	G-II	ANNGW
41.	10.	B38-1	15801	CO	ZONE 4	G-II	ANNGW
42.	11.	B40-1	15804	CO	ZONE 4	G-II	ANNGW
43.	13.	B42-1	15808	CO	ZONE 4	G-II	ANNGW
44.	14.	B59-1R	15817	CO	ZONE 4	G-II	ANNGW
45.	15.	B60	15819	CO	ZONE 4	G-II	ANNGW
46.	16.	B63-1	15823	CO	ZONE 4	G-II	ANNGW

Tomoka Farms Road Landfill MPIS
Volusia County

Count Total	Count By Type	Monitoring Site Number	WACS Well Number	Well Type	Zone/ Screen	GW/SW Class	WACS Report Type
Annual Monitoring Wells (Sampled Only in November)							
47.	17.	B68	15829	CO	ZONE 4	G-II	ANNGW
48.	18.	B70-1	19800	CO	ZONE 4	G-II	ANNGW
49.	19.	B73-1	19804	CO	ZONE 4	G-II	ANNGW
50.	20.	MO5-B	15635	CO	ZONE 4	G-II	ANNGW
Wells Suspended August 2014							
51.	1.	B8	15642	IM	ZONE 6	G-II	Suspended
52.	2.	B-32	15791	BG	ZONE 4	G-II	Suspended
53.	3.	B61R	15820	DE	ZONE 1-2	G-II	Suspended
54.	4.	B62-1R	15821	DE	ZONE 4	G-II	Suspended
55.	5.	B62-2R	15822	DE	ZONE 1-2	G-II	Suspended
56.	6.	B66	15827	DE	ZONE 1-2	G-II	Suspended
Wells Suspended June 2015							
57.	7.	B45-1	15813	CO	ZONE 4	G-II	SEMGW
58.	8.	B41-1	15806	CO	ZONE 4	G-II	ANNGW
Surface Water Sampling							
59.	1.	SW-1	15830	BG	BACKGROUND	SW-IIIF	SEMSW
60.	2.	SW-2	15831	CO	OUTFALL OF EXTERNAL DITCH	SW-IIIF	SEMSW
61.	3.	SW-3	15832	CO	OUTFALL FROM LANDFILL	SW-IIIF	SEMSW
62.	4.	SW-4	15833	CO	OUTFALL OF RETENTION POND	SW-IIIF	SEMSW
63.	5.	SW-5	15638	CO	OUTFALL OF INTERNAL DITCH	SW-IIIF	SEMSW
64.	6.	SW-11	19798	CO	STORMWATER MANAGEMENT DITCH	SW-IIIF	SEMSW
65.	7.	SW-12	19799	CO	SE CORNER OF BORROW AREA	SW-IIIF	SEMSW

Well Type Codes: (BG) Background (DE) Detection (IM) Intermediate (CO) Compliance



ZONE OF DISCHARGE

N

NOTES:
1. LANDFILL AND SURROUNDING AERIAL FROM VOLUSIA COUNTY PROPERTY APPRAISER WEBSITE, 2014.

LEGEND:

- PROPERTY BOUNDARY
- PARCEL BOUNDARY
- ZONE OF DISCHARGE
- PROPERTY NOT OWNED BY VOLUSIA COUNTY
- ⊕PW-1 POTABLE WATER WELL

SCALE IN FEET

−2000 0 2000 4000

A	N 29°07'41.29" W 81°04'58.76"	E	N 29°08'23.21" W 81°06'14.75"
B	N 29°08'08.20" W 81°05'00.06"	F	N 29°07'53.70" W 81°06'14.21"
C	N 29°08'07.87" W 81°05'08.90"	G	N 29°07'39.32" W 81°06'04.89"
D	N 29°08'23.49" W 81°05'20.30"		

Attachment B - Monitoring Locations Map

TOMOKA FARMS ROAD LANDFILL
SITE PLAN WITH
ZONE OF DISCHARGE BOUNDARY

DATE
JUNE 2015

FIGURE
1

ATTACHMENT C

Florida Department of Environmental Protection

3319 Maguire Boulevard, Suite 232, Orlando, Florida 32803-3767

MONITORING WELL COMPLETION REPORT FORM

Facility Name: **Tomoka Farms Road Landfill**		Date:
DEP Permit No.:	WACS Facility ID #:27540	
WACS Monitoring Site ID #:	WACS Monitoring Site Name:	
Well Type: ❑ Background ❑ Detection ❑ Compliance ❑ Other_____		
LATITUDE AND LONGITUDE (See Next Page For 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:	
Filter Interval Covered:	Filter Interval: _____ To_____(BLS)	
Sealant Type:	Sealant Interval: _____ To_____(BLS)	
Grout Type:	Grout Interval: _____ To_____(BLS)	
Top Of Casing Elev. (NGVD):	Ground Surface Elev. (NGVD):	
Post Development Water Level Elev. (NGVD):	Date And Time Measured:	
Describe Well Development:		
Remarks:		
Name Of Person Preparing Report:		
Organization:	Phone Number:	

NOTE Attach As-Built Mw Construction Diagram, Lithologic Log, And Survey Drawing (See Next Page).

