Florida Department of Environmental Protection

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

Rick Scott
Governor

Jennifer Carroll
Lt. Governor

Herschel T. Vinyard Jr.
Secretary

May 9, 2012

NOTICE OF PERMIT

By-Email
lmarion@co.volusia.fl.us

In the matter of an
Application for Permit By:

Leonard Marion
Volusia County Solid Waste Division
3151 East New York Avenue
DeLand, Florida 32724

OCD-SW-12-191

Volusia County – SW WACS No. 27540
Tomoka Farms Road Landfill Class I
Closure of the North Cell Phase I & Post-Closure Care of the South Cell
Renewal of Closure Permit
DEP File No. SF64-0078767-028

Dear Mr. Marion:

Enclosed is Permit Number SF64-0078767-028 for closure of the North Cell Phase I and post-closure care of the South Cell, issued under Sections 403.061(14) and 403.707, of the Florida Statutes.

Any party to this order (permit) has the right to seek judicial review of the permit under section 120.68 of the Florida Statutes, by the filing of a Notice of Appeal under rule 9.110 of the Florida Rules of Appellate Procedure, with the Clerk of the Department of Environmental Protection, 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 of appeal must be filed within thirty days after this notice is filed with the Clerk of the Department.

Executed in Orlando, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

For: Jeff Prather
Director, Central District

FILING AND ACKNOWLEDGMENT

FILED, May 9, 2012, pursuant to Section 120.52, F. S., with the designated Department Clerk, receipt of which is hereby acknowledged.

Clerk **Date**

May 9, 2012

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF PERMIT and all copies were sent before the close of business on May 9, 2012 to the listed persons.

Clerk

JP/tl/ll

Enclosure
Permit No. SF64-0078767-028

Copies furnished to:
Richard Tedder, P.E. – DEP – Tallahassee, Richard.Tedder@dep.state.fl.us
Jennifer Stirk, Volusia County Solid Waste Division, jstirk@co.volusia.fl.us
Kanishka Perera, P.E., HDR Engineering, Inc., Kanishka.Perera@hdrinc.com
Carlo Lebron, P.E., HDR Engineering, Inc., carlo.lebron@hdrinc.com
Solid.Waste.Financial.Coordinator@dep.state.fl.us

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3319 Maguire Boulevard, Suite 232
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Secretary

Permit Issued to:

Volusia County Solid Waste Division
3151 East New York Avenue
DeLand, Florida 32724
(386) 943-7889

Facility WACS ID No.: 27540
Tomoka Farms Road Landfill Class I
Closure of the North Cell Phase I & Post-Closure Care of the South Cell
Location: 1990 Tomoka Farms Road,
Port Orange, Volusia County, Florida
Contact Person:
Leonard Marion
Solid Waste Director
3151 East New York Avenue, DeLand, Florida 32724
(386) 943-7889

Solid Waste Renewal Closure Permit
Tomoka Farms Road Landfill Class I
Closure of the North Cell Phase I & Post-Closure Care of the South Cell
Permit No. SF64-0078767-028
Replaces Permit No. SF64-0078767-020

Permit Issued: 05/09/2012
Permit Renewal Application Due Date: 01/17/2017
Permit Expires: 03/19/2017

Permitting Authority
Florida Department of Environmental Protection
Central District Office
3319 Maguire Boulevard, Suite 232
Orlando, FL 32803
(407) 897-4304

SECTION 1 - SUMMARY INFORMATION

A. Authorization

The permittee is hereby authorized to close the North Cell and perform post-closure activity at the South Cell 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 closure permit is issued under the provisions of Chapter 403, Florida Statutes, and 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 permit 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

Tomoka Farms Road Landfill Class I
Closure of the North Cell Phase I & Post-Closure Care of the South Cell
Location: 1990 Tomoka Farms Road,
Port Orange, Volusia County, Florida
Sections 9, Township 16 South, Range 32 East
Latitude 29° 7′ 42.27″N and Longitude 81° 4′ 54.49″W

C. Facility Description

The closure permit SF64-0078767-020 (Reference No. 5 – Appendix 2) was to close the combined North and East Cells Class I, as portions of those cells reach permitted final grade, and to provide post-closure care to South Cell Class I. The North and East Cells have been combined and designated as North Cell, Phase I. This permit is for the closure of the North Cell Phase I (65.64 acres) as shown in Figure 1 (Reference No. 2 – Appendix 2) and for post-closure care of the South Cell (114 acres).

The North and South Cells are located within the 3,500-acre Volusia County's Tomoka Farms Road Landfill (TFRL) solid waste management facility. The North Cell Phase I has a double liner system with leachate collection and detection systems. The South Cell does not have a bottom liner because it was not required when the cell was built in 1978. DEP approved the closure construction for the South Cell on 12/17/2003. The 30-year long-term care period has not yet begun because the South Cell does not have its own water quality zone of discharge that can be monitored separately. The 30-year Long Term Care period will not begin until the official closing date for the TFRL has been established by FDEP.

