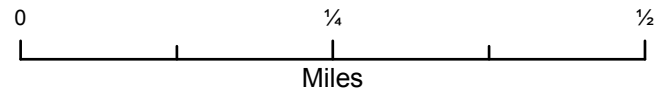
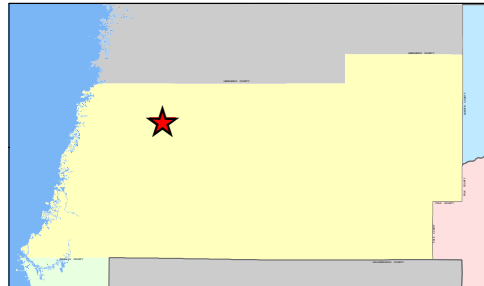
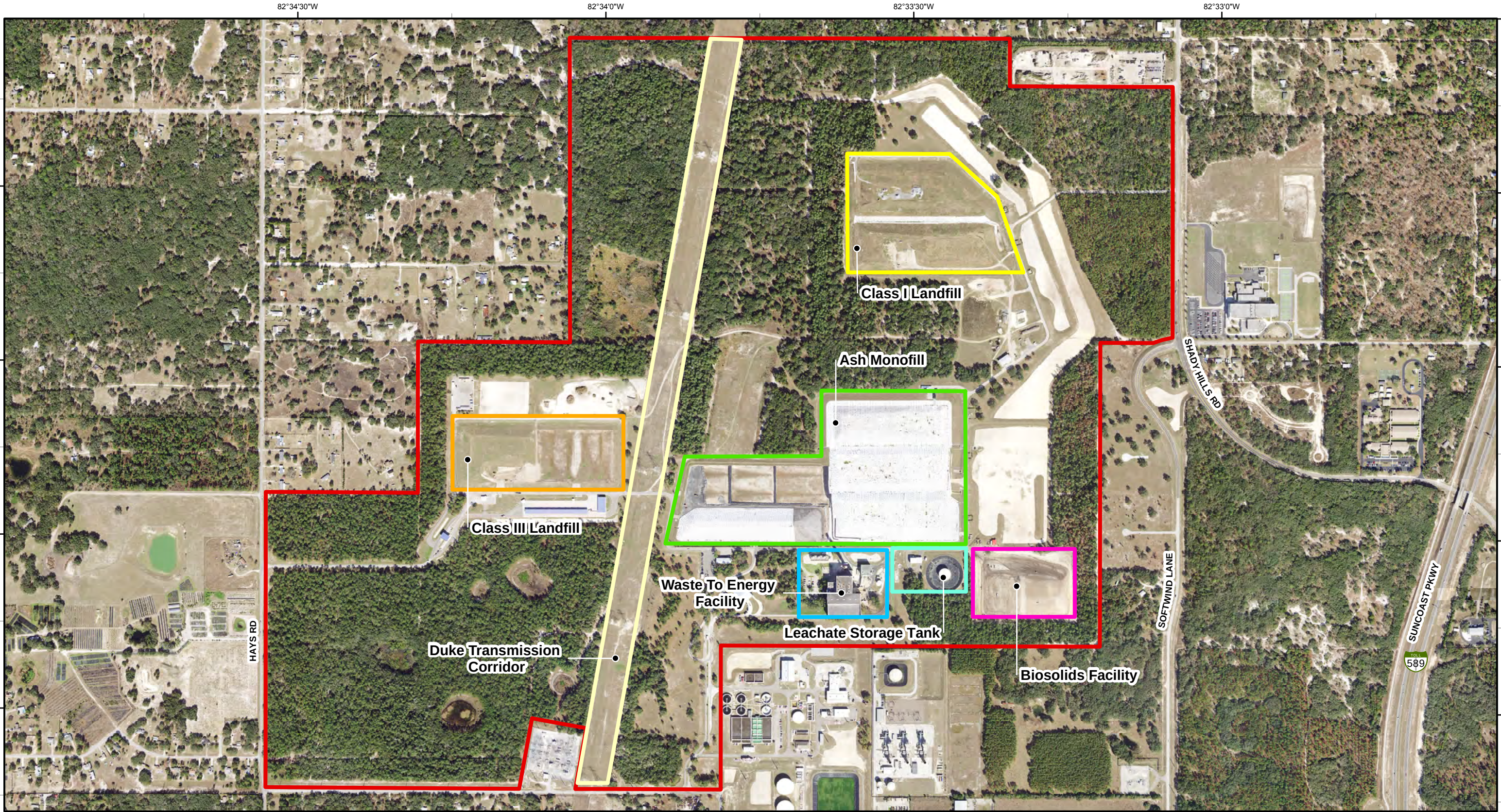


ATTACHMENTS

ATTACHMENT A: Certified Site/Areas/Facilities Delineation Map(s)



 West Pasco Resource Recovery Site

This map is for informational purposes only. The data contained herein is not collected under the supervision of, or approved by, a licensed surveyor. It is not intended for any legal use. The data does not meet the Standards of Practice under the Florida Administrative Code Chapter 5J-17 and Chapter 472 Florida Statutes. The Pasco County Board of County Commissioners does not accept any responsibility for errors or omissions of any kind contained in the data herein. All products and derivations from the data contained herein must retain this disclaimer.

Pasco County, Florida
Utilities Administration Office
Geographic Information Systems
(G.I.S.)
19420 Central Blvd.
Land O' Lakes, FL 34637



**Power Plant
Siting Act (PPSA)
Certified/Non-Certified
Facilities**

Author: Gabriel Lama

April 25, 2018

ATTACHMENTS

ATTACHMENT B: Surface Water Management System Operation and Maintenance Requirements

1. In accordance with Section 373.416(2), F.S., unless revoked or abandoned, all stormwater management systems, dams, impoundments, reservoirs, appurtenant works, or works permitted under Part IV of Chapter 373, F.S., must be operated and maintained in perpetuity. The operation and maintenance shall be in accordance with the designs, plans, calculations, and other specifications that are submitted with any amendment or modification and approved by the Department.
2. A registered professional must perform inspections annually after conversion of the project to the operation and maintenance phase to identify if there are any deficiencies in structural integrity, degradation due to insufficient maintenance, or improper operation of the stormwater management system or other surface water management systems that may endanger public health, safety, or welfare, or the water resources, and to insure that systems are functioning as designed and approved. Within 30 days of the inspection, a report shall be submitted electronically or in writing to the Department using Form 62-330.311(1), "Operation and Maintenance Inspection Certification".
3. If deficiencies are found, the PCRRF will be responsible for correcting the deficiencies so that the project is returned to the operational functions as designed and approved. The corrections must be done a timely manner to prevent compromises to flood protection and water quality.
4. If the operational maintenance and corrective measures are insufficient to enable the systems to meet the performance standards of this chapter, the PCRRF must either replace the systems or construct an alternative design.
5. The PCRRF shall provide for periodic inspections in addition to the annual inspections, especially after heavy rain. It must maintain a record of each inspection, including the date of inspection, the name and contact information of the inspector, whether the system was functioning as designed and approved, and make such record available upon request of the Department. Within 30 days of any failure of any system or deviation from these requirements, a report shall be submitted electronically or in writing to the Department using Form 62-330.311(1), "Operation and Maintenance Inspection Certification," describing the remedial actions taken to resolve the failure or deviation.
6. The PCRRF shall immediately notify the Department by telephone whenever a serious problem occurs at this facility. Notification shall be made to the Southwest District Office at (813) 470-5700. Within 7 days of telephone notification, a report shall be submitted electronically or in writing to the Department using Form 62-330.311(1), "Operation and Maintenance Inspection Certification," describing the extent of the problem, its cause, the remedial actions taken to resolve the problem.
7. The following operational maintenance activities shall be performed on approved systems on a regular basis or as needed:
 - (1) Removal of trash and debris from the surface water management systems,
 - (2) Inspection of culverts, culvert risers, pipes and screwgates for damage, blockage, excessive leakage or deterioration, if applicable,
 - (3) Inspection of stormwater berms, if applicable,

ATTACHMENTS

- (4) Inspection of pipes for evidence of lateral seepage,
 - (5) Inspection of flapgates for excessive backflow or deterioration, if applicable,
 - (6) Removal of sediments when the storage volume or conveyance capacity of the surface water management system is below design levels,
 - (7) Stabilization and restoration of eroded areas,
 - (8) Inspection of pump stations for structural integrity and leakage of fuel or oil to the ground or surface water, if applicable, and
 - (9) Inspection of monitoring equipment, including pump hour meters and staff gauges, for damage and operational status, if applicable.
8. In addition to the practices listed above, specific operational maintenance activities are required, if applicable, depending on the type of approved system, as follows:
- (1) Overland flow systems shall include provisions for:
 - a. Mowing and removal of clippings, and
 - b. Maintenance of spreader swales and overland flow areas to prevent channelization.
 - (2) Spray irrigation systems for reuse/disposal shall include provisions for:
 - a. Inspection of the dispersal system, including the sprayheads or perforated pipe for damage or clogging, and
 - b. Maintenance of the sprayfield to prevent channelization.
 - (3) Treatment systems which incorporate isolated wetlands shall include provisions for:
 - a. Stabilization and restoration of channelized areas, and
 - b. Removal of sediments which interfere with the function of the wetland or treatment system.

ATTACHMENTS

ATTACHMENT C: Wetland Mitigation Plan(s)

(To be attached as applicable)

ATTACHMENTS

ATTACHMENT D: Groundwater Quality Monitoring Requirements

ATTACHMENT D

GROUNDWATER QUALITY MONITORING REQUIREMENTS

Pasco County Resource Recovery Facility
14230 Hays Road
Spring Hill, FL 34610
Pasco County

Latitude: 28°22'12" North Longitude: 82°33'36" West

INTRODUCTION

These Groundwater Quality Monitoring Requirements (GWQMR) were developed by the Licensee, Pasco County, in conjunction with the Florida Department of Environmental Protection Solid Waste (SW) Section – Tallahassee. The GWQMR incorporates groundwater monitoring for the Class I landfill (Solid Waste Cells SW-1 & SW-2 and Ash Monofill Cells A-1 through A-4). The Department's SW Section is responsible for reviewing and approving all revisions to this document that are: a) submitted concurrently with a SCA; b) submitted as part of an amendment request or a petition for modification; or c) in accordance with Section A, Condition XX. Procedures for Post-Certification Submittals.

1. General

A. 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.]

B. 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>

C. The licensee 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]

D. 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 Licensee may confirm the data by resampling the affected wells within thirty (30) days of receipt of the sampling data. Should the licensee 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 licensee chooses not to resample, the licensee 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 Licensee 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 licensee shall initiate evaluation monitoring in accordance with Rule 62-701.510(6)(a), F.A.C.

