



# Florida Department of Environmental Protection

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

Rick Scott  
Governor

Carlos Lopez-Cantera  
Lt. Governor

Jonathan P. Steverson  
Secretary

## Permit Issued to:

Broward County Solid Waste and Recycling Services  
1 North University Drive, Suite 400  
Plantation, Florida 33324  
954-474-1848

WACS Facility ID No.: 53328  
Facility Name: Broward County Landfill  
Facility Address: 7101 SW 205<sup>th</sup> Avenue  
Unincorporated Broward County, Florida 33332

## Contact Person:

Richard Meyers, SWRS Program Manager  
Broward County Solid Waste and Recycling Services  
1 North University Drive, Suite 400  
Plantation, Florida 33324  
rmeyers@broward.org  
954-474-1848

Solid Waste Class I Operation Permit – Landfill  
Permit No.: 053055-011-SO  
Replaces Permit No.: 053055-008-SO

Permit Issued: February 16, 2016  
Permit Renewal Application Due Date: December 16, 2025  
Permit Expires: February 15, 2026

Permitting Authority  
Florida Department of Environmental Protection  
Solid Waste Program & Permitting  
2600 Blair Stone Road, MS #4565  
Tallahassee, Florida 32399-2400  
850-245-8707  
Fax: 850-245-8803

## **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, (F.S.), and Chapters 62-4 and 62-701, Florida Administrative Code, (F.A.C.).

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 main entrance of the facility is located at 7101 SW 205<sup>th</sup> Avenue, Unincorporated Broward County, Florida 33332, specifically in Sections 2&3: Township 51S: Range 39E. The latitude is north 26 degrees 2 minutes and 13 seconds and west longitude 80 degrees 25 minutes and 18 seconds.

### **C. Facility Description**

A Class I sanitary landfill consisting of 52 lined acres. This site has a total of 588 acres with 263 acres designated to be within the waste site boundary. The landfill was constructed with a double liner system. The primary liner is an 80 mil high density polyethylene geomembrane (HDPE) and the secondary liner is a 40 mil HDPE with perimeter and lateral leachate collection and leachate detection systems, a gas collection system, and a surface water management system. This permit is for operation only and does not authorize any liner construction, horizontal or vertical expansions without a permit modification through the Department. The facility currently operates as a Class III facility with weekly cover. The Operation Plan addresses the operational changes that would be implemented to allow acceptance of Class I waste without the need for permit modification.

### **D. Appendices Made Part of This Permit**

APPENDIX 1 – General Conditions

APPENDIX 2 – List of Approved Documents Incorporated into the Permit

APPENDIX 3 – Water Quality Monitoring Plan

APPENDIX 4 – Figure 2, Gas Monitoring Locations

## 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., and Rule 62-4.120, 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. This facility is authorized to operate under a Title V permit. The Air Program Facility ID is 0112370. For information regarding the Title V permit, contact the Division of Air Resource Management, Office of Permitting and Compliance, 2600 Blair Stone Road, Mail Station #5505, Tallahassee, Florida 32399-2400, (850) 717-9000.
6. Submittals Required Every Five Years. No later than February 14, 2021 the permittee shall submit a report to the Department that contains the following:
  - a. If needed, 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 within the last five years.
  - d. An updated operation plan, if operational procedures have changed.
7. Permit Fee Payments. The total permit fee required for this permit is \$20,000 for a 10-year permit. 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 February 14, 2021 the permittee shall submit to the Department an installment payment of this fee in the amount of \$10,000. This fee is due 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 either pay the entirety of the fee due before submitting the application for transfer, or 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.

## **B. Construction Requirements**

1. Construction authorized. This Permit does not authorize any construction or vertical expansion activities.

## **C. Operation Requirements**

1. General Operating Requirements. The Permittee shall operate the landfill in accordance with the approved Operation Plan as provided in the permit application dated January 8, 2016. 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 landfill and shall be accessible to landfill operators.
3. Authorized Waste Types. The facility 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) Class III waste.
    - 3) Construction and demolition debris.
    - 4) Yard trash.
    - 5) White goods.
    - 6) Waste tires.
    - 7) Recovered materials.
  - b. Other Wastes Specifically Authorized:
    - 1) Disaster debris
    - 2) Mobile homes and trailers in accordance with Rule 62-701.520, F.A.C.
    - 3) Boats in accordance with Rule 62-701.520, F.A.C.
4. Unauthorized Waste Types. The facility 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 permitted maximum height of the landfill is 135 feet NGVD in accordance with Figure C-3 of Attachment D-1 of the January 8, 2016 permit renewal application.