(NGVD)=National Geodetic Vertical Datum Of 1929 (BLS) = Below Land Surface

Additional Survey Notes:

1. Latitude and Longitude Requirements and Definitions:

   a. **Latitude** must be measured in degrees, minutes and seconds, to at least two (2) decimal places.

   b. **Longitude** must be measured in degrees, minutes and seconds, to at least two (2) decimal places.

   c. **Eastings and northings** (State Plane Coordinates) **must** be converted to latitude and longitude.

   d. **Coordinate Accuracy:** the measured, estimated degree of correctness of the measurement. An accuracy of 15 feet or 5 meters is required.

   e. **Datum:** the horizontal reference for measuring locations on the Earth's surface. NAD83-North American Datum of 1983 is preferred.

   f. **Elevation Datum:** the reference datum from which elevation measurements are made. NGVD29 (National Geodetic Vertical Datum of 1929 is required.

   g. **Collection Method:** the method or mechanism used to derive the measurements, e.g. GPS, map, aerial photo, etc.

   h. **Collection Date:** the date and time on which the measurements were taken.

   i. **Collector Name:** the name of the person taking the measurement.

   j. **Collector Affiliation:** the agency or company for whom the collector works.

2. As specified in the MPIS, One (1) paper copy and one (1) electronic copy of a drawing must be submitted within thirty (30) days following monitoring well installation showing the location of all monitoring wells (active and abandoned), water bodies and waste filled areas. The location of features on the drawing must be horizontally and vertically located by standard surveying techniques. The drawing shall include all monitoring well locations, each monitoring well name and identification (WACS) number, the top of casing, pad elevation, permanent benchmark(s) and/or corner monument marker(s) referenced to NGVD with an accuracy of 0.01 feet. The latitude and longitude of each well in degrees, minutes and seconds, to two (2) decimal places, with an accuracy of 15 feet, must be determined and provided on the drawing. The survey shall be conducted and certified by a Florida Licensed Surveyor and Mapper. [***62-701.510(1)(c)&(3)(d)1, F.A.C.***]

3. If a monitoring well is being replaced or new wells are being added to an existing ground water monitoring plan, only the new wells needs to be surveyed as long as all other monitoring wells in the MPIS have been surveyed and certified by a Florida Licensed Surveyor and Mapper and there is no reason to believe that the elevations have changed. This location and elevation determinations and the certification must be provided with the Monitoring Well Completion Form for the new well.

Attachment D
Guidance for Submitting Electronic Water Quality Data
To the FDEP Central District Waste & Air Resource Programs

I. General Information

Water quality monitoring reports and all groundwater, surface water, and leachate (when required) analytical results for the Solid Waste Program shall be submitted to the Department electronically via email, FTP site, compact disc, or flash drive media readable by Microsoft Windows. **(Rules 62-160.240 and 62-160.340, F.A.C.)**

Water quality monitoring reports shall be submitted in Adobe pdf format. The water quality Electronic Data Deliverable (EDD) shall be compatible with software called Florida DEP Automated Data Processing Tool (ADaPT) --unless otherwise approved by the Department.

ADaPT has been developed to evaluate and upload water quality data into the Department's Water Assurance Compliance System (WACS) database. A copy of this ADaPT software with installation instructions and EDD specifications can be downloaded from the following website address:

http://www.dep.state.fl.us/waste/categories/shw/pages/ADaPT.htm

II. Monitoring Report

The groundwater monitoring report shall be submitted in Adobe PDF format, with the EDDs as an attachment. The report shall include the following items:

1. Cover letter;
2. Summary of exceedances and sampling issues (if any, for example, variation from SOP field criteria);
3. Conclusions and recommendations;
4. Groundwater contour maps;
5. Chain of custody forms;
6. Water levels, water elevation table;
7. Groundwater Monitoring Report Certification, using the appropriate Department form **(Attachment E**);
8. Appropriate sampling information on Form FD 9000-24 (DEP-SOP-001/01); (**Attachment F);**
9. Laboratory EDDs and associated Lab EDD Error Logs, Field EDDs that are compatible with ADaPT software and ADaPT export file(s).

(NOTE: You no longer have to complete or submit the DEP Form 62-522.900(2), Parameter Monitoring Report.)