2. Specific

A. The twenty-nine ground water monitoring wells/piezometers included in this monitoring plan and designated for water quality testing and water level measurements are listed on Table 1 and shown on Figure 1. [62-701.510(3)(d)2 & 3, F.A.C.]

B. 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. 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

C. The twenty-nine active monitoring wells for the landfill shall be routinely sampled and analyzed semi-annually (during the periods January 1-June 30, and July 1-December 31 of each year) for the following Ground Water Monitoring 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. Those parameters listed in 40 CFR Part 258 Appendix I

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

3. Surface Water Monitoring

A. It is not anticipated that the existing stormwater management system will discharge from the property. However, in the event that discharges from the stormwater management system leave the property, representative samples of each discharge event shall be collected. [62-701.510(4)(c), F.A.C.]

B. The samples shall be analyzed for the following Surface Water Monitoring Parameters. [62-701.510(5)(d) & (7)(b), F.A.C.]

Field Parameters	Laboratory Parameters
1. Surface Water Elevation	1. Unionized ammonia as N
2. Specific Conductivity	2. Total hardness as CaCO ₃
3. pH	3. Biochemical oxygen demand (BOD ₅)
4. Dissolved oxygen	4. Iron
5. Turbidity	5. Mercury
6. Temperature	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 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

4. Monitoring Requirements

A. If a monitoring well or piezometer becomes damaged or inoperable, the Licensee 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)(l), F.A.C.]

B. 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.]

C. 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.]

D. 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.]

5. Reporting Requirements

A. Field Activities

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

One (1) paper copy and 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

1. One (1) paper copy and 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) and (3)(d)1, and 62-520.600(6)(i), F.A.C.]

2. 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

A total depth measurement must be made on each well at time of the Technical Report or 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

1. Required monitoring reports must be submitted to the Department within sixty (60) days from completion of laboratory analyses and no later than January 15th and July 15th of each year for the time periods July 1-December 1 and January 1-June 30, respectively and shall follow the Department's electronic reporting requirements using the ADaPT software. [Rule 62-701.510(8)(a), F.A.C.]

2. 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/>.

3. Water quality monitoring reports shall be signed and sealed by a Florida registered professional geologist or professional engineer with experience in hydrogeological investigations and shall include the following:

- (1) Cover letter;
- (2) Summary of exceedances and recommendations;
- (3) Ground water contour maps;
- (4) Laboratory report of results including chain of custody forms;
- (5) Water levels, water elevation table;
- (6) Water Quality Monitoring Certification using Form Rule 62-701.900(31), F.A.C.;
- (7) Appropriate information using the Groundwater Sampling Log, Form FD 9000-24 (DEP-SOP-001/01); and,
- (8) Laboratory and Field EDDs and error logs, as applicable.

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

Florida Department of Environmental Protection Southwest District Office Air/Solid Waste Section 13051 N. Telecom Parkway Tampa, Florida 33637-0926 Email to: SWD_Waste@dep.state.fl.us	Florida Department of Environmental Protection Solid Waste Section 2600 Blair Stone Road, MS 4565 Tallahassee, Florida, 32399-2400 Email to: ADaPT.EDDs.and.Reports@dep.state.fl.us
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F. Water Elevations

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 and reported semi-annually. 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. All water level measurements must be made within a one-day period. 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 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

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. 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(8)(a)9, F.A.C.]

H. Technical Report

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

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

h) An evaluation of the adequacy of the water quality monitoring frequency and sampling locations based upon site conditions.

2. One (1) paper and 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.]

Sampling Periods Covered	Number of Semi-annual Sampling	Date Technical Report Due
Second semi-annual event 2015 through Second semi-annual event 2017	5	March 31, 2018
First semi-annual event 2018 through first semi-annual event 2020	5	August 30, 2020
Second semi-annual event 2020 through Second semi-annual event 2022	5	March 31, 2023
First semi-annual event 2023 through First semi-annual event 2025	5	August 30, 2025
Second semi-annual event 2025 through Second semi-annual event 2027	5	March 31, 2028
First semi-annual event 2028 through First semi-annual event 2030	5	September 30, 2030

3.. Required water quality monitoring reports and water quality data for the Technical Report shall be submitted in electronic format as described in Specific Conditions E.5-8 of this Attachment. [62-160.240, and 62-701.510(8)(a), F.A.C.]

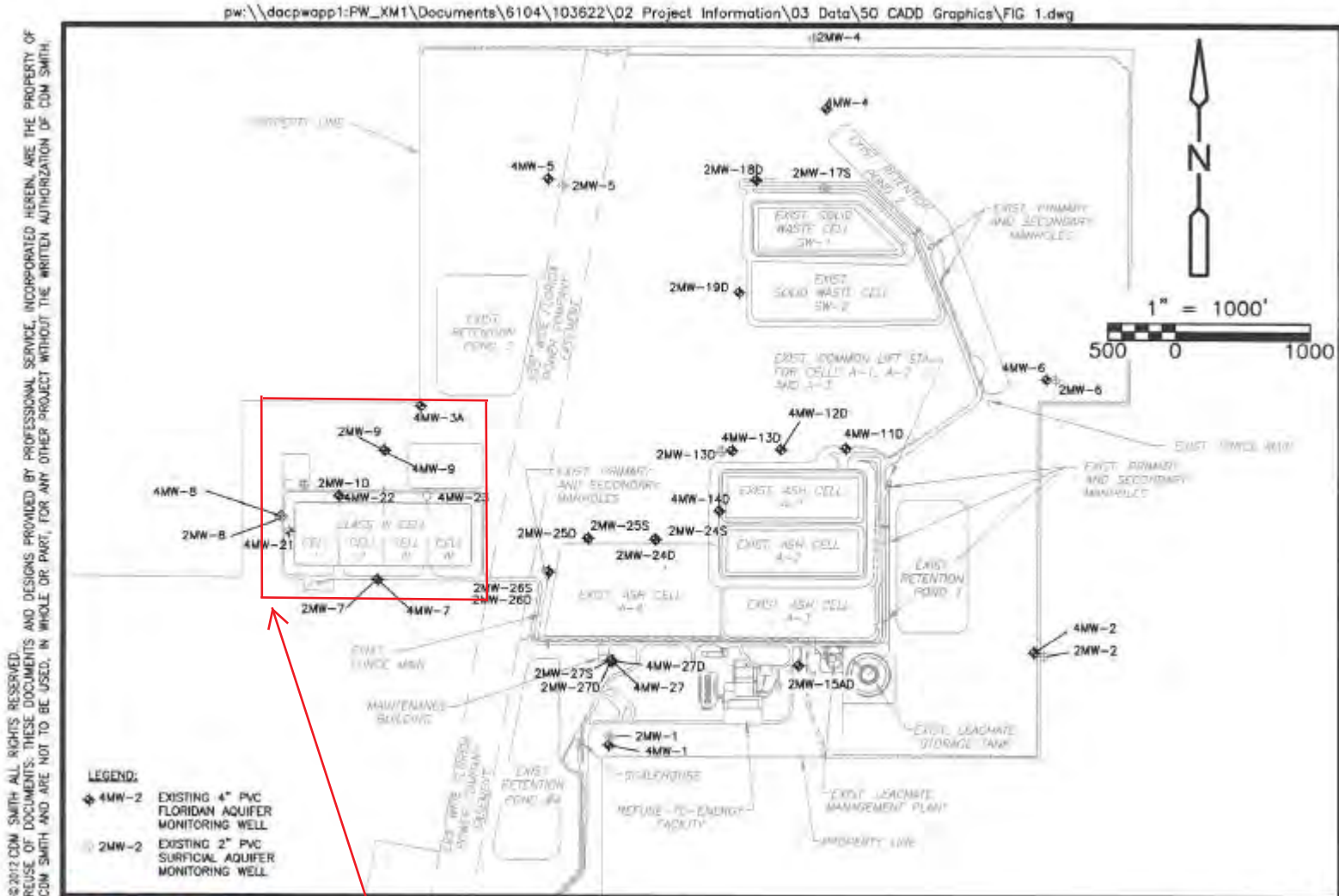
List of Attachments

Table 1 Water Quality Sampling Testsite Information
Figure 1 Groundwater Monitoring Locations Map

Table 1 – Water Quality Sampling Testsite Information

Testsite Name	Testsite WACS No.	Designation	Aquifer
2MW-1	2381	Surficial	Background
4MW-1	2386	Floridan	Background
2MW-2	2382	Surficial	Background
4MW-2	2387	Floridan	Background
2MW-6	2385	Surficial	Background
4MW-6	2390	Floridan	Background
2MW-15DA	19766	Floridan	Background
2MW-27S	23449	Surficial	Background
2MW-27D	23450	Floridan	Background <u>Piezometer</u>
4MW-27	23451	Floridan	Background
4MW-27D	23452	Floridan	Background
4MW-11D	2510	Floridan	Detection
4MW-12D	2511	Floridan	Detection
2MW-13D	2515	Surficial	Detection
4MW-13D	19214	Floridan	Detection
4MW-14D	2512	Floridan	Detection
2MW-17S	19758	Surficial	Detection
2MW-18D	19759	Floridan	Detection
2MW-19D	19764	Floridan	Detection
2MW-24S	23443	Surficial	Detection
2MW-24D	23444	Floridan	Detection
2MW-25S	23445	Surficial	Detection
2MW-25D	23446	Floridan	Detection
2MW-26S	23447	Surficial	Detection
2MW-26D	23448	Floridan	Detection
2MW-4	2383	Surficial	Compliance <u>Piezometer</u>
4MW-4	2388	Floridan	Compliance
2MW-5	2384	Surficial	Compliance <u>Piezometer</u>
4MW-5	2389	Floridan	Compliance

Figure 1: Monitor Well Location Map



Area outlined in red (Class III Landfill) is permitted separately by DEP Solid Waste under Permit #26254 and not part of the certification

**CDM
Smith**

ATTACHMENTS

Attachment E: Solid Waste Construction and Operations Requirements

ATTACHMENT E

SOLID WASTE CONSTRUCTION AND OPERATIONS REQUIREMENTS
(WACS Facility ID: 45799)

1. General

This site shall be classified as a Class I landfill [Solid Waste Cells SW-1 & SW-2 and Ash Monofill Cells A-1 through A-4] and shall be constructed, operated, closed, monitored and maintained in accordance with all applicable requirements of Chapters 62-4, 62-302, 62-330, 62-520, 62-550, and 62-701, Florida Administrative Code (F.A.C.) and all applicable requirements of Department rules.