There is one water quality monitoring plan (called the Monitoring Plan Implementation Schedule) for the entire TFRL solid waste management facility. The new version (dated 3/12/2012) is included as Appendix 3. It is made a part of this permit and all other permits for the TFRL solid waste management facility.

D. Appendices Made Part of This Permit

APPENDIX 1 - General Conditions

APPENDIX 2 - Approved Application Documents

APPENDIX 3 – Water Quality Monitoring Plan Implementation Schedule (3/12/2012)

E. For Informational Purposes Only

List of Previous Permit Activity

Permit	Permit Sub-Type	Issued Date	Expiration Date	Comments
Closure	SF64-0078767-011	3/8/2001	1/30/2006	Closure of the South Cell (114 acres)
Closure	SF64-0078767-020	5/30/2007	2/15/2012	Closure of North Cell Phase I and South Cell (115 acres)
Closure Renewal	SF64-0078767-028	TBD	TBD	Renewal permit application received 12/7/2011 to replace -020

SECTION 2 - SPECIFIC CONDITIONS

A. Administrative Requirements

1. Documents Part of This Permit. The permit application as revised, replaced or amended in response to the Department's Request 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, 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 closure operations for 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 Construction Permit Requirements. The Tomoka Farms Road Landfill (TFRL) solid waste management facility has an Air Title V Operation Permit. The landfill owner or operator must determine whether the closure activities authorized by this solid waste permit require any notifications or modifications of the air permit.

B. Construction Requirements

This permit does not authorize construction of any new disposal areas. It does authorize construction activities related to the closure of the North Cell Phase I. (See Section 2.G)

C. Operation Requirements

This permit does not authorize any operation activities. Permit SO64-0078767-023 (expiration date 3/3/2013) authorizes the disposal operations in the North Cell Phase I.

D. Water Quality Monitoring Requirements

1. Zone of Discharge (ZOD). There is one zone of discharge for the entire Tomoka Farms Road Landfill (TFRL) facility (both Class I and Class III landfills). This permit does not change the ZOD specified in Permit SO64-0078767-026.

   The ZOD shall be a three dimensional volume, defined in the vertical plane as extending from the top of the ground to the bottom of the screen of the lower surficial monitoring wells (that is, Zone 4), and defined in the horizontal plane as extending 100 feet from the footprint of the waste disposal area or to the property boundary, whichever is less. The permittee shall ensure that Class G-II water quality standards will not be exceeded at the boundary of the zone of discharge, per Rule 62-520.420, F.A.C., and that ground water minimum criteria will not be exceeded outside the boundary of the zone of discharge, per Rule 62-701.320(17), F.A.C.

2. Electronic Reporting. Required water quality monitoring reports and all ground water, surface water and leachate analytical results shall be submitted as one electronic copy and one paper copy. Electronic submittals of water quality monitoring reports shall be in Adobe pdf format. The water quality data Electronic Data Deliverable (EDD) shall be provided to the Department in an electronic format only 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:

(paper and electronic)
FDEP Central District
Solid Waste Section
3319 Maguire Blvd, Suite 2332
Orlando, FL 32803

and to:

(electronic only)
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 new version (dated 3/12/2012) 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. Construction Requirements. A landfill gas management system will be installed as part of the closure construction activities. All construction shall be done in accordance with the approved gas management system design, drawings, and specifications section O and drawings 4 to 6 (Reference No. 7 – Appendix 2). 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.

2. Certification of Construction Completion.
   a. The closure of the North Cell Phase I will be done in stages. The amount of work done depends upon the scope of work in each contract that is awarded. A Certification of Construction Completion shall be submitted for the work accomplished by each scope of work.
   b. After construction 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.

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

4. 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 Department under separate cover no later than 15 days after the end of the period in which the monitoring occurred.

5. 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.

6. 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. The total approved financial assurance cost estimates provided is shown in Appendix B Attachment R-1 of Reference No. 1 – Appendix 2 for North Cell Phase I and South Cell are the following:

Area of Facility	Date of Estimate	Closing Cost Estimate	30- Year Long-Term Care Estimate
North Cell Phase I (65.64 acres)	12/6/2011	$9,364,941.36	$5,259,774.30
South Cell (114 acres)	12/6/2011		$3,425,467.65
TOTALS		$9,364,941.36	$8,685,241.95

Please check with Frank Hornbrook, frank.hornbrook@dep.state.fl.us, to determine whether the value of the current financial assurance instrument for Volusia County is sufficient for this facility.