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. The permittee shall comply with waste handling and cover requirements in accordance with Rule 62-701.500(7), F.A.C. A mixture of mulch and clean soils may be used as initial cover, intermediate and final cover material. Class I and Class III wastes shall be landfilled in distinctly separate working faces. Initial cover shall be applied to the Class I waste working face daily. Initial cover shall be applied to the Class III waste working face weekly. Should there be an operational need to mix Class I and Class III wastes, the initial cover shall be applied to the combined working face daily. The approved alternatives to soil as initial cover under this permit, include the following:
  - a. Tarps (hand or mechanically deployed)
  - b. Spray on Materials such as 480TM and Concover<sup>TM</sup>
  - c. Mixtures of 50% of wood chip and 50% of soil
  - d. Recovered Screen materials (RSM) from C&D recycling facilities
  - e. Street sweepings
  - f. Shredded yard waste (not green in color)
  - g. Ground up C&D debris
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 the DEP's Southeast District Office at 561-681-6667.
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, and storage 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 in accordance with the schedule established in the Operation Plan.
  - 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 with the permit renewal application.
  - d. The permittee, on a daily basis, shall record quantities of leachate generated in gal/day and precipitation at the facility, and shall compare these measurements.

13. Spotters and Operators. This 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.
14. Record Keeping Requirements.
- Waste Quantity Records. Waste records shall be compiled monthly, and copies shall be provided to the Department annually by February 1. This information may be submitted by email or by regular mail to the Southeast District Office and to Tallahassee at the addresses below, or it can be reported to the Department through the DEP Business Portal located at: <http://www.fldepportal.com/go>.
  - Estimate of Remaining Life. The permittee shall submit an estimate of the remaining life and capacity annually by March 31. Reports are required by Rule 62-701.500(13)(c), F.A.C., and may be submitted by email or by regular mail to the Southeast District Office and to Tallahassee at:

Florida Department of Environmental Protection Southeast District Office 3301 Gun Club Road, MSC 7210-1 West Palm Beach, Florida 33406 Email to: <a href="mailto:Amede.Dimonnay@dep.state.fl.us">Amede.Dimonnay@dep.state.fl.us</a>	Florida Department of Environmental Protection Solid Waste Program & Permitting 2600 Blair Stone Road, MS 4565 Tallahassee, Florida, 32399-2400 Email to: <a href="mailto:Derbra.Owete@dep.state.fl.us">Derbra.Owete@dep.state.fl.us</a>
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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. Storm water. Leachate shall not be discharged into the storm water management system. Storm water 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.

#### **D. Water Quality Monitoring Requirements**

- Zone of Discharge. The zone of discharge for this facility shall be a three dimensional volume extending horizontally to the property boundary, as shown on Figure 1 of Appendix 3, and vertically to the top of the first confining unit. 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.
- Water Quality Monitoring Plan. The Water Quality Monitoring Plan for this permit is included in APPENDIX 3.

### **E. Gas Management System Requirements**

1. 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 ambient monitoring points are specified in Figure 2 (Appendix 4).
  - b. Locations of soil monitoring probes are specified in Figure 2 (Appendix 4).
  - c. Locations of gas extraction wells are indicated on the annual elevation surveys.
2. Certification of Construction Completion. 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 at locations shown on Figure 2 (Appendix 4) 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. 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 4548  
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) 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](mailto:Solid.Waste.Financial.Coordinator@dep.state.fl.us).