A. Prohibitions. The prohibitions of F.A.C. Rule 62-701.300 shall apply to operations and new structures.

B. Pollution Prevention. The landfill shall be designed, constructed, operated, maintained, closed and monitored throughout its design period to control the movement of waste and waste constituents into the environment so that ground water and surface water quality standards and criteria of Chapters 62-302 and 62-520, F.A.C., will not be violated beyond the zone of discharge specified for the landfill.

C. Access Control. To prevent unauthorized waste disposal, as required by F.A.C. Rule 62-701.500(5), access to and use of the Facility shall be controlled by fencing, gates, or other barriers, as well as signs and Facility personnel.

D. Records Maintenance. As required by F.A.C. Rule 62-701.500(13), records shall be kept of all information used to develop or support the landfill design and any supplemental information provided to DEP pertaining to construction of the landfill. Records pertaining to the operation of the landfill shall be kept for the design period of the landfill. Records of all monitoring information, including calibration and maintenance records, all original chart recordings for continuous monitoring instrumentation, and copies of all reports required by these conditions, shall be kept for at least ten years. Background water quality records shall be kept for the design period of the landfill.

E. Professional Certifications. Where required by Chapter 471 (P.E.) or Chapter 492 (P.G.), Florida Statutes, applicable portions of supporting documents which are submitted to the Department for public record shall be signed and sealed by the professional(s) who prepared or approved them.

F. Nuisance Conditions. Nuisance conditions shall be controlled by conducting site activities in the manner described in these Conditions of Certification, the operations plan, and applicable Department rules.

2. Construction

The Class I landfill disposal units associated with this site shall be constructed in accordance with all applicable requirements of Chapter 62-701, F.A.C., and in accordance with all applicable requirements of other Department rules.

A. General Construction Requirements. All construction shall be done in accordance with the approved design, drawings, CQA plan, 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 an amendment or modification is required. If an

amendment or modification is not required, it may be processed in accordance with Section A, Condition XX Procedures for Post-Certification Submittals.

B. Certification of Construction Completion. Upon completion of construction, 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 done in substantial conformance with the approved construction plans except where minor deviations were necessary. All deviations shall be described in detail and the reasons therefore enumerated. The following documents shall be submitted along with the Certification:

(1) The final report and record drawings showing that the liner system has been installed in substantial conformance with the plans and specifications for the liner system. The record drawings must include the results of the surveys of the liner, base grade and collection pipe slopes.

(2) The final report showing the results of the geomembrane liner leak location survey, if applicable.

(3) Results of testing of geosynthetic and soil components of the liner system.

C. Construction Quality Assurance Plan pursuant to 62-701.400(1), F.A.C.

D. Approval of Certification. The licensee shall not begin using newly constructed Class I disposal unit at the facility until one of the following has occurred: (1) the Department has stated in writing that it has no objection to the certification of construction completion; or (2) at least 30 days have passed since the certification was submitted and the Department has not responded in writing to the certification.

3. Operation

Operation of the associated landfill shall be done in accordance with all applicable portions of Chapter 62-701, F.A.C., including prohibitions, procedures for closing of the landfill, and final cover requirements, or, as provided in the Conditions Section B. Condition I. Department of Environmental Protection, C – Resource Recovery Facility in its entirety. Review shall be performed in accordance with the Conditions Section A. Condition VI. Design and Performance Criteria. The final plans for this Facility shall include provisions for the isolated temporary handling of suspected hazardous, toxic, or infectious wastes.

A. No suspected or known hazardous, toxic, or infectious wastes as defined by applicable Federal, State or local statutes, rules, regulations or ordinances shall be burned or landfilled at the site.

B. Special Wastes. The disposal or management of any "special wastes" shall be in accordance with F.A.C. 62-701.300(8), 62-701.520 and any other applicable Department rules, to protect the public safety, health and welfare. All solid wastes, recovered materials, or residues shall be managed in a manner so as not to constitute a fire or safety hazard or a sanitary nuisance, and shall comply with all applicable local or state regulations. Recovered resources which may be offered for sale shall comply with applicable regulations of all appropriate state agencies.

C. Landfill Operation Requirements. This Facility shall be operated in accordance with F.A.C. 62-701.500, Landfill Operation Requirements, and the current Department-approved Operations Plan (see attached Appendix I). Changes to the Operations Plan shall be submitted to the Department for review and written approval prior to implementation. The Department shall approve or disapprove requests for minor changes to the Operations Plan within 30 days of such change request. A minor change is defined to include: changes to filling sequence, changes to equipment used, dimensions of the working face, and similar daily operational issues.

Pasco County Resource Recovery Facility, PA 87-23
COC Attachment E – Solid Waste Construction and Operation Requirements

D. Operating Personnel. As required by F.A.C. 62-701.320(15) and 62-701.500(1), at least one operator shall be at the landfill at all times when the landfill receives waste and at least one spotter shall be at the working Face when the landfill receives waste. Copies of the training verifications shall be maintained at the site for the Department's review.

E. Operation Plan and Operating Record. The landfill owner and operators shall have an operations plan which meets the requirements of F.A.C. 62-701.500(2). A copy of these Conditions of Certification, operations plan, construction reports and record drawings, and supporting information shall be kept at the Facility at all times for reference and inspections. The operating record as required by F.A.C. 62-701.500(3) is part of the operations plan and shall also be maintained at the site.

F. Authorized Waste Types. The facility is authorized to manage only the following waste types defined in Rule 62-701.200, F.A.C.:

- (1) Fly Ash
- (2) Bottom Ash
- (3) Ash Residue
- (4) Class I Waste

G. Unauthorized Waste Types. The facility is not authorized to accept, process or dispose any waste types not listed in F, above. Any unauthorized waste inadvertently received by the facility shall be managed in accordance with the approved Operation Plan.

H. Landfill Elevation. The final elevation for Ash Monofill Cells A-1, A-2, A-3, and A-4 shall not exceed +122 feet as shown in the approved Operation Plan (Appendix I). The final elevation of Solid Waste Cells SW-1 and SW-2 shall not exceed +121 feet as shown on Figure 7-1, Phasing Plan for Cells SW1 and SW2, of the approved Operation Plan (Appendix I).

I. 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.

J. Method and Sequence of Filling. The method and sequence of filling shall be in accordance with the current Department-approved Operations Plan.

K. Waste Records. Waste quantity records shall be maintained as required by F.A.C. 62-701.500(4) and submitted to the Department quarterly.

L. Control of Access. Access to, and use of, the Facility shall be controlled as required by F.A.C. 62-701.500(5).

M. Monitoring of Waste. Wastes shall be monitored as required by F.A.C. 62-701.500(6). No regulated hazardous waste as identified in Chapter 62-730, F.A.C. shall be accepted for disposal at this site. Hazardous waste should be disposed of in accordance with F.A.C. 62-701.300(4) and 62-701.500(6)(b).

N. Working Face and Waste Handling Requirements. All solid waste disposed of in Cells SW-1 and SW-2 area shall be covered as required by F.A.C. 62-701.500(7). As required by F.A.C. 62-701.500(7)(d), the operator shall minimize the size of the working Face. The working Face of a cell shall be only wide enough to accommodate vehicles discharging waste. Leachate from the working Face shall be managed as described in the approved Operations Plan. Runoff from the landfill will be considered stormwater if the flow passes over only areas with no exposed waste.

(1) Initial cover shall be applied and maintained in accordance with F.A.C. 62-701.500(7)(e), and as described in the approved Operations Plan.

(2) Alternate cover materials not identified herein shall be approved by the Department prior to use at the Facility. For those areas where solid waste will be deposited on the working Face within 18 hours, initial cover may consist of a temporary cover or tarpaulin. Waste tires that have been cut into sufficiently small parts, which means that 70 percent of the waste tire material is cut into pieces of 4 square inches or less and 100 percent of the waste tire material is 32 square inches or less and applied in a six (6) inch compacted layer, may be used as initial cover as described in the approved Operations Plan.

(3) Intermediate cover shall be applied and maintained in accordance with F.A.C. 62-701.500(7)(g). An intermediate cover of one (1) foot of compacted earth in addition to the six (6) inch initial cover shall be applied within seven (7) days of cell completion at all landfills if final cover or an additional lift is not to be applied within 180 days of cell completion.

O. Final Cover. Portions of the landfill which have been filled with waste to the extent of final closure designed dimensions shall be closed (shall receive final cover) in accordance with F.A.C. 62-701.500(7)(g) and all applicable requirements of Department rules.

P. 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.

Q. Leachate Management. Leachate shall be managed in accordance with the requirements of F.A.C. 62-701.500(8), these conditions of certification, and the current Department-approved Operations Plan.

(1) Leachate storage tanks shall be inspected as required by F.A.C. 62-701.400(6)(c)9, and inspection results shall be made available to the Department upon request.

(2) Each pump station shall be inspected on a semi-annual basis. Documentation of all inspections shall be kept on file at the Facility.

(3) Leachate generation reports as required by F.A.C. Rule 62-701.500(8) shall be compiled monthly and submitted to the Department quarterly.

(4) A report assessing the effectiveness of the leachate collection and removal system, force mains and gravity pipe lines, leachate storage tank and treatment Facility shall be submitted to the Department at least every five years. As part of the five-year assessment, the entire leachate collection and removal system, force mains and gravity pipelines, shall be visually or video inspected, or pressure tested where possible to verify adequate performance. Components not performing adequately shall be cleaned and/or repaired. Those portions of the tank secondary containment liner which can be readily visually inspected shall be inspected for damage and repaired if necessary. The report shall include the results of the inspection and any corrective measures undertaken to demonstrate adequate performance, signed and sealed by a professional engineer.

R. Landfill Gas Management

(1) Gas Monitoring and Control.

a. Landfills that receive biodegradable wastes shall have a gas management and control system designed to prevent explosions and fires, and to minimize off-site odors, lateral migration of gases and damage to vegetation. A gas management and control system is not necessary until such time as the methane generation rate exceeds the thresholds in 40 CFR 60, Subpart WWW.