2. Financial Assurance Mechanism. The permittee shall maintain compliance with the financial assurance requirements of Rule 62-701.630, F.A.C. 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

3. Cost Estimates.
   a. The permittee shall submit annual closure cost estimates 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. All submittals in response to this specific condition shall be sent to the District Office and a copy to the address identified in Specific Condition F.1. or to the following email address: Solid.Waste.Financial.Coordinator@dep.state.fl.us.

G. Closure Requirements

1. Closure Design. All closure construction shall be done in accordance with the approved closure design plan as described in the references in Appendix 2. The Department shall be notified before any changes, other than minor deviations, to the approved closure design are implemented in order to determine whether a permit modification is required.

2. Final Cover System. The final cover system for the North Cell shall consist of a minimum of twelve inches of initial soil cover (grading layer), a LLDPE geomembrane, a biplanar geocomposite drainage net, and 24 inches of protective cover soil, including six inches of top soil capable of supporting vegetative growth. 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 of Reference No. 3 – Appendix 2 and Attachment R19 of Reference No. 4 – Appendix 2.

3. Final Cover Design – Side Slopes. The side slope design for the North Cell closure is shown on Sheets C-05 of the Closure Design Drawings and detail sheets C-06 through C-09 of Reference No. 3 – 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 collecting stormwater from the slopes. Terraces will drain at a slope of one percent to direct stormwater to a series of 18-inch and 24-inch diameter downdrains. Downdrains will be constructed at approximately 400-foot centers and discharge stormwater within the perimeter drainage channels. The top portion on the North Cell will have a 4 percent slope to direct runoff to the downdrains.

4. Closure Sequencing. The final cover shall be constructed in three sequences, to allow the County to install final cover over areas that have reached final

permitted elevation as shown on Sheet 00C-04 in Appendix A of Reference No. 3 – Appendix 2.

5. Construction Quality Assurance Plan. The Construction Quality Assurance (CQA) Plan submitted with the permit modification application in Appendix C of Reference No. 3 –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.

6. North Cell Elevation. The final (maximum) elevation of the Tomoka Farms Road Landfill – North Cell, Class I shall not exceed 193 feet NGVD as shown on Sheet 00C-03 in Appendix A of Reference No. 3 – Appendix 2.

7. Survey after Construction: 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 No. 2.G.8.

8. Certification of Closure Construction Completion
    a. The closure of the North Cell Phase I will be done in stages. The amount of work done depends upon the scope of work in each contract that is awarded. A Certification of Construction Completion shall be submitted for the work accomplished by each scope of work.
    b. After 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.

9. Notification of Closure Activities: The permittee shall notify the Department 30 days prior to commencing initial closure activities such as constructing the cap, side slopes, and stormwater drainage facilities, and shall notify the Department at least 10 days before completing these activities.

10. Declaration to the Public After closing operations are approved by the Department, the facility owner or operator shall file a declaration to the public in the deed records in the office of the county clerk of the county in which the facility is located. The declaration shall include a legal description of the property on which the facility is located and a site plan specifying the area actually filled with construction and demolition debris. The declaration shall also include a notice that any future owner or user of the site should consult with the Department prior to planning or initiating any activity involving the disturbance of the facility's cover, monitoring system or other control structures. A certified copy of the declaration shall be filed with the Department, Rule 62-701.730(9)(f), F.A.C.

H. Long Term Care Requirements

1. Post-Closure Care of South Cell. The Permittee shall continue to monitor and maintain the integrity and effectiveness of the final cover as well as other appurtenances, control erosion, fill subsidences, comply with the ground water monitoring plan and gas monitoring program, and maintain the stormwater system, in accordance with an approved closure plan at the South Cell.

2. Stabilization Report. At the next permit renewal, the permittee shall submit a report to the Department that addresses stabilization of the South Cell. 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, and gas production and management. Because South Cell does not have a bottom liner, the submittal will not address leachate collection and removal system effectiveness, leachate quality, and leachate quantity.

3. Use of Closed Landfill Areas: Closed landfill areas, if disturbed, are a potential hazard to public health, ground water and the environment. The Department retains regulatory control over any activities which may affect the integrity of the environmental protection measures such as the landfill cover, drainage, liners, monitoring system, gas management system, or leachate and stormwater controls. Consultation with the Department is required prior to conducting activities at the closed landfill.

4. Construction on Closed Landfill: Pursuant to Section 403.705(1), Florida Statutes, (F.S.), the following guidance is provided for use of a closed landfill.

a. Enclosed ground level and underground structures should be avoided due to the potential for explosive concentrations of methane gas. Special construction and ventilation techniques must be employed if such structures are proposed.

b. Ponding of water, excessive irrigation, or any disturbance of cover soils should be avoided unless there is assurance that moisture will not percolate into the buried waste.

c. Concentrated weight loadings should be avoided to prevent uneven settlement.

d. The effectiveness and integrity of landfill cover and any liners or barriers must not be disturbed when structures are built, particularly when pilings are used.

e. Underground utilities and similar installations that cross, or are placed within 200 feet of any filled areas, should be avoided. If they cannot, a properly located gas barrier or ventilation system should be placed at each property boundary to prevent methane gas migration along the utility line to off-site structures.