**G. Closure Requirements**

1. Closure Permit Requirements. Prior to initiating closure of a solid waste disposal unit, or part of a solid waste disposal unit, the Permittee shall receive authorization from the Department in one of the following ways.
  - a. If the landfill is operating under a Department permit that includes a Closure Plan with sufficient detail to provide reasonable assurance of compliance with the closing requirements of Rule 62-701.600, F.A.C., then the Permittee shall notify the Department at least 30 days prior to initiating the closure activities and receive written approval from the Department prior to beginning the work.
  - b. If the landfill is operating under a Department permit that requires substantive changes to the closing activities in the permitted Closure Plan, then the Permittee shall request a modification of the permit to include sufficient design detail to ensure compliance with the closing requirements of Rule 62-701.600, F.A.C., and shall initiate closing only after the permit has been modified.
  - c. The Permittee shall submit an application to the Department for a closure permit on Form 62-701.900(1) and shall initiate closure activities only after the permit is issued. The application shall include a Closure Plan made up of the following:
    - 1) A closure design plan;
    - 2) A closure operation plan;
    - 3) A plan for long-term care; and,
    - 4) A demonstration that proof of financial assurance for long-term care will be provided.
2. Closure Design. All closure construction shall be done in accordance with an approved closure design plan. The Department shall be notified before any changes, other than minor deviations, to an approved closure design are implemented in order to determine whether a permit modification is required.



3. Closure Operation Plan. All closure shall be done in accordance with the approved closure operation plan.
4. Certification of Closure Construction Completion. 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.

Executed in Leon County, Florida.

STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL PROTECTION



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Tim Bahr, P.G., Program Administrator  
Permitting and Compliance Assistance Program

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



02/16/2016

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Clerk

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Date

## **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, as 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 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 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**

### **APPROVED DOCUMENTS INCORPORATED INTO THE PERMIT**

The approved application documents for the 2016 Broward County Landfill Permit Renewal consist of the following:

1. Renewal Permit Application, dated January 8, 2016. This application includes no revisions to the approved design.

[http://depedsms.dep.state.fl.us/Oculus/servlet/shell?command=getEntity&\[guid=8.241585.1\]](http://depedsms.dep.state.fl.us/Oculus/servlet/shell?command=getEntity&[guid=8.241585.1])

2. Broward County Landfill Annual Elevation Survey, dated March 30, 2015.

[http://depedsms.dep.state.fl.us/Oculus/servlet/shell?command=getEntity&\[guid=8.203951.1\]](http://depedsms.dep.state.fl.us/Oculus/servlet/shell?command=getEntity&[guid=8.203951.1])

### **APPENDIX 3 WATER QUALITY MONITORING PLAN**

Broward County Landfill

PERMIT NO: 053055-011-SO

WACS FACILITY ID: 053328

#### **I. GENERAL**

1. 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.]**
2. 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. 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), 62-701.510(2)(b), F.A.C. and DEP SOP FS 1008.]**

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

3. The permittee must ensure that the analytical laboratory conducting the analyses uses analytical methods capable of achieving detection limits at or below the Groundwater Cleanup Target Levels (GCTLs) or the Freshwater Surface Water Cleanup Target Levels (SWCTLs) 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 and SWCTLs that are not water quality standards are used as screening tools and interim guidelines for ground water minimum criteria until standards are promulgated. **[DEP SOP FM 1000]**
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 may confirm the data by resampling the affected 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. If the data is confirmed, or if the permittee chooses not to resample, the permittee shall notify the Department within 14 days of this finding. **[62-701.510(6)(a), F.A.C.]**

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, unless a different due date is approved. Use “CONF” (for confirmation data) in the report type column. **[62-701.510(8)(a), F.A.C.]**

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

## II. GROUND WATER QUALITY MONITORING

5. The 18 ground water monitoring wells/piezometers included in this monitoring plan and designated for water quality testing and water level measurements are listed in Table 1 and shown on Figure 1. **[62-701.510(3)(d)2 & 3, F.A.C.]**
6. Any initial sample collected from a new ground water monitoring well, unless the new monitoring well is installed to replace an existing well within the monitoring network, shall be analyzed for the following Initial Ground Water Monitoring Parameters. **[62-701.510(5)(b), F.A.C.]**