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b. Landfill gas shall be monitored to demonstrate compliance with the criteria established in Rule 62-701.530(1)(a), F.A.C. (less than 25% of the lower explosive limit (LEL) for combustible gases in structures and less than 100% of the LEL for combustible gases at or beyond the property boundary).

c. The results of **quarterly gas monitoring** required by Rule 62-701.530(2)(c), F.A.C., conducted at the locations listed in Specific Condition #F.3., shall be submitted to the Department by the following dates:

<u>Measured During</u>	<u>Report Submitted By</u>
Quarter 1	April 15 th of each year
Quarter 2	July 15 th of each year
Quarter 3	October 15 th of each year
Quarter 4	January 15 th of each year

2. Gas Monitoring Locations. The gas monitoring probes installed in proximity to solid waste cells SW-1 and SW-2 shall be sampled at least **quarterly** for concentrations of combustible gases determined as a percentage of the LEL calibrated to methane, as described in Rule 62-701.530(2), F.A.C.

<u>Monitoring Probe</u>	<u>Location Description</u>
Solid Waste Cell SW-1	GMP-1, GMP-2, GMP-3 and GMP-4

Solid Waste Cell SW-2	GMP-5 and GMP-6
All gas probes are to be clearly labeled and easily visible at all times	

3. Gas Remediation. If the results of gas monitoring show that combustible gas concentrations exceed 25% of the LEL calibrated to methane in structures or 100% of the LEL calibrated to methane at the property boundary, the licensee shall immediately take all necessary steps to ensure protection of human health and notify the Department. Within 7 days of detection, a gas remediation plan detailing the nature and extent of the problem and the proposed remedy shall be submitted to the Department for approval. The remedy shall be completed within 60 days of detection unless otherwise approved by the Department.

4. 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 licensee shall develop and implement an odor remediation plan in accordance with the requirements of Rule 62-701.530(3)(b), F.A.C.

S. Stormwater System Management. Stormwater shall be managed as required by F.A.C. 62-701.400(9). The system shall minimize stormwater from entering waste filled areas and avoid the mixing of stormwater with leachate.

T. Record Keeping Requirements

1. Waste Quantity Records. Waste records shall be compiled monthly, and copies shall be provided to the Department no less than annually by February 1st of each year. This information shall be reported to the Department through the DEP Business Portal located at: <http://www.fldepportal.com/go>.

2. Estimate of Remaining Life. The licensee shall submit the annual estimate of the remaining life and capacity by March 1st of each year. The report is required by Rule 62-701.500(13)(c), F.A.C. and must be submitted to the District Office and to:

Florida Department of Environmental Protection
Solid Waste Section, MS 4565
2600 Blair Stone Road
Tallahassee, Florida, 32399-2400
SWPP@dep.state.fl.us

U. Waste Burning. Open burning of solid waste is prohibited except in accordance with F.A.C. 62-701.300(3).

V. Liner Location. The top edge of the geomembrane liner shall be clearly identified in the field to prevent waste disposal and leachate runoff outside the geomembrane liner.

4. Closure Requirements.

A. Prior to initiating closure of a solid waste disposal unit, or part of a solid waste disposal unit, the Licensee shall receive authorization from the Department in one of the following ways.

(1) If the landfill is operating under a Department approved 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 Licensee 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 in accordance with the Conditions Section A, Condition XX. Procedures for Post-Certification Submittals.

(2) If the landfill is operating under an approved Closure Plan that requires substantive changes to the closing activities in the permitted Closure Plan, then the Licensee shall request a modification of this license 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 license has been modified in accordance with the Conditions Section A, Condition XXIII. Modification of Certification.

(3) The Licensee 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:

- a. A closure design plan;
- b. A closure operation plan;
- c. A plan for long-term care; and,
- d. A demonstration that proof of financial assurance for long-term care will be provided.

B. Closure Design. All closure construction shall be done in accordance with the approved closure design plan. 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 modification is required. If required it will be processed in accordance with the Conditions Section A, Condition XXIII. Modification of Certification.

C. Closure Operation Plan. All closure shall be done in accordance with the approved closure operation plan.

D. 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.

5. Financial Assurance and Cost Estimates

A. Financial Assurance Mechanism

The licensee 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 licensee 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

B. Cost Estimates.

(1) The licensee 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).

(2) 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.

(3) A revised closure cost estimate, made by recalculating the total cost of closure or long-term care, in current dollars shall be submitted every 5 years in accordance with 62-701.630(3), F.A.C.

(4) All submittals in response to this specific condition shall be sent to the District Office and a copy to the address identified in this Attachment (Attachment E) 5. Financial Assurance and Cost Estimates, A., or to the following email address: Solid.Waste.Financial.Coordinator@dep.state.fl.us.

6. Beneficial Ash Use Authorization

A. Beneficial Use Authorization by the Department.

Section 403.7045(5) of the Florida Statutes authorizes the Department to approve the beneficial use of ash residue when an applicant demonstrates that “no significant threat to public health will result and that applicable Department standards and criteria will not be violated.”

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B. Documents Submitted in Support of Beneficial Use of Ash Residue.

The following documents have been submitted by the Licensee and reviewed by the Department regarding the beneficial use of bottom ash residue by the Licensee:

(1) “Request for Approval of Standing Beneficial Use Encapsulated Bottom Ash Generated by the Pasco County Resource Recovery Facility”. dated August 14, 2014.

(2) “Request for Amendment to Approval of Standing Beneficial Use of Encapsulated Bottom Ash Generated by the Pasco County Resource Recovery Facility”, dated October 20, 2016.

(3) “Request for Amendment to the Previous Approval of the Standing Beneficial Uses of Bottom Ash Generated by the Pasco County Resource Recovery Facility”, which was included as part of the “Request for Modification to Conditions of Certification”, dated February 6, 2019.

C. Approval of Beneficial Use of Bottom Ash Residue Generated by the Licensee.

Based on review of the documents listed in Paragraph 6.B. above, the Licensee is hereby authorized to beneficially use bottom ash residue in accordance with Section 403.7045(5), F.S., as follows:

(1) Specified Materials:

The following materials (Specified Materials) are allowed for recycling or reuse within Pasco County by, under the direction of the Licensee:

a. Bottom Ash Residue as defined in Rule 62-701.200(7)(a), F.A.C., from the Pasco County Resource Recovery Facility (Facility), a waste-to-energy facility as defined in Section 403.7061(4), F.S. (bottom ash), and b. Any product or construction material, including asphalt or concrete, which contains bottom ash residue as referenced herein.

(2) Required Treatment:

a. The Specified Materials for recycling and reuse shall be conditioned, by or under the direction of the Licensee, in accordance with the following procedure:

Prior to recycling and reuse, bottom ash residue will be aged for a minimum period of 3 months. Aging will be conducted on top of or in a lined Class I landfill cell. During the entire treatment period, ash piles shall be no greater than 20 feet in height.

(3) Specified Uses:

a. The recycling and reuse of the above specified materials are limited to, and only approved for, the following specified uses where the Specified Materials shall be as required herein: (i) Covered use as a road base course, where bottom ash residue from the Facility has been screened to remove large pieces of waste materials (>3/4 inch), and the road base course will be completely covered by a pavement layer; (ii) Encapsulated use as a replacement for up to 50%, by weight, of the customarily used aggregate in Portland cement concrete pavement, where bottom ash residue from the Facility has been screened to remove large pieces of waste materials (>3/4 inch) and the fine fraction of the ash (<3/8 inch);

(iii) Encapsulated as an aggregate in hot mix asphalt pavement, where bottom ash residue from the Facility has been screened to remove large pieces of waste materials (>3/4 inch) and the fine fraction of the ash (<3/8 inch);

(iv) As a partial coarse aggregate replacement in Portland cement concrete slabs beneath structures; and

(v) As a structural base course, underlying multi-use paths.

(4) Recycling and Reuse Conditions:

The Licensee shall implement the recycling and reuse controls specified

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herein. The following controls and conditions are binding upon the Licensee and are enforceable under Chapter 403, F.S:

a. Bottom ash residue shall be treated by conditioning, prior to recycling and reuse, in accordance with this Authorization.

b. The Licensee shall not allow recycling, reuse, or disposal of the Specified Materials in any manner inconsistent with the requirements of Chapter 62-701, F.A.C., or this Authorization.

c. Bottom ash residue shall not be placed within 3 feet of groundwater, or 15 feet of wetlands or natural water bodies, or within 100 feet of a potable well that is being used or might be used for human or livestock water consumption.

d. When utilized as road base, the placement of the bottom ash residue shall not extend beyond the outside edge of the pavement*. Bottom ash residue remaining outside the edge of the pavement after construction shall be removed and recycled in a manner consistent with this Authorization or placed in a permitted Class I lined landfill.

e. When utilized as road base, placement of the pavement shall be completed as soon as practicable after placement of the bottom ash residue.

f. When bottom ash residue is utilized as a road base course, only dense-graded asphalt mixes shall be placed as the overlying pavement layer with a 4-inch or greater as-built thickness, except that for two lane roads designed for lower density traffic loads, an overlying pavement layer with a 2-inch as-built thickness may be used.

g. All roadways shall be placed and maintained following generally accepted road construction practices consistent with those utilized in Pasco County at the time of the issuance of the COC modification that incorporates this Authorization.

h. When used as structural base for multi-use paths, the placement of the bottom ash residue shall not extend more than six inches beyond the edge of the pavement and shall be completely covered by a compacted soil layer of a thickness of at least one inch, or equal to the thickness of the pavement, whichever is greater.

i. Bottom ash residue remaining outside this distance after construction shall be removed and recycled in a manner consistent with this Authorization or placed in a permitted Class I lined landfill.

j. When bottom ash residue is utilized as a structural base layer under a multi-use path, only asphalt or concrete mixes shall be placed as the overlying pavement layer with a one-inch or greater as-built thickness.

k. When removed from service, asphalt or concrete products containing bottom ash residue as aggregates shall be managed as construction and demolition debris, recycled or reused in a manner consistent with this Authorization, or placed in a permitted Class I lined landfill.

l. When removed from service, bottom ash residue that has been used as a base course shall be recycled or reused in a manner allowed under this Authorization or placed in a permitted Class I lined landfill.

m. Fugitive dust emissions from the storage, processing, transport or placement of bottom ash residue shall be controlled by wetting.

n. Bottom ash residue used as an aggregate in asphalt and concrete shall be stored on site at batch plants for a period of no more than 120 hours. Loads shall be covered with a tarp, or a similar protective cover, during transportation and ash will not be transported during periods of inclement weather. Following batching of the concrete or asphalt products, the unused

o. Bottom ash residue shall be recovered and either used in a subsequent allowed construction project or placed in a Class I lined landfill.

p. The Licensee shall comply with the following record keeping requirements:

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(i) Whenever not the owner, the Licensee shall receive written notice, from the owner or duly authorized agent of the owner (Owner) of the property where the Specified Materials are to be placed, providing the Licensee express authorization for the placement of the Specified Materials, detailing the Owner's authorized placement dates, placement locations, and the maximum quantities of bottom ash residue that may be recycled or reused, or otherwise placed, on the Owner's property;