5. Long-Term Care Period. The 30-year long-term care period will not begin until the official closing date has been established by FDEP.

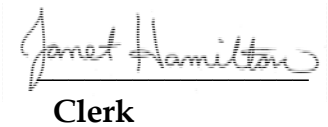
Executed in Orange County, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

F Thomas Lubczynski

For: Jeff Prather
Director, Central District

FILED, May 9, 2012, pursuant to Section 120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.



Clerk

May 9, 2012
Date

Enclosures:

1. Appendix 1 - General Conditions
2. Appendix 2 - List of Documents Incorporated into Permit
3. Appendix 3 – Water Quality Monitoring Plan Implementation Schedule (3/12/2012)

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, 403.727, or 403.859 through 403.861, Florida Statutes (F.S.) The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

6. 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 personal rights, nor any infringement of federal, state, or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in this permit.

4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and 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, as required by Department rules. This provision includes the operation of backup and 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 this 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.

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 Section 403.111 and 403.73, F.S. Such evidence

shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

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

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

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

13. 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 information) 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.

14. 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 Permit

1. 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.

2. 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.

3. 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.

4. 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.

5. 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.

6. 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.

7. 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.

Appendix 3

TOMOKA FARMS ROAD LANDFILL

WACS_FACILITY: 27540

MONITORING PLAN IMPLEMENTATION SCHEDULE (MPIS)
3/23/2012

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 **SF64-0178767-028** 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 conditions 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(7)(a), F.A.C.]**

Upon notification by the Department, the permittee shall initiate evaluation monitoring in accordance with Rule 62-701.510(7) F.A.C. **[62-701.510(7)(a), F.A.C.]**

GROUND WATER QUALITY MONITORING

5. The fifty-four (54) ground water monitoring wells designated for water quality testing and water level measurements are listed on **Attachment A** and are shown on **Attachment B.** [**62-701.510(3)(d)2 & 3, F.A.C.**]

   NOTE: 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 an 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.

6. Initial samples collected from any new ground water monitoring wells shall be collected within 30 days of the installation date. The samples shall be analyzed for the following Initial Ground Water Monitoring Parameters. **[62-701.510(6)(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 not listed because it is included in Appendix II.
* Appendix I is not listed because it is a subset of Appendix II

7. Semi-annual samples from the fifty-four (54) ground water monitoring wells shall be collected in **May and November.**

8. The samples shall be analyzed for the following Ground Water Monitoring Parameters. **[62-701.510(6)(d) & (8)(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. Specified conductivity	2. Chlorides
3. pH	3. Iron
4. Dissolved oxygen	4. Mercury
5. Turbidity	5. Nitrate
6. Temperature	6. Sodium
7. Colors sheens (by observation)	7. Total dissolved solids (TDS)
	8. Those parameters listed in 40 CFR Part 258 Appendix I

[62-701.510(6)(d) & (8)(a), F.A.C.]

9. Ground water levels in all wells, whether sampled or not, and all piezometers must be measured to the nearest 0.01 foot and reported semiannually. All water level measurements must be made within a one-day period. These measurements must be referenced to the National Geodetic Vertical Datum of 1929 (NGVD). **NOTE:** Chapter 62-701, F.A.C, effective 05/27/01, requires the use of NGVD 1929. The term "NGVD 1929" in this MPIS means any datum acceptable by the current version of 62-701, F.A.C. **[62-701.510(9)(a)8, F.A.C.]**

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 Department's approval of the sampling location. The samples shall be analyzed for the following Initial Surface Water Monitoring Parameters **[62-701.510(6)(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(6)(e) & (8)(b), F.A.C.]**

Semi-Annual Surface Water Monitoring Parameters	
Field Parameters	**Laboratory Parameters**
1. Surface Water Elevation	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 phosphorus (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 Ground Water Cleanup Target Levels (GCTLs) in 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". SCTLs are used as screening tools and interim guidelines for ground water minimum criteria until standards are promulgated.

LEACHATE QUALITY MONITORING

14. The site designated for leachate quality testing is L-1. The site is listed on **Attachment A** and shown on **Attachment B**. **[62-701.510(5), F.A.C.]**

15. Samples from the leachate monitoring site shall be collected annually in **November**. The samples shall be analyzed for the following Annual Leachate Parameters .