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. 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. The monitoring wells listed in Table 1 shall be routinely sampled and analyzed semi-annually in April and October for the following parameters. **[62-701.510(5)(c) & (7)(a), F.A.C.]**

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. Parameters listed in 40 CFR Part 258, Appendix I

8. All water quality analyses will be performed on unfiltered samples unless approved by the Department.

### III. SURFACE WATER MONITORING

9. The surface water sites included in this monitoring plan are listed on Table 1 and shown on Figure 1. **[62-701.510(4)(c), F.A.C.]**
10. The surface water sampling location designated as the Stormwater Outlet and depicted on Figure 1 will be sampled during discharge events for the following parameters. **[62-701.510(5)(d) & (7)(b), F.A.C.]**

Field Parameters	Laboratory Parameters
1. Specific Conductivity	1. Un-ionized ammonia as N
2. pH	2. Total hardness as CaCO <sub>3</sub>
3. Dissolved oxygen	3. Biochemical oxygen demand (BOD <sub>5</sub> )
4. Turbidity	4. Iron
5. Temperature	5. Mercury
6. Colors and sheens (by observation)	6. Nitrate
	7. Total Dissolved Solids (TDS)
	8. Total Organic Carbon (TOC)
	9. Fecal Coliform
	10. Total Phosphorus as P
	11. Chlorophyll A
	12. Total nitrogen
	13. Chemical Oxygen Demand (COD)
	14. Total Suspended Solids (TSS)
	15. Parameters listed in 40 CFR Part 258 Appendix I

### IV. MONITORING WELL REQUIREMENTS

11. If a monitoring well or piezometer becomes damaged or inoperable, the Permittee shall notify the Department within two (2) days of discovery with a written report within ten (10) days of notice. 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. **[62-520.600(6)(I), F.A.C.]**
12. New or replacement monitoring well design or placement must be approved by the Department. The design and construction of these wells must be based on site-specific borings with appropriate supporting data such as grain size distribution analyses, in-situ hydraulic conductivity testing, and depth to water. Wells shall be installed using standard, accepted practices for well construction. **[62-701.510(3), F.A.C. and 62-520.600(3) and (6), F.A.C.]**
13. 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.]**

14. The Department shall be notified in writing before any monitoring wells are abandoned or plugged. Wells shall be abandoned using standard, accepted practices for well abandonment. **[62-701.510(3)(d)6, F.A.C.]**

## **V. REPORTING REQUIREMENTS**

### **A. FIELD ACTIVITIES**

15. 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) so that the Department may collect split samples. **[62-701.510(8)(a), F.A.C.]**

### **B. MONITORING WELL COMPLETION REPORT**

16. One (1) electronic copy (Adobe pdf format) of the Monitoring Well Completion Report, Form 62-701.900(30), F.A.C., 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. **[62-520.600(6)(j), F.A.C.]**

**NOTE:** The top of casing elevation of each well, to the nearest 0.01 feet, and the latitude and longitude of each well in degrees, minutes and seconds, to two (2) decimal places, must be determined and certified by a Florida Licensed Surveyor and Mapper and provided on the form. **[62-701.510(3)(d)1 & 62-520.600(6)(i), F.A.C.]**

### **C. SURVEYING**

17. One (1) electronic copy (Adobe pdf format) of a drawing must be submitted within sixty (60) 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 a nationally recognized datum (such as NGVD 1929 or NAVD 1988) to the nearest 0.01 feet. The latitude and longitude of each well in degrees, minutes and seconds, to two (2) decimal places, 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, and 62-520.600(6)(i), F.A.C.]**
18. 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 monitoring plan 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 Report upon completion of each new well. **[62-701.510(3)(d)1, F.A.C.]**

#### **D. DEPTH MEASUREMENTS**

19. A total depth measurement must be made on each well every five years. 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.