(ii) The Licensee may receive such notices from Owner's electronically;

(iii) The Licensee shall provide and maintain records detailing the actual placement dates, locations, quantities, the nature of recycling or reuse including the types of associated construction materials (i.e., road base course, concrete pavement, or asphalt pavement) where the Specified Materials were placed, and the dates and disposition whenever any Specified Materials are removed from service;

(iv) Notices and records shall be maintained in a centralized record storage system accessible from the Facility, and also in association with the particular construction project records for any related road construction project that utilizes the Specified Materials; and

(v) Such notices and records shall be maintained by the Licensee for a period of not less than 30 years after the removal of the Specified Materials from service.

q. Recycling and reuse of the Specified Materials, and associated construction activities, shall be conducted in a manner that does not cause or contribute to violations of state water quality standards. Performance-based erosion and sediment control best management practices shall be implemented and maintained immediately prior to, during, and after construction as needed to stabilize all disturbed areas, including material storage, staging, and processing areas, to prevent adverse impacts to the water resources and adjacent lands. Erosion and sediment control measures shall be installed and maintained in accordance with the State of Florida Erosion and Sediment Control Designer and Reviewer Manual (Florida Department of Environmental Protection and Florida Department of Transportation June 2007), available at www.dep.state.fl.us/water/wetlands/docs/erp/FLerosionSedimentManual_6_07.pdf, and the Florida Stormwater Erosion and Sedimentation Control Inspector's Manual (Florida Department of Environmental Protection, Nonpoint Source Management Section, Tallahassee, Florida, July 2008), available at www.dep.state.fl.us/water/nonpoint/docs/erosion/erosion-inspectors-manual.pdf.

r. The Licensee shall immediately notify the Department in writing upon, or at least within 5 business days of, becoming aware of any condition, test result, or other information indicating that recycling or reuse of the Specified Materials, in accordance with this Authorization, may cause or contribute to violations of state water quality standards.

s. Upon reasonable notice to the Licensee, Department staff or agents with proper identification shall have permission to enter, inspect, sample and test as the Department may claim needed to verify compliance with the requirements of Chapter 403, F.S., and this Authorization.

t. Uses other than as specified herein are not approved under this Authorization. Where bottom ash residue from the Facility, or related materials, may be used or placed in a manner that does not comply with this Authorization, such materials shall be managed as a solid waste subject to the requirements of Chapter 62-701, F.A.C.

*Pavement is defined as including the paved shoulders

APPENDIX I

OPERATION PLAN
FOR THE
PASCO COUNTY
WEST PASCO COUNTY CLASS I LANDFILL

Prepared for:
Pasco County Public Infrastructure
Solid Waste & Resource Recovery
14230 Hays Road
Spring Hill, Florida 34610

Prepared by:
Jones Edmunds & Associates, Inc.
730 NE Waldo Road
Gainesville, FL 32641

July 2022

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1.0 GENERAL DESCRIPTION OF THE SOLID WASTE COMPLEX

The West Pasco County Class I Landfill (WPCL) (for which this Operation Plan has been prepared) is an integral component of the larger West Pasco Solid Waste Complex. The overall 800-acre Complex is comprised of the following components:

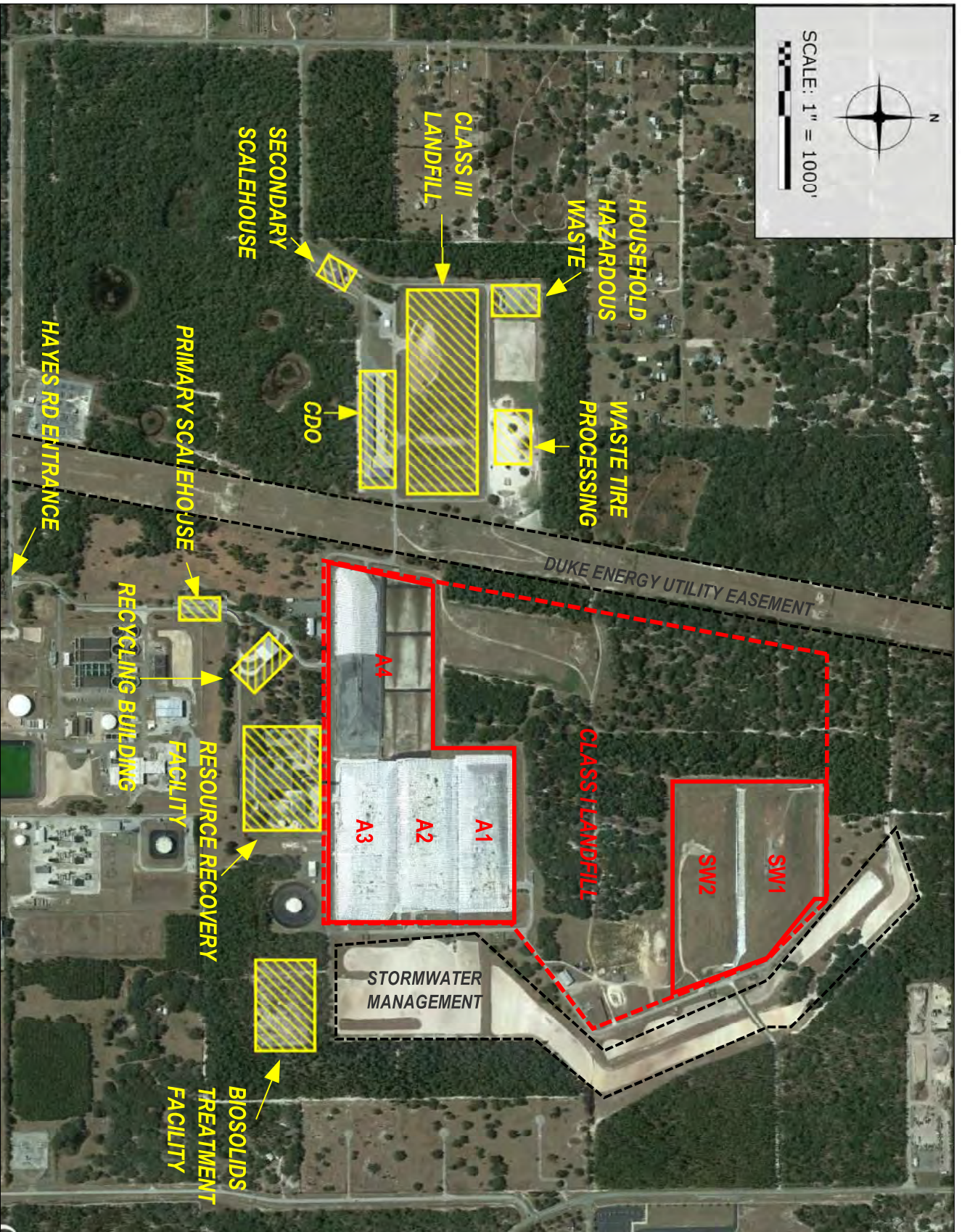
- The Pasco County Resource Recovery Facility;
- The West Pasco Class I Landfill (the component addressed by this Operation Plan);
- The West Pasco Class III Landfill;
- The West Pasco Materials Recovery Facility;
- Citizen's Drop Off Facility;
- The Pasco County Biosolids Treatment Plant, and;
- Various support structures, including two scalehouses, vehicle maintenance buildings, etc.

The main entrance of the West Pasco Solid Waste Complex is at 14230 Hays Road in Spring Hill and is depicted on **Figure 1-1**. The majority of the complex is permitted under the Florida Electrical Power Plant Siting Act through Conditions of Certification No. PA 87-23G; however, the Class III Landfill and the Biosolids Treatment Plant are permitted through individual permits outside of PA 87-23G. The following solid waste management activities occur at the Complex:

- Scalehouse operations.
- Solid Waste combustion at the Resource Recovery Facility.
- Metals recovery in the Ash Storage Building of the Resource Recovery Facility.
- Ash disposal in the Ash Monofill (currently Cell A-4).
- Engineered Aggregate processing within the Ash Monofill (currently limited to Cell A-4).
- Maintenance of temporary cover on the inactive cells of Ash Monofill (Cells A-1, A-2, and A-3).
- Solid Waste Disposal in the Solid Waste Landfill (currently Cell SW-2).
- Maintenance of temporary cover on the inactive cell of the Solid Waste Landfill (Cell SW-1).
- Construction and demolition (C&D) disposal within the Class III Landfill.

- Yard waste processing.
- White goods collection and recycling.
- Household hazardous waste (HHW) collection.
- Recycled materials processing.
- Stormwater collection and treatment.
- Landfill gas monitoring.
- Groundwater monitoring.
- Landfill leachate collection and transport.
- Heavy equipment and vehicle maintenance.
- Waste tire collection and processing.

The entire 800-acre site is enclosed by a chain link fence or barbed wired fence to limit access. Public access is limited to two gates, both of which are monitored by Pasco County staff in the scalehouses adjacent to the gates. After-hours access to the primary entrance gate off Hays Road is monitored and controlled by the control room operator at the Resource Recovery Facility.



Site Plan
West Pasco Solid Waste Facility

Figure
1-1

2.0 SAFETY

2.1 EMERGENCY CONTACTS AND REPORTING

Dr. Justin Roessler, PhD, PE	Office	(727) 856-0119
Solid Waste Director	Cell	(352) 270-1454
Mr. Tim Treshler	Office	(727) 856-0119
Sr. Program Manager	Cell	(727) 992-0032

The emergency contact individuals are subject to change. The Operation Plan will be updated if any changes occur. All accidents should be immediately reported to the Solid Waste Director. After immediately reacting to the accident (first aid or equipment repair), the Solid Waste Director or others designated by the Solid Waste Director will investigate the cause of the accident. A full accident report will be drafted and submitted to Director. The accident report will include all facts involved in the incident as applicable including, but not limited to, date, time of day, weather conditions, hauler vehicle traffic conditions, location on the landfill, equipment and personnel involved, circumstances leading to cause, and response. Photographs will be attached when applicable.

2.2 OPERATOR AND HAULER REQUIREMENTS

Smoking is prohibited on and near the landfill cells and the working face. A spark from a lighter, cigarette, cigar, or pipe could ignite landfill gas (LFG). A sign at the scalehouse notifies anyone entering the landfill of the No-Smoking Policy. All Pasco County employees will enforce this policy in the field. "No Smoking" signs are posted at all entrances, roadways, and active areas.