Annual Leachate Monitoring Parameters	
Field Parameters	**Laboratory Parameters**
1. Specific conductivity	1. Total ammonia as N
2. pH	2. Total alkalinity as $CaCO_3$
3. Dissolved oxygen	3 Chlorides
4. Colors and sheens (by observation)	5. Iron
5. Temperature	6. Nitrate
	7. Sodium
	8. Total Dissolved Solids
	9. Those parameters listed in 40 CFR Part 258 Appendix II

16. If the annual analysis indicates that a contaminant listed in 40 CFR Part 261.24 exceeds the regulatory level listed therein, the permittee:

    a. Shall notify the Department in writing within 14 days of receipt of the analytical data.
    b. Shall initiate monthly sampling and analysis within 60 days of receipt of the analytical data for the parameters in exceedance and for field parameters.
    c. Shall submit and discuss all leachate sampling data in the routine semi-annual sampling report.

    If in any three consecutive months no listed contaminant is found to exceed the regulatory level, the permittee may request approval from the Department to discontinue the monthly sampling and analysis and return to a routine sampling schedule, that is, annual sample each November.
    [62-701.510(6)(c)&(8)(C)&(d), F.A.C.]

17. Semi-annual staff gauge readings for the north and south leachate ponds shall be reported on **Attachment C** and included in the corresponding monitoring report**.** These elevations do not need to be reported in ADaPT.

MONITORING WELL REQUIREMENTS

18. 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.]**

19. 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. (This condition is satisfied for the 17 new wells specified in this MPIS.)

20. 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.]**

21. 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.]**

22. 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

23. 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(9)(a), F.A.C.]**

MONITORING WELL COMPLETION

24. One (1) paper copy and one (1) electronic copy (Adobe pdf format) of **Attachment D 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 monitoring 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

25. 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.**]

26. 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 that the elevations have changed. The location and elevation determinations and the certification must be provided with the Monitoring Well Completion Form for the new well,

DEPTH MEASUREMENTS

27. A total depth measurement must be made on each well at time of permit renewal. This information must be provided as part of permit renewal application. This measurement is to be reported as total apparent depth below ground surface and should be compared to the original total depth of the well.

INITIAL AND SEMI-ANNUAL SAMPLING

28. Required monitoring reports must be submitted to the Department within sixty (60) days from completion of laboratory analyses. Requirement for submitting the report is outlined in **Attachment E (ADaPT electronic reporting requirements) [Rule 62-701.510(9), F.A.C.]**

WATER ELEVATIONS

29. 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.

30. 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 semiannually.

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

32. These measurements should be reported in a table that includes well or surface water point name, date water level measured, measuring point elevation referenced to NGVD 1929, depth to water and calculated water level elevation referenced to NGVD 1929. The ground water elevations shall be reported in the ADaPT data for the upload into WACS. **[62-701.510(9)(a)8, F.A.C.] [62-701.510(9)(a)8, F.A.C.]**

GROUND WATER CONTOUR MAPS

33. 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 referenced 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 492 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(9)(a)9, F.A.C.]**

MPIS Technical Report (formerly Biennial Report)

34. 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 and leachate monitoring results and water level measurements collected since the last Technical Report. The report shall contain, at a minimum, the following [62-701.510(9)(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.

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

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

Report	Number Of Semi-annual Sampling Events in Report	Sampling Periods Covered	MPIS Technical Report Due
Mid-Permit Report	6	May 2009 through Nov 2011	March 2012
Renewal Report	5	May 2012 through May 2014	At the time of Permit SO64-0078767-026 Renewal 8/10/2014

Requirements for Electronic Reporting of Water Quality Data

37. Required water quality monitoring reports and all ground water, and surface water analytical results shall be submitted as described in Attachment E **(ADaPT electronic reporting requirement)**. Required monitoring reports must be submitted to the Department within sixty (60) days from completion of lab analyses. **(62-160.240 and 62-160.340, F.A.C.)**

38. Monitoring Plan Implementation Schedule Tracking

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. • MW types updated for build out of Landfill • Update leachate sampling location--L-1 suspended and replaced with L-2 prior to the leachate treatment facility.