The monitoring report (including ADaPT EDDs) should be emailed to Tallahassee using the following email address: ADaPT.EDDs.and.Reports@dep.state.fl.us.

Submit all ADaPT files in a single zip file named as follows:
12345_200811_swldd.zip

Submit the monitoring report in a single (text, no scanned content) PDF file named as follows:
12345_200811_swgwmr.pdf

Please do not submit multiple documents for the monitoring report; combine all documents in a single PDF document. Less preferable, zip these documents into a single zip file named as follows:
12345_200811_swgwmr.zip

(Note: refer to Section III below for details of file nomenclature.)

If attachments are too large to email, monitoring reports may also be transmitted to the FDEP Solid Waste program in Tallahassee using the following FTP site: ftp://ftp.dep.state.fl.us/pub/WACS-ADaPT/EDDS_and_Reports

Note: When submitting files to the FTP site, please combine all ADaPT EDDs and the groundwater monitoring report into a single zip file (sw_12345_200811_gwmr.zip).

Please email us at ADaPT.EDDs.and.Reports@dep.state.fl.us informing us of what files were transmitted via FTP for which facility sampling event.

If you are unable to submit the groundwater monitoring report electronically via email or FTP, it can also be sent by regular mail to:

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

III. ADaPT EDDs

The ADaPT EDD consists of two electronic deliverables:

(1) a Laboratory EDD, identified as swldd.txt; and

(2) a Field EDD identified as swfdd.txt.

The Laboratory EDD shall be submitted in a comma separated (csv format) text file using the .txt filename extension. The Laboratory EDD file name format shall be:

[WACS Facility I.D] underscore [Begin Sampling Year and Month (yyyymm)] underscore SWldd.txt

For example, with WACS Facility I.D. # 12345 where sampling started in November and ended in December of 2008, the Laboratory EDD file name should be: 12345_200811_swldd.txt

The Field EDD shall be submitted in the same comma separated (.csv format) text file as the Laboratory EDD. The Field EDD file name format shall be:

[WACS Facility I.D.] underscore [Begin Sampling Year and Month (yyyymm)] underscore swfdd.txt

For example, with WACS Facility I.D. # 12345 where sampling started in November and ended in December of 2008, the file name should be: 12345_200811_swfdd.txt

For confirmation sampling, add the term "_conf" to the EDD filenames as follows:

12345_200811_conf_swldd.txt for the Laboratory EDD or

12345_200811_conf_swfdd.txt for the Field EDD.

For radiochemistry results, add the term "_rad" similar to confirmation sampling indicated above.

IV. Signatures Required

Water quality monitoring reports and interpretative documents (such as recommendations about exceedances and/or contour maps) shall be signed and sealed by a Florida registered professional geologist or professional engineer with experience in hydrogeological investigations.

An electronic signed and sealed signature page may be submitted with the report provided a stamped seal is used. If a raised seal is used, ensure that the seal is legible (gray the embossed seal and scan). Otherwise, you must separately mail the signed and sealed page.

V. Process Required

Three steps are generally required.

First, the Laboratory EDD, in comma separated text format, must be submitted by the laboratory. In order to validate the QA/QC aspects of the Laboratory EDD, the permittee shall ensure the laboratory processes the Laboratory EDD through ADaPT using both their laboratory specific library and the Department's Division of Waste Management Master library and corrects all critical errors and explains all non-critical errors prior to submittal.

Second, the appropriate entity (laboratory, consultant, or permittee) shall process the Field EDD through ADaPT and correct all Field EDD errors prior to submittal.

Third, as a completeness check, the laboratory, permittee or consultant shall process both the Laboratory EDD and the Field EDD through ADaPT and confirm a successful export to disk and submit the ADaPT generated export file (ADaPTYYYYMMDDHHMMSS.txt).

VI. Resources

In the event help is needed to prepare these EDDs, or monitoring testsite information needs updating in the WACS Oracle database, or if you need help in submitting the groundwater monitoring report, please contact the Laxsamee Levin (407-897-4313) at the Central District office:

Florida Department of Environmental Protection
Central District Office
Waste and Air Resource Programs
3319 Maguire Blvd., Ste. 232
Orlando, FL 32803-3767

DEP_CD@dep.state.fl.us

You can also receive assistance by contacting Clark Moore, clark.b.moore@dep.state.fl.us, (850) 245-8739 or by emailing ADaPT.EDDs.and.Reports@dep.state.fl.us

ATTACHMENT E

Florida Department of Environmental Protection

3319 Maguire Boulevard, Suite 232, Orlando, Florida 32803-3767

GROUND WATER MONITORING REPORT

Rule 62-522.600(11)

PART I GENERAL INFORMATION

(1) Facility Name **TOMOKA FARMS ROAD LANDFILL**

Address _____

City _____ Zip _____ County _____

Telephone Number ( ) _____ E-mail address _____

(2) WACS_Facility **27540**

(3) DEP Permit Number _____

(4) Authorized Representative's Name _____ Title _____

Address _____

City _____ Zip _____ County _____

Telephone Number ( ) _____ E-mail address _____

(5) Type of Discharge _____

(6) Method of Discharge _____

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 ( ) _____

E-mail Address _____

From DER Form 62-701.900(31), F.A.C.