Welding and oxy-acetylene cutting are prohibited near the landfill or working face. If a vehicle requires this type of maintenance, it shall be towed to an area away from LFG venting. If this is not possible, an employee trained in using a combustible gas meter will take a reading around the area to determine whether methane/combustible gases are absent and their concentrations if they are present.

2.3 TRAINING, EQUIPMENT, AND MATERIALS

Safety materials and equipment include fire extinguishers at landfill sites and first aid kits that are easily accessible for field use. Other equipment provided by the County may include various types of Personal Protective Equipment (PPE) and protective disposable coveralls. Landfill field employees are required to wear appropriate clothing on the work site, such as steel-toed boots, long pants, and a shirt.

Pasco County Public Infrastructure maintains a pro-active approach to training by requiring key operating personnel attend the University of Florida's Training, Research, and Education of Environmental Operations (TREEO) certification courses. All Operators and Spotters must attend and pass the Initial Training for Operators of Landfills and Waste Processing Facilities

course. Within three years of passing the initial training course and every three years thereafter, each operator must complete an additional 16-hour refresher course. Additionally, all spotters must attend and pass the Initial Training Course for Spotters at Landfills, C&D Sites, and Transfer Stations. Within three years of passing the initial training course and every three years thereafter, each spotter must complete an additional 8-hour refresher course.

Copies of course completion certificates are kept on file within the Administration offices. The landfill has at least one trained operator on site during all times when the landfill receives waste. At least one trained spotter is at each working face at all times to detect unauthorized wastes when the landfill receives waste other than ash.

3.0 ORGANIZATION

Pasco County Solid Waste is organized as follows:

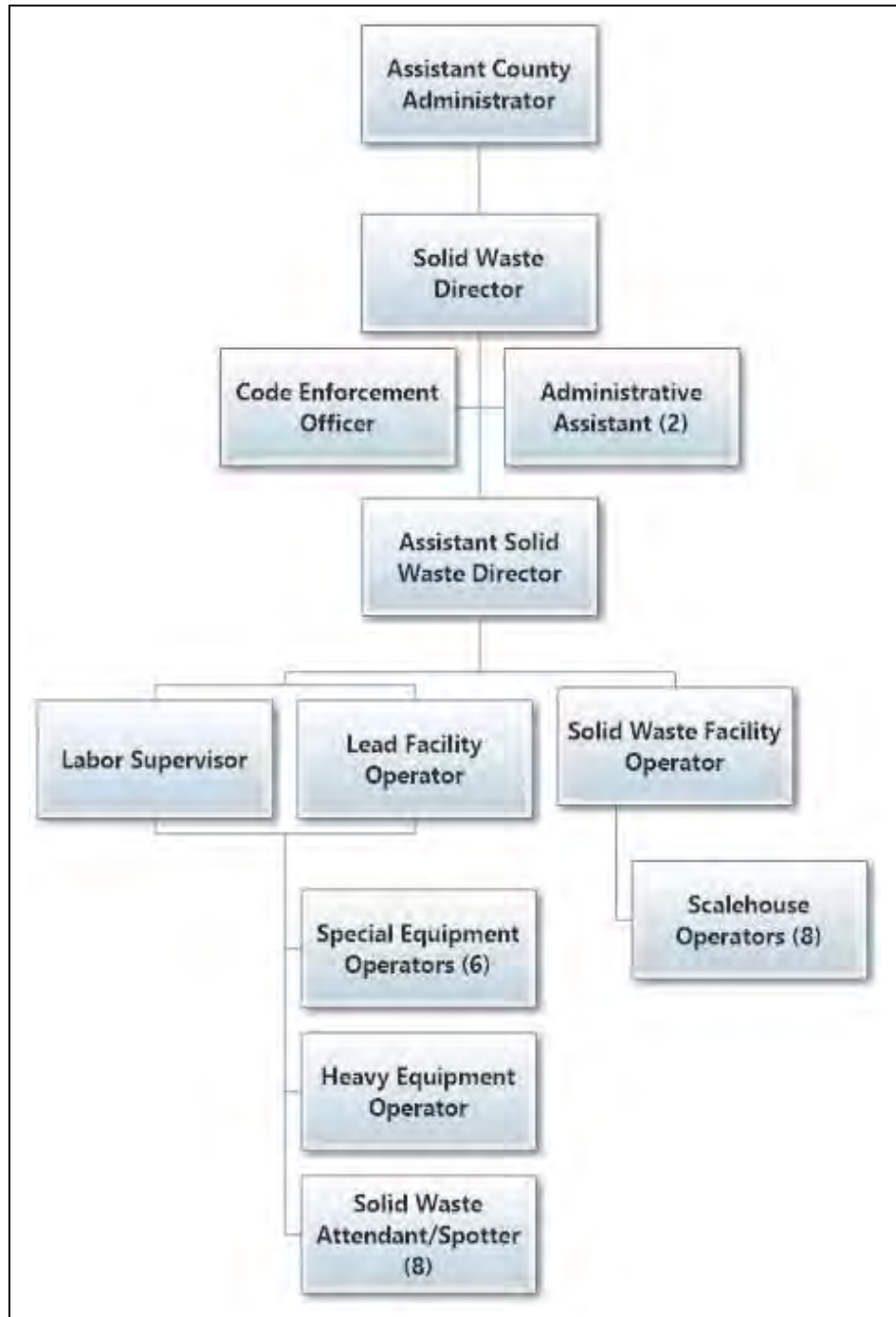


Figure 3-1
Organizational Chart

4.0 SCALEHOUSE OPERATIONS

The scale operation is critical to the efficiency of the landfill facility. This operation serves several important functions including security, initial load checking, waste identification and segregation, traffic control, waste quantity recording, and financial documentation.

The primary scalehouse is approximately 1,000 feet from the entrance gate on the main facility access road. The scale facility has a scalehouse, two inbound scales, two outbound scales, one inbound bypass lane, one outbound bypass lane, and a video surveillance system. Monitoring the movement of haul trucks and other vehicles is part of the duties of the Scalehouse Attendant. All traffic entering the facility must check in with the Scalehouse Attendant. Waste delivery vehicles are required to weigh in, and all visitors must first report in and state the purpose of their visit. A Scalehouse Attendant is maintained on duty during all periods when the facility is open.

A secondary scalehouse, constructed in 2011, is utilized primarily for citizens that choose to self-haul to the Citizens' Drop-Off facility. The secondary scalehouse has a scalehouse, one inbound scale, one outbound scale, one inbound bypass lane, one outbound bypass lane, and a video surveillance system.

Administration maintains communication with landfill staff via hand-held radios and cell phones. A sign at both entrances to the facility identifies the operating authority, hours and days of operation, waste disposal restrictions, and other information. Speed limit signs are posted along the main road leading to the active filling areas. Signs identifying roads leading to the Class I filling area are posted at the intersection of each road. Other miscellaneous signs direct customers to the other public facilities, including recycling drop-off containers, mulch, and tire disposal area.

4.1 LOAD SCREENING

The Scalehouse Attendant screens all loads as they are received at the scale facility. The Scalehouse Attendant performs two types of inspections on incoming waste loads per transaction: hauler interview, and visual inspections when visible from inside the scale facility.

The initial inspection of the incoming waste is conducted by the Scalehouse Attendant. This inspection includes identification from the driver of the type of waste and random visual inspections of the vehicle. The random visual inspections include looking for suspicious containers that may contain prohibited wastes and smoke rising from the payload area of the vehicle.

The types of businesses in the area that may generate prohibited wastes include automotive repair, painting, dry cleaning, fiberglass fabrication, and marine service. All incoming loads of waste should be checked for visual and olfactory indications. Indications of suspicious loads include the following:

- Hazardous placards or markings.
- Drums.
- Containerized liquids.
- Powders or dusts.
- Sludges.
- Bright or unusual colors.
- Broken or intact mercury-containing lamps or devices.
- Chemical odors.

4.2 PROHIBITED WASTES

The Scalehouse Attendant should also scan incoming loads for components that contain prohibited materials and interview the driver of the hauler vehicle whether the incoming load contains such materials. Waste materials prohibited from disposal at the West Pasco Facility are listed below. Refer to Section 7.6 for handling and removal of prohibited wastes from the waste stream. References to sections where disposal is addressed are shown parenthetically. Please note that waste tires, white goods, yard waste, and other selected items are accepted at the Complex but are diverted from either the Class I cell or the Waste-to-Energy Facility.

- Lead Acid Batteries (8.7).
- Paint (8.4 and 8.5).
- Biomedical wastes (8.10).
- Whole tires (8.11).
- Used motor oil and oil filters (8.3).
- White goods (8.12).
- Household Hazardous Waste (8.1).
- Unknown Wastes (8.2).
- Septic/sewage/sludge except that bound for the Biosolids Processing Facility or meeting the definition of a solid waste in accordance with 62-701(107) and not prohibited by Rule 62-701.300, FAC (8.10).
- Segregated Electronics (8.8).
- Contaminated Soils (8.9).
- Mercury-Containing Lamps and Devices (8.13).

4.3 WASTE CATEGORIES

Pasco County utilizes defined categories of types of waste received at the scalehouse. These categories of waste are designed to provide required reporting to FDEP as well as to properly manage the incoming waste. Each waste category is managed at a specific area of the Complex. The Scalehouse Attendant is responsible for directing the driver of the haul vehicle to the proper location in the landfill for unloading.

Table 4-1 lists all waste categories received at the Complex and the location for unloading within the Complex.

The tonnage of all waste categories is compiled monthly. The waste quantity reports are submitted annually to FDEP.