List of Attachments

Attachment A – Monitoring Well and Surface Water Sampling Point List

Attachment **B –** Monitoring Locations Map

Attachment C – Semi-annual Leachate Pond Elevation Levels

Attachment D – Monitoring Well Completion Report Form

Attachment **E –** ADaPT electronic reporting requirement

Attachment F – Ground Water Monitoring Report Certification Form

Attachment **G –** Water Sampling Log

ATTACHMENT A

TOMOKA FARMS ROAD LANDFILL
WACS _FACILITY: 27540
MONITORING SITES

	Monitoring Site Number	WACS Well	Well Type	Zone/ Screen	GW/SW Class	WACS Report Type
Ground Water						
1.	B1-B	15636	CO	ZONE 4*	G-II	SEMGW
2.	B-2	15402	BG	ZONE 4	G-II	SEMGW
3.	B-5	15403	CO	ZONE 4*	G-II	SEMGW
4.	B8	15642	IM**	ZONE 6*	G-II	SEMGW
5.	B8-2	15790	IM**	ZONE 4	G-II	SEMGW
6.	B11	15679	BG	ZONE 1-2	G-II	SEMGW
7.	B-32	15791	BG	ZONE 4	G-II	SEMGW
8.	B33-1	15792	BG	ZONE 4	G-II	SEMGW
9.	B33-2	15793	CO	ZONE 1-2	G-II	SEMGW
10.	B34-1	15794	BG	ZONE 4	G-II	SEMGW
11.	B34-2	15795	BG	ZONE 1-2	G-II	SEMGW
12.	B35-1	15796	BG	ZONE 4	G-II	SEMGW
13.	B35-2	15797	BG	ZONE 1-2	G-II	SEMGW
14.	B36	15798	BG	ZONE 4	G-II	SEMGW
15.	B37-1	15799	CO	ZONE 4	G-II	SEMGW
16.	B37-2	15800	CO	ZONE 1-2	G-II	SEMGW
17.	B38-1	15801	CO	ZONE 4	G-II	SEMGW
18.	B38-2	15802	CO	ZONE 1-2	G-II	SEMGW
19.	B-39	15803	CO	ZONE 1-2	G-II	SEMGW
20.	B40-1	15804	CO	ZONE 4	G-II	SEMGW
21.	B40-2	15805	CO	ZONE 1-2	G-II	SEMGW
22.	B41-1	15806	CO	ZONE 4	G-II	SEMGW
23.	B41-2	15807	CO	ZONE 1-2	G-II	SEMGW
24.	B42-1	15808	CO	ZONE 4	G-II	SEMGW
25.	B42-2	15809	CO	ZONE 1-2	G-II	SEMGW
26.	B43-1	15810	CO	ZONE 3-4	G-II	SEMGW
27.	B43-2	15811	CO	ZONE 1-2	G-II	SEMGW
28.	B44	15812	CO	ZONE 1-2	G-II	SEMGW
29.	B45-1	15813	CO	ZONE 4	G-II	SEMGW
30.	B45-2	15814	CO	ZONE 1-2	G-II	SEMGW
31.	B59-1R	15817	CO	ZONE 4	G-II	SEMGW
32.	B59-2R	15818	CO	ZONE 1-2	G-II	SEMGW
33.	B60	15819	CO	ZONE 4	G-II	SEMGW
34.	B61R	15820	DE	ZONE 1-2	G-II	SEMGW
35.	B62-1R	15821	DE	ZONE 4	G-II	SEMGW
36.	B62-2R	15822	DE	ZONE 1-2	G-II	SEMGW
37.	B63-1	15823	CO	ZONE 4	G-II	SEMGW
38.	B63-2	15824	CO	ZONE 1-2	G-II	SEMGW
39.	B64	15825	CO	ZONE 1-2	G-II	SEMGW
40.	B65	15826	CO	ZONE 1-2	G-II	SEMGW