#### **E. INITIAL AND SEMI-ANNUAL SAMPLING AND SUBMITTING ELECTRONIC DATA**

20. Required monitoring reports must be submitted to the Department within sixty (60) days from completion of laboratory analyses and shall follow the Department's electronic reporting requirements using the ADaPT software. **[Rule 62-701.510(8)(a), F.A.C.]**
21. Required water quality monitoring reports and analytical results 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 a comma separated text file electronic format consistent with requirements for importing the data into the Department's databases as summarized at: <http://www.dep.state.fl.us/waste/ADaPT/>. 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 recommendations;
  - c) Ground water contour maps;
  - d) Chain of custody forms;
  - e) Water levels, water elevation table;
  - f) Water Quality Monitoring Certification using Form Rule 62-701.900(31), F.A.C.;
  - g) Appropriate information using the Groundwater Sampling Log, Form FD 9000-24 (DEP-SOP-001/01); and,
  - h) Laboratory and Field EDDs and error logs, as applicable.

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

Florida Department of Environmental Protection Southeast District Office 3301 Gun Club Road, MSC 7210-1 West Palm Beach, Florida 33406 Email to: <a href="mailto:Amede.Dimonnay@dep.state.fl.us">Amede.Dimonnay@dep.state.fl.us</a>	Florida Department of Environmental Protection Solid Waste Program & Permitting 2600 Blair Stone Road, MS 4565 Tallahassee, Florida, 32399-2400 Email to: <a href="mailto:ADaPT.EDDs.and.Reports@dep.state.fl.us">ADaPT.EDDs.and.Reports@dep.state.fl.us</a>
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#### **F. WATER ELEVATIONS**

22. Water levels in all monitoring wells, whether sampled or not, and all piezometers must be measured to the nearest 0.01 foot and reported semi-annually. All water level measurements

must be made within a one-day period. These measurements should be reported in a table that includes well name, date water level measured, measuring point elevation referenced to a nationally recognized datum (such as NGVD 1929 or NAVD 1988), depth to water and calculated water level elevation referenced to the same nationally recognized datum. The ground water elevations shall be reported in the ADaPT data for the upload into WACS. **[62-701.510(8)(a)8, F.A.C.]**

### **G. GROUND WATER CONTOUR MAPS**

23. Ground water elevation contour maps for each monitored aquifer zone must be submitted semi-annually to the Department, with contours at no greater than one foot intervals unless site specific conditions dictate otherwise. 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 a nationally recognized datum (such as NGVD 1929 or NAVD 1988), a bar scale, north arrow, ground water contour interval, date of measurement and ground water flow direction. 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(8)(a)9, F.A.C.]**

### **H. TECHNICAL REPORT**

24. 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. This report may be submitted with the semi-annual groundwater reports. The technical report shall summarize and interpret the water quality monitoring results and water level measurements collected since the last technical report was submitted. 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.

25. One (1) electronic copy (Adobe pdf format) of the technical report shall be submitted to the Department on the following schedule: **[62-701.510(8)(b), F.A.C.]**

Report	Sampling Periods Covered	Number Of Semi-annual Sampling Events in Report	Date Technical Report Due
#1	October 2015 to October 2017	5	January 1, 2018
#2	April 2018 to April 2020	5	July 1, 2020
#3	October 2020 to October 2022	5	January 1, 2023
#4	April 2023 to April 2025	5	July 1, 2025