Table 4-1
PC Scales Waste Category Codes and Disposal Area

Code	Description	Disposal Area
AC	Air Conditioner	HHW
AR	Adopt a Road	RRF, Class I, Class III, Waste Tire
CCT	Coastal Cleanup	RRF, Class I, Class III, Waste Tire
CD	Construction Debris	Class III
CEE	Commercial Electronic Equipment	HHW
CM	Computer Monitor	HHW
COM	Computer without Monitor	HHW
EE	Electronic Equipment	HHW
FCY	Fuel Cylinder	HHW
HEL	Helium Tank	HHW
MET	Metal	Class III
MSW	Municipal Solid Waste – Residential	RRF, Class I
MSWC	Municipal Solid Waste – Commercial	RRF, Class I
OXY	Oxygen Tank	HHW
PT20	Propane Tank up to 20 gallons	HHW, Class III
PT50	Propane Tank up to 50 gallons	HHW, Class III
REF	Refrigeration	HHW

RIMS	Outbound Tire Rims	N/A
TC	Tire Chips	Waste Tire
TCOTR	Off road Tire Chips	Waste Tire
TLT	Toilet Recycling Program	Class III
TR	Tires	Waste Tire
TRE1	Tires (each) car or pickup	Waste Tire
TRE2	Tires (each) large truck or semi	Waste Tire
TVP	TV Projection and Console	HHW
TV1	TV up to 36" screen	HHW
WC	Wood Chips	RRF, Class I, Class III
WG	Outbound metal and white goods	N/A
YWC	Yard Waste Commercial	Yard Waste
YWR	Yard Waste Residential	Yard Waste

4.4 DATA RECORDING AND REPORTING

Vehicles are first weighed at the scale with the gross weight of the vehicle recorded. Pasco County utilizes the software PC Scale to categorize and track inbound and outbounds loads. Following assignment of the appropriate commodity code into the PC Scale program, the Scalehouse Attendant then directs the vehicle to the appropriate area of the Complex to unload. The vehicle returns to the scale where the tare weight is recorded to determine the net weight of the material. Materials such as white goods, tires, and bulk yard waste are dropped off at the designated areas as shown on **Figure 1-1**. These areas are clearly indicated by signs.

5.0 LANDFILL OPERATOR AND SPOTTER TRAINING PLAN

Landfill Operator and Spotter training will comply with Rule 62-701.320(15), FAC.

Training courses, whether public or in-house, meet the requirements of Rule 62-701.320(15), FAC and shall be certified by the FDEP Solid Waste Management Training Committee (SWMTC). This training plan, along with documents that record training plan implementation, are kept on site and will be made available to FDEP's inspection staff upon request. Training records are also kept by University of Florida Center for Training, Research, and Education for Environmental Occupations (TREEO).

5.1 OPERATORS

New Supervisors hired by Pasco County Solid Waste will participate in 24 hours of initial training provided by an entity that has been pre-approved by the Department pursuant to Section 403.716, Florida Statutes. Within 3 years after passing the exam and every 3 years thereafter, Supervisors will participate in continuing education courses totaling 16 hours conducted by an approved provider.

5.2 SPOTTERS

New spotters will participate in 8 hours of initial training provided by entities meeting the requirements of Rule 62-701.320(15), FAC. Every 3 years after initial training, landfill Spotters will participate in continuing education courses provided by approved entities totaling 4 hours.

6.0 ASH MONOFILL OPERATIONS

The Ash Monofill portion of the Class I Landfill receives only combustion residue (ash) from the Pasco County Resource Recovery Facility. Ash that is generated from the combustion process is directed to the dedicated Ash Storage Building at the Resource Recovery Facility, where it is periodically loaded within the building by a front-end loader into top loading trucks. The loaded trucks travel to the active ash disposal cell, where they are off-loaded. Ash hauling operations occur between 7 AM and 6 PM, Monday through Friday, or more frequently as needed.

The liner and leachate collection system have been constructed, one disposal unit at a time (A-1, A-2, A-3, A-4) with temporary roads and swales for access and surface-water management. The phasing plan for the currently active ash disposal cell (A-4) is depicted in the drawing set dated July 2008 by CDM sheets C-6 through C-11. The proposed modifications to the side slopes and vertical expansion of Cells A-1, A-2, and A-3 to a final buildout elevation of 122 feet North American Vertical Datum of 1988 (ft NAVD) requires an update to the preexisting phasing plan. As of June 2021, Cell A-4 is the active disposal cell for the Resource Recovery Facility's ash; however, activities such as advanced metals recovery exercises by Covanta and periodical ash-derived aggregate processing partially occupy the available disposal area, encouraging the County to explore revised phasing plans to increase operational flexibility.

In general, waste filling is done in conjunction with using a rain tarp as intermediate cover to reduce leachate generation. As of May 2021, Cells A-1, A-2, and A-3 are covered by such intermediate cover. The rain tarp is a 20-mil geomembrane that serves as intermediate cover for areas that are not expected to be used for disposal within 180 days. All precipitation on the landfill that comes in contact with the rain tarp (and not in contact with ash) is managed as non-contact stormwater.

Cell A-4 is divided into six subcells. The subcells are numbered from one to six, starting at the southwest corner of the overall cell progressing eastward (subcells 1, 2, and 3), then from the northwest corner progressing eastward (subcells 4, 5, and 6). The sequence of filling is depicted on drawings dated July 2008 by CDM, sheets C-6 through C-11.

The general filling sequence is accomplished by filling in each subcell to an approximate elevation of 85 feet, with a side-slope of 3:1. A secondary berm (inside the subcell divider berms) around the Phase I fill area has been constructed to divert contaminated stormwater (leachate) to low areas as shown on sheet C-6. This overall plan is accompanied by a modified phasing plan for the entire ash monofill, which accounts for the vertical expansion and valley fills between Cells A-1/A-2, Cells A-2/A-3, and Cells A-3/A-4. Unless otherwise noted, all ash beneficial reuse activities (described in detail in Section 6.6) shall be relocated or ceased as necessary as this phasing plan proceeds.

6.1 CURRENT FILLING SEQUENCE OF A-4

This section describes the current filling sequence for Cell A-4 starting with the individual subcells, after which the modified filling sequence will be discussed.

6.1.1 PHASE I - FILLING IN SUBCELL 1

1. Flag the edge of the liner at the top of the berm or mark with traffic cones. Ash will not be placed within 2 feet of the flagged or marked line.
2. Close the ball valves in subcells 2 and 4. All other ball valves will be in open position. Install stormwater pumps in subcells 2 and 4. Stormwater from all subcells except subcell 1 will be pumped to the surface drainage swales.
3. Place a berm/swale around the active phase of the cell area. All waste and water in contact with waste will be contained within the bermed area. (See sheet C-6.)
4. Ash will be unloaded from the entrance ramp to the cell and spread over the 2 feet of protective sand cover, constructing a platform. A minimum of 5 feet of initial lift will be placed and rolled to cover subcell 1. The ash for the initial lift will be free from large, sharp objects that may damage the liner system.
5. Continue normal filling operation, maintaining the perimeter berm/ swale around the sub-cell 1. Filling the sub-cell 1 will be accomplished by constructing approximately 10-foot lifts, working in a general direction from south to north, and from west to east.
6. As the filling operation progresses, construct an access road using ash from the west of subcell 1 as shown in sheet C-6, and provide drainage berms/swales on both sides of the access road and around the perimeter of the subcell 1 area. Only the portion of the access road within the landfill footprint shall be constructed of ash.
7. Continue the operation until the elevation of 85 feet is achieved as indicated in sheet C-6.

6.1.2 PHASE II - FILLING IN SUBCELL 2

1. Close the ball valves in subcells 3 and 4. All other ball valves will be in open position. Remove stormwater pumps for subcell 2 and install them in subcell 3. Stormwater from all subcells except subcells 1 and 2 will be pumped to the surface drainage swales.
2. Begin the filling operation in the Phase II area in a similar manner as in Phase I. Please see sheet C-7 for additional details.

6.1.3 PHASE III - FILLING IN SUBCELL 3

1. Close the ball valves in subcell 4. All other ball valves will be in open position. Remove stormwater pumps for subcell 3. Stormwater from all sub-cells except subcells 1, 2, and 3 will be pumped to the surface drainage swales.
2. Begin the filling operation in the Phase III area in a similar manner as in Phases I and II. Please see sheet C-8 for additional details.

6.1.4 PHASE IV - FILLING IN SUBCELL 4

1. Close the ball valves in subcell 5. All other ball valves will be in open position. Remove stormwater pumps for subcell 4 and install them in subcell 5. Stormwater from all subcells except subcells 1, 2, 3, and 4 will be pumped to the surface drainage swales.
2. Begin the filling operation in the Phase IV area in a similar manner as in Phases I, II, and III. Please see sheet C-9 for additional details.

6.1.5 PHASE V - FILLING IN SUBCELL 5

1. Close the ball valves in subcell 6. All other ball valves will be in open position. Remove stormwater pumps for subcell 5 and install them in subcell 6. Stormwater from subcell 6 will be pumped to the surface drainage swales.
2. Begin the filling operation in the Phase V area in a similar manner as in Phases I, II, III, and IV. Please see sheet C-10 for additional details.
3. The Aggregate Processing Operation described in Section 6.5 will take place within subcell 5. Once the subcell has been floored with ash, equipment will be placed in the approximate configuration shown on **Figure 6-1**. Please refer to Section 6.5 of this Operation Plan for a description of the Aggregate Processing operation.

6.1.6 PHASE VI - FILLING IN SUBCELL 6

1. All ball valves will be in open position. Remove stormwater pumps for subcell 6.
2. Begin the filling operation in the subcell 6 area in a similar manner as in Phases I, II, III, IV, and V. Please see sheet C-11 for additional details.

6.2 VALLEY FILLING AND VERTICAL EXPANSION

This section discusses the valley fills proposed between Cells A-1, A-2, A-3, and A-4, as well as the vertical expansion for filling all four cells to a final elevation of 122 ft NAVD. Filling in the existing valleys between Cells A-1/A-2, A-2/A-3, A-3/A-4, and within A-4 may occur after filling in the remainder of area in Cell A-4 or upon completion of the current phase in A-4.

6.2.1 VALLEY FILL BETWEEN CELL A-1/A-2

1. The temporary rain cover should be removed within the valley starting west to east. The valley should be filled in progressing west to east by constructing approximately 10-foot lifts. Before filling in the valley area, the existing ash surface shall be prepared to limit the potential for surface water short-circuiting between the “aged” and “fresh” ash contact surface. Continue the filling operation until approximate elevation of 85 ft NAVD.
2. Leachate collection system cleanout points exist at several points in this valley. To accommodate valley filling, these existing cleanouts will be extended/abandoned as necessary.

6.2.2 VALLEY FILL BETWEEN CELL A-2/A-3

1. The temporary rain cover should be removed within the valley starting west to east. The valley should be filled in progressing west to east by constructing approximately 10-foot lifts. Continue the filling operation until approximate elevation of 85 ft NAVD. Leachate collection system cleanout points exist at several points in this valley. To accommodate valley filling, these existing cleanouts will be extended/abandoned as necessary.

6.2.3 FILLING IN VALLEY WITHIN CELL A-4

1. Begin filling the valley area between subcells from east to west. Fill the area by constructing approximately 10-foot lifts working in the general direction from south to north and toward the west. Continue the filling operation until approximate elevation of 85 ft NAVD.

6.2.4 VALLEY FILL BETWEEN CELL A-3/A-4

1. Begin filling the valley area between cells from east to west. Fill the area by constructing approximately 10-foot lifts working in the general direction from south to north and toward the west.