Effective January 6, 2010

Attachment F
WATER SAMPLING LOG

DEP-SOP-001/01 FS 2200 Groundwater Sampling

Form FD 9000-24

FACILITY NAME: Tomoka Farms Road Landfill WACS 27540	FACILITY LOCATION:	
MONITORING_SITE_NUM:	WACS_WELL:	DATE:

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
only fill out if applicable)

= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISSOLVED OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
PUMP OR TUBING DEPTH IN WELL (feet):	SAMPLE PUMP FLOW RATE (mL per minute):	TUBING MATERIAL CODE:	
FIELD DECONTAMINATION: Y N	FIELD-FILTERED: Y N FILTER SIZE: ____ µm Filtration Equipment Type:	DUPLICATE: Y N	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP =** Peristaltic Pump **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

ATTACHMENT 1
Time Sensitive Action Chart

Required Notifications and Submittals to the Department

If any of the time deadlines in the Time Sensitive Action Chart are inconsistent with the time deadlines in the permit conditions, the time deadlines in the permit condition shall be followed.

Specific Condition	Topic	Action	Due Date
Section 2.A.3	Permit Renewal	Submit permit renewal application to the Department	Due 3/13/2033
Section 2.A.6	Permit Fees	Submit installment payment of $10,000 to the Department	May 13, 2018 May 13, 2023 May 13, 2028
Section 2.A.7	5 Year Submittal Report	Submit report to the Department	May 13, 2018 May 13, 2023 May 13, 2028
Section 2.C.1	Operation Plan	Notify the Department	Before any non-minor operational changes
Section 2.C.9	Erosion Control	Notify the Department	When it is determined that the erosion cannot be corrected within 7 days of occurrence.
Section 2.C.10	Emergencies	Notify the Department	Per the Contingency Plan
Section 2.C.12.c	Leachate Management	Submit a summary report to the Department concerning the leachate collection pipes cleaning or video inspection	At a minimum by: May 13, 2018 May 13, 2023 May 13, 2028 As part of the report required by Section 2.A.7
Section 2.C.12.g	Leachate Management	Submit leachate quantity analysis report	January 31 of each year
Section 2.C.14	Waste Quantity Report	Submit information at http://www.fldepportal.com/go	February 1 of each year
Section 2.C.14	Estimate of Remaining Life	Submit estimate of remaining life to the Department	November 1 of each year
Section 2.C.15	Regulated Hazardous Waste	Notify the Department	Immediately upon discovery
Section 2.D	Ground Water Monitoring	Conduct sampling semi-annual events and submit groundwater Reports	Per the current MPIS

Specific Condition	Topic	Action	Due Date
Section 2.E.1	LGCS Construction	Notify the Department	Prior to any non-minor changes to the approved design are implemented
Section 2.E.4	LGCS Construction	Submit Certification of Construction Completion Report	After each gas system construction event is completed
Section 2.E.6	Gas Monitoring	Submit report to the Department	Quarterly within 15 days of monitoring event
Section 2.F.1	Cost Estimate for Unused Disposal Units	Submit to the Department	60 days prior to the planned acceptance of waste
Section 2.F.1	Annual Financial Mechanism Adjustment	Submit evidence of adjusted financial mechanism to the Department	Annually after the adjusted cost estimate is approved
Section 2.F.2	Cost Estimate	Submit to the Department	Annually between July 1 and September 1
Section 2.F.2	Detailed Cost Estimate	Submit to the Department	At a minimum by: May 13, 2018 May 13, 2023 May 13, 2028 As part of the report required by Section 2.A.7
Section 2.G.2.a	Closure	Submit to the Department or meet with the Department	90 days prior to commencing closure activities
Section 2.G.2.c	Closure	Notify the Department	30 days prior to commencing closure activities
Section 2.G.8	Closure Post-Construction Survey	Submit to the Department	With the Certification of Construction Completion Report
Section 2.G.9	Closure Construction	Submit Certification of Construction Completion Report	After completion of each sequence of closure

Specific Condition	Topic	Action	Due Date
Section 2.G.10	Post-Closure Care	Submit the stabilization report to the Department	At a minimum by: May 13, 2018 May 13, 2023 May 13, 2028 As part of the report required by Section 2.A.7