#### **List of Attachments**

**Table 1** – Water Quality Monitoring Testsite Information

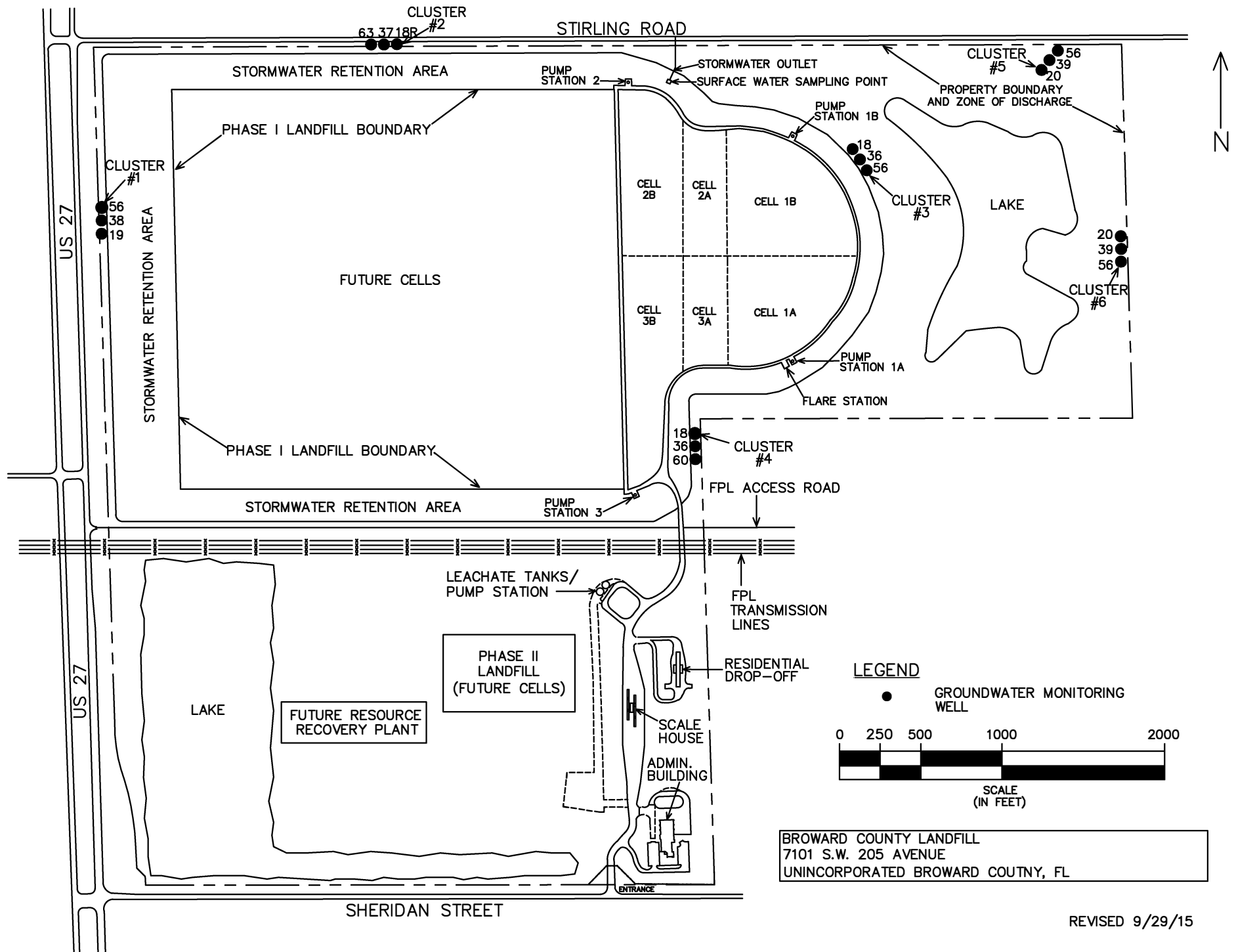
**Figure 1** – Water Quality Monitoring Locations Map

**Table 1 – Water Quality Monitoring Testsite Information**

<b>Testsite Name</b>	<b>Testsite WACS No.</b>	<b>Designation</b>	<b>Aquifer</b>
MW-1(19)	00004975	Background	Surficial
MW-1(38)	00004976	Background	Surficial
MW-1(56)	00004977	Background	Surficial
MW-2(18R)	00004978	Compliance	Surficial
MW-2(37)	00004979	Compliance	Surficial
MW-2(63)	00004980	Compliance	Surficial
MW-3(18)	00004981	Detection	Surficial
MW-3(36)	00004982	Detection	Surficial
MW-3(56)	00004983	Detection	Surficial
MW-4(18)	00004984	Compliance	Surficial
MW-4(36)	00004985	Compliance	Surficial
MW-4(60)	00004986	Compliance	Surficial
MW-5(20)	00004987	Compliance	Surficial
MW-5(39)	00004988	Compliance	Surficial
MW-5(56)	00004989	Compliance	Surficial
MW-6(20)	00004990	Compliance	Surficial
MW-6(39)	00004991	Compliance	Surficial
MW-6(56)	00004992	Compliance	Surficial
<b>SURFACE WATER SAMPLING LOCATION</b>			
Storm Water Outlet	00005087	Compliance	Storm water