6.2.5 FINAL BUILDOUT OF CELLS A-1, A-2, A-3, AND A-4 TO ELEVATION 122 FT NAVD

1. These lifts will be an area fill over Cells A-1, A-2, A-3, and A-4 to the final elevation of 122 ft NAVD. Slopes will be maintained to meet the modified 3H:1V. These lifts will be approximately 10 feet thick.

6.3 ASH MONOFILL WASTE INSPECTION

Because the ash monofill receives only combustion residue (ash) from the Resource Recovery Facility, there is no need to deploy spotters to the working face. All Operators working within the ash monofill are trained to identify materials that may have inadvertently been loaded into the ash transport trucks and to segregate such materials if necessary. Such materials could be oversized material (such as white goods) that were segregated at the tipping floor of the Resource Recovery Facility. If such non-ash materials are identified at the monofill, they will be segregated and taken to the appropriate location within the larger Solid Waste Complex.

6.4 ASH MONOFILL HAULER QUEUING

Private haulers are not authorized to utilize the ash monofill. All hauling of ash residue from the Ash Storage Building to the active cell is accomplished by a single contractor employed by the Resource Recovery Facility Operator (Covanta Pasco, Inc.). Hauling takes place Monday through Friday, or more frequently if needed. The Ash Storage Building is sufficiently sized to store several day's worth of ash.

6.5 WASTE COMPACTION AND APPLICATION OF COVER

The ash is spread and compacted as necessary by a front-end loader. Because it contains no putrescible material, daily cover is not applied. On areas where no activity is expected for 180 days or more, a 20-mil geomembrane rain tarp may be installed to minimize leachate generation.

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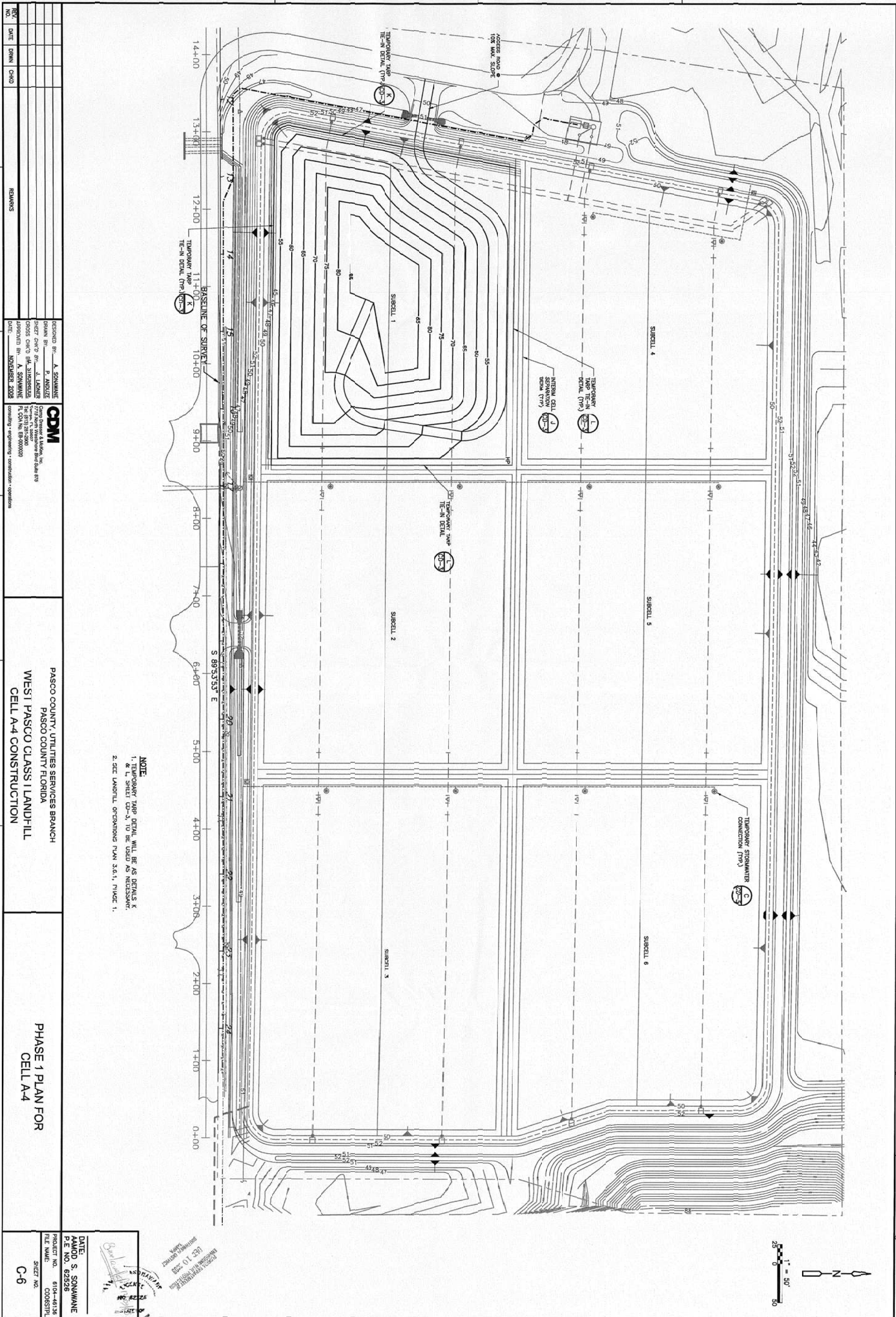
consulting • engineering • construction • operations

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PASCO COUNTY, UTILITIES SERVICES BRANCH
PASCO COUNTY, FLORIDA
WEST PASCO CLASS I LANDFILL
CELL A-4 CONSTRUCTION

PHASE 1 PLAN FOR
CELL A-4

PROJECT NO.	6104-46136
FILE NAME:	C006STPL
SHEET NO.	C-6



[illegible]

CDM
 DESIGNED BY: A. SOMMAYNE
 DRAWN BY: P. ANDUZE
 SHEET NO. OF: 1 LAMER
 CROSS CHECK BY: B. STODOLSKY
 APPROVED BY: A. SOMMAYNE
 DATE: NOVEMBER, 2008

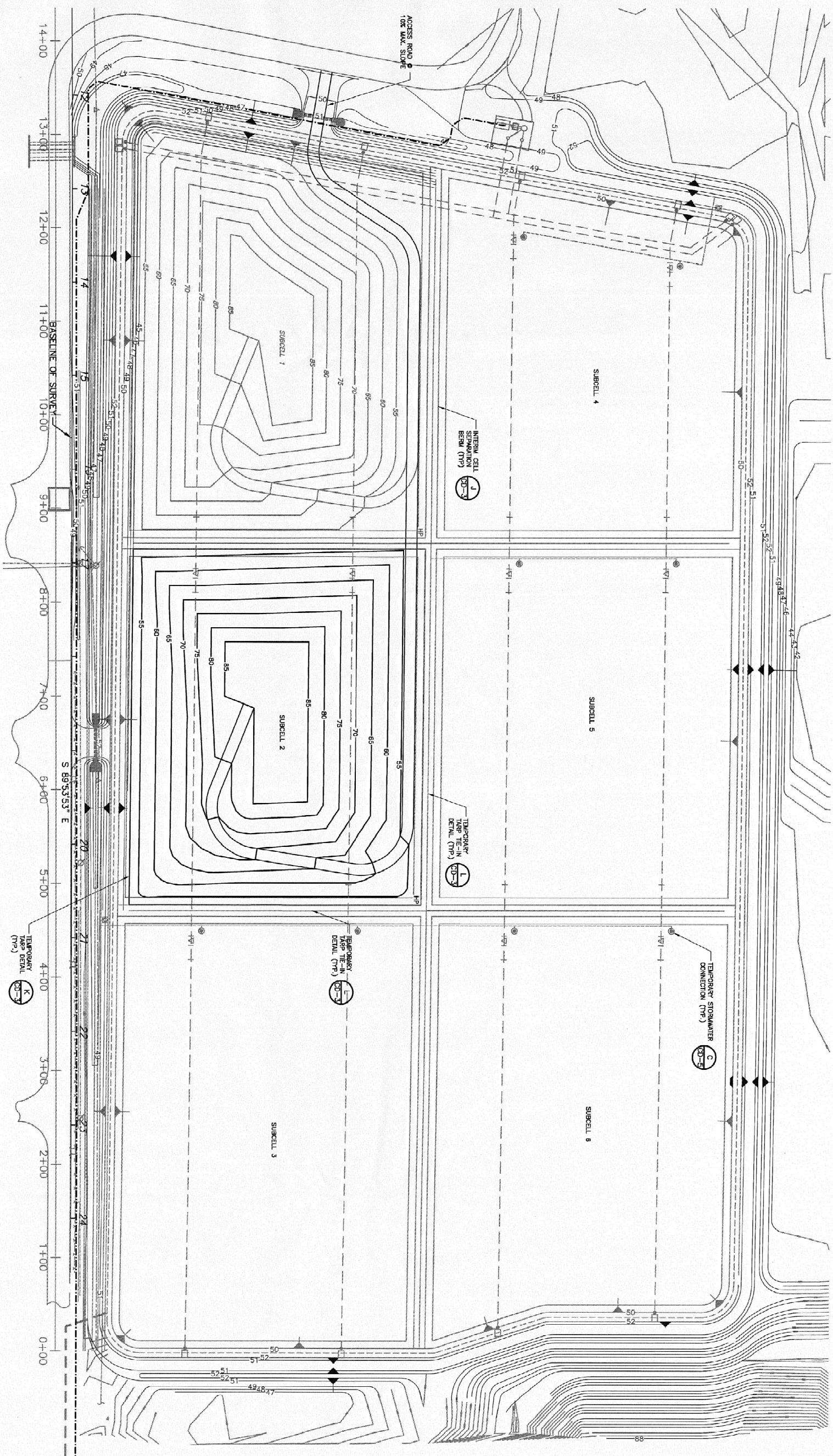
Carpis Driscoll & McKee, Inc.
 1718 North Westshore Blvd Suite 575
 The Woodlands, TX 77380
 Tel: (409) 221-4200
 FL COA NO. EB-0000200

entraining • engineering • construction • operation

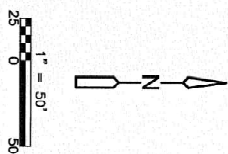
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PASCO COUNTY FLORIDA
WEST PASCO CLASS I LANDFILL
CELL A-4 CONSTRUCTION