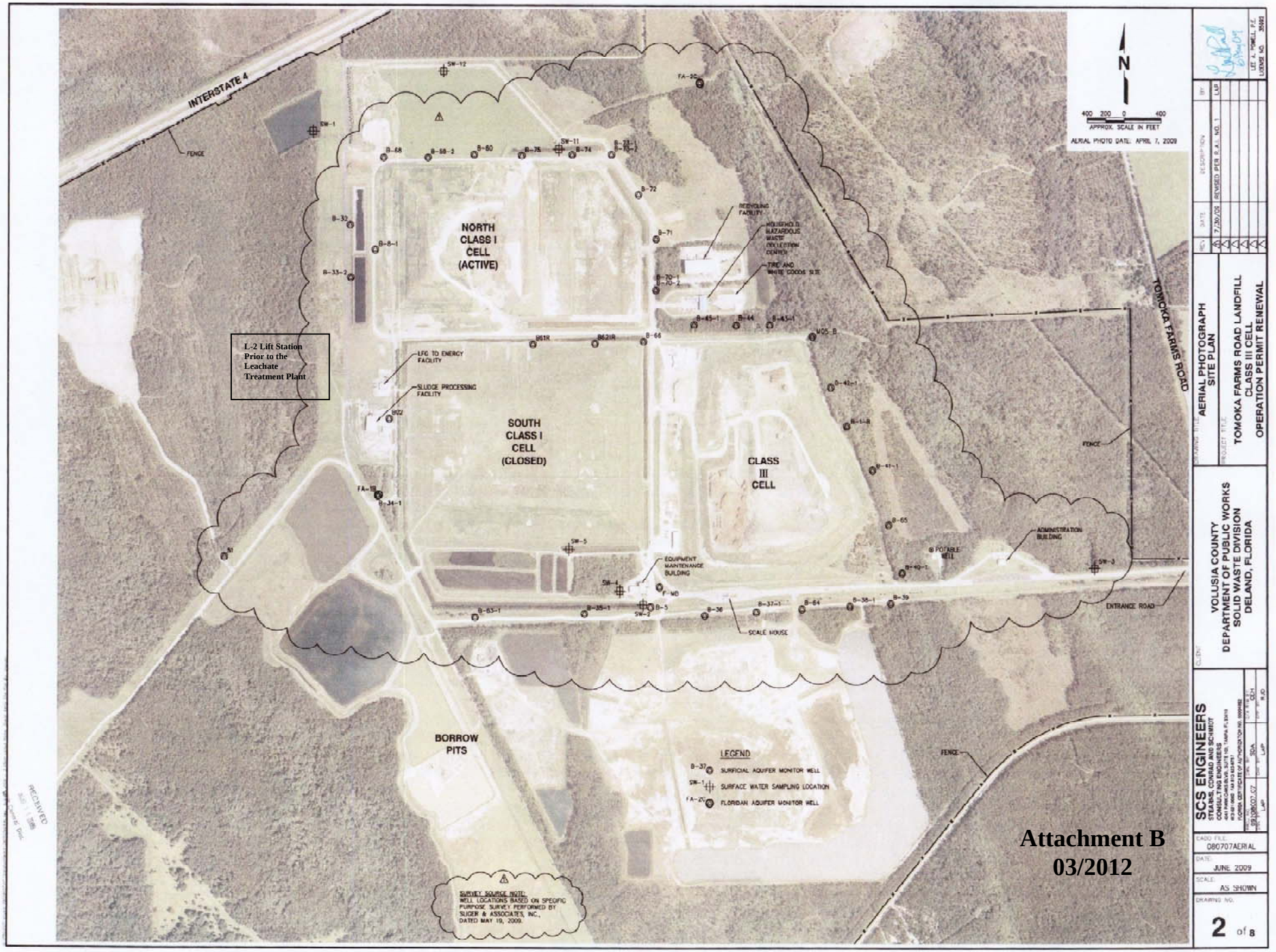
ATTACHMENT A

TOMOKA FARMS ROAD LANDFILL
WACS _FACILITY: 27540
MONITORING SITES

41.	B66	15827	DE	ZONE 1-2	G-II	SEMGW
42.	B68	15829	CO	ZONE 4	G-II	SEMGW
43.	B70-1	19800	CO	ZONE 4	G-II	SEMGW
44.	B70-2	19801	DE	ZONE 1-2	G-II	SEMGW
45.	B71	19802	CO	ZONE 1-2	G-II	SEMGW
46.	B72	19803	CO	ZONE 1-2	G-II	SEMGW
47.	B73-1	19804	CO	ZONE 4	G-II	SEMGW
48.	B73-2	19805	CO	ZONE 1-2	G-II	SEMGW
49.	B74	19806	CO	ZONE 1-2	G-II	SEMGW
50.	B75	19807	CO	ZONE 1-2	G-II	SEMGW
51.	FA-1B	15639	BG	FLORIDAN	G-II	SEMGW
52.	FA-2C	15836	CO	FLORIDAN	G-II	SEMGW
53.	F-MB	22777	CO	FLORIDAN	G-II	SEMGW
54.	MO5-B	15635	CO	ZONE 4*	G-II	SEMGW
Surface Water						
1.	SW-1	15830	CO	BACKGROUND	SW-IIIF	SEMSW
2.	SW-2	15831	CO	OUTFALL OF EXTERNAL DITCH	SW-IIIF	SEMSW
3.	SW-3	15832	CO	OUTFALL FROM LANDFILL	SW-IIIF	SEMSW
4.	SW-4	15833	CO	OUTFALL OF RETENTION POND	SW-IIIF	SEMSW
5.	SW-5	15638	CO	OUTFALL OF INTERNAL DITCH	SW-IIIF	SEMSW
6.	SW-11	19798	CO	STORMWATER MANAGEMENT DITCH	SW-IIIF	SEMSW
7.	SW-12	19799	CO	SE CORNER OF BORROW AREA	SW-IIIF	SEMSW
Leachate						
1.	L-1 (AKA LS-1)	15844	CO	DISCHARGE PIPE INTO PONDS	LC	Suspended No Sampling
2.	L-2	28679	CO	Lift Station Prior To The Treatment Plant	LC	ANNLC

* As designated in the 2001 Biennial Report Table 1 foot notes per Dr. Gomberg.