Note: Testsite name as it appears in WACS data base

Figure 1: Water Quality Monitoring Locations



# APPENDIX 4

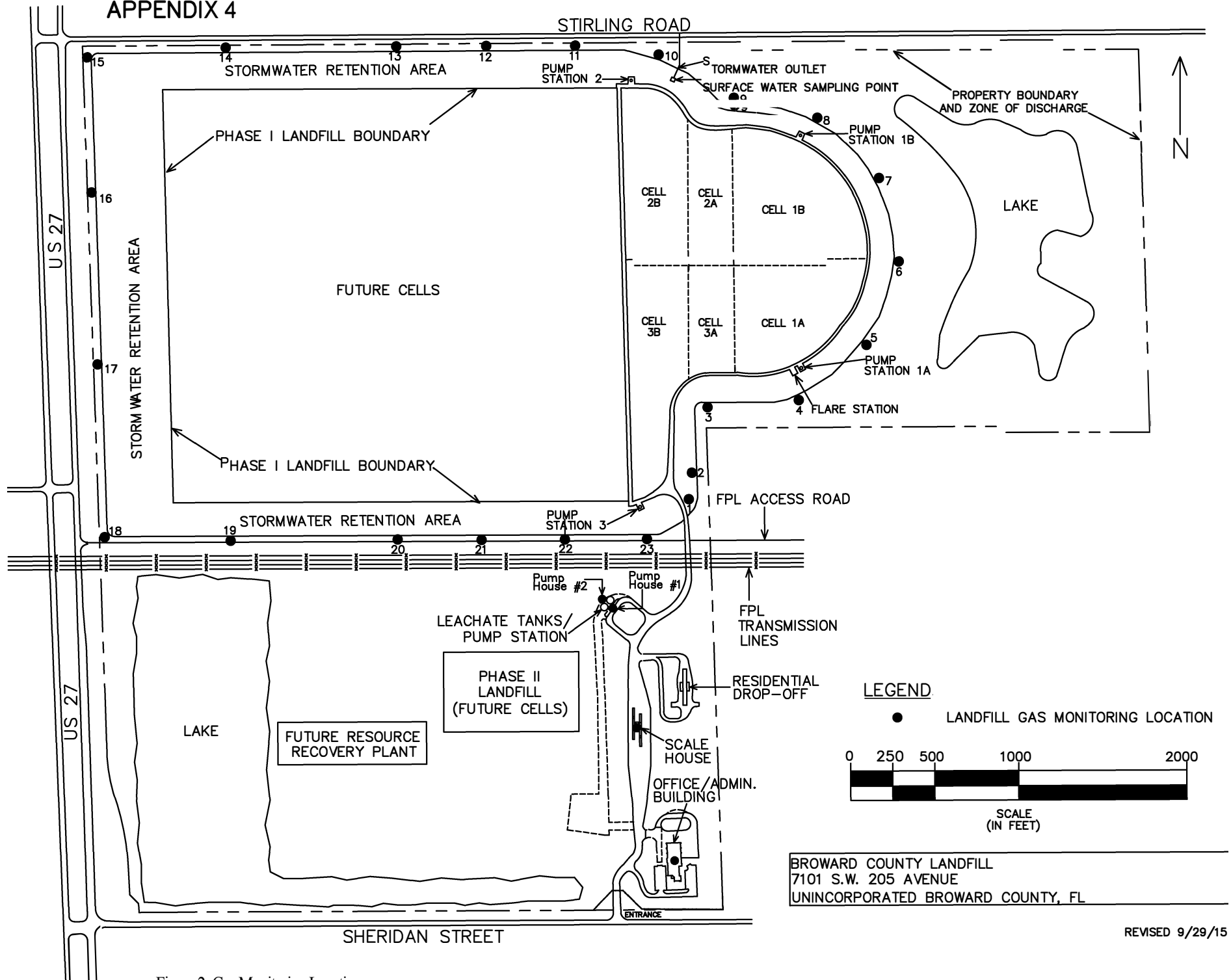


Figure 2: Gas Monitoring Locations

REVISED 9/29/15