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



Attachment B
03/2012

ATTACHMENT C

TOMOKA FARMS ROAD LANDFILL
WACS_FACILITY 27540

PARAMETER MONITORING REPORT

Semi-Annual Leachate Pond Elevations (Page 1 of 1)

SAMPLING DATE _____ SAMPLING TIME _____

Total rainfall in the previous 48 hours_____inches/feet (circle the unit used).

	PARAMETER MONITORED Water Level	Water Elevation	**UNITS**
1	North Leachate Pond*		**Ft NGVD**
2	South Leachate Pond*		**Ft NGVD**

*The elevations for these 2 sites do not need to be submitted in ADaPT format.

ATTACHMENT D

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

DEP Form 62-520.900(3) Effective April 14, 1994

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 E
REQUIREMENT FOR SUBMITTING
ELECTRONIC WATER QUALITY DATA
TO THE FDEP CENTRAL DISTRICT SOLID WASTE PROGRAM

3/23/2012

I. General Information

Electronic versions of monitoring reports and all ground water, surface water and leachate analytical results for the Solid Waste Program shall be submitted to the Department on compact disc, DVD, or flash drive media readable by Microsoft Windows. Water quality monitoring reports shall be submitted in Adobe pdf format.

Unless otherwise approved by the Department, the water quality Electronic Data Deliverable (EDD) shall be compatible with software called Florida DEP Automated Data Processing Tool (ADaPT). 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: **ftp://ftp.dep.state.fl.us/pub/WACS-ADaPT/ (Rules 62-160.240 and 62-160.340, F.A.C.)**

II. Monitoring Report

Two electronic copies of the water quality monitoring report shall be submitted. The electronic version of the monitoring report shall be submitted in Adobe pdf format, with the EDDs as separate files on the electronic media.

The Monitoring 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. Ground water contour maps;
5. Chain of custody forms;
6. Water levels, water elevation table;
7. Ground Water Monitoring Report Certification, using the appropriate Department form (**Attachment F);**
8. Required sampling information on Form FD 9000-24 (DEP-SOP-001/01) (**Attachment G);**
9. Laboratory and Field EDDs that are compatible with ADaPT software and the ADaPT error log(s).

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

One copy of the Monitoring Report shall be sent to each:

Florida Department of Environmental Protection
Central District Solid Waste Program
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803

And to:

Florida Department of Environmental Protection
Solid Waste Section
2600 Blair Stone Road, MS 4565
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 which can be produced through Excel. The Laboratory EDD file name format shall be: WACS Facility I.D. underscore Begin Sampling Date (yyyymm) underscore swldd.txt. The period at the end would not be included. 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 Date (yyyymm) underscore swfdd.txt. Again, the period at the end is not included. 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 data that is resubmitted, add _#, where # is the number of data submittals (greater than 1). For example, if the data was resubmitted for the first time, and was thus submittal number 2, then the EDD filenames would be as follows: 12345_200811_2_swldd.txt for the Laboratory EDD and 12345_200811_2_swfdd.txt for the Field EDD.

Finally, taking this to an extreme, if confirmation data was resubmitted for say the 10th time, then the EDD filenames would be: 12345_200811_conf_10_swldd.txt for the Laboratory EDD or 12345_200811_conf_10_swfdd.txt for the Field EDD.

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. A sealed signature page may be submitted with the electronic copy of the report provided that the seal is legible (gray the embossed seal and scan). Otherwise, you must separately mail the sealed and signed page.

V. Process Required

Three steps are generally required. First, two copies of the Laboratory EDD, one in comma separated text format and one as a PDF file, must be submitted by the laboratory. A digitally "signed" PDF copy (read-only file) by the laboratory serves to maintain the integrity of the Laboratory EDD. 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 Solid Waste 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 using the Department's Solid Waste Master library and correct all critical errors and explain all non-critical errors prior to submittal. Finally, as a completeness check, the permittee or consultant shall process both the Laboratory EDD and the Field EDD through ADaPT and confirm a successful export to disk prior to submitting the Laboratory EDD, Field EDD and ADaPT error log(s) to the Department.

VI. Resources

In the event help is needed to prepare these EDDs, you can contact the Central District Solid Waste staff, especially Ms. Laxsamee Levin at (407) 893-3311or by e-mail at laxsamee.levin@dep.state.fl.us.

You can also receive assistance by contacting Mr. Clark Moore (850-245-8739 or by e-mail at clark.b.moore@dep.state.fl.us) or Mr. Lee Martin (850-245-8734 or by e-mail at lee.martin@dep.state.fl.us) in FDEP Tallahassee.

ATTACHMENT F

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 Comp QAP # _____

Analytical Lab NELAC #/ HRS Certification _____

Lab Name _____

Address _____

Phone Number ( ) _____

E-mail Address _____

Attachment G
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. (^{O}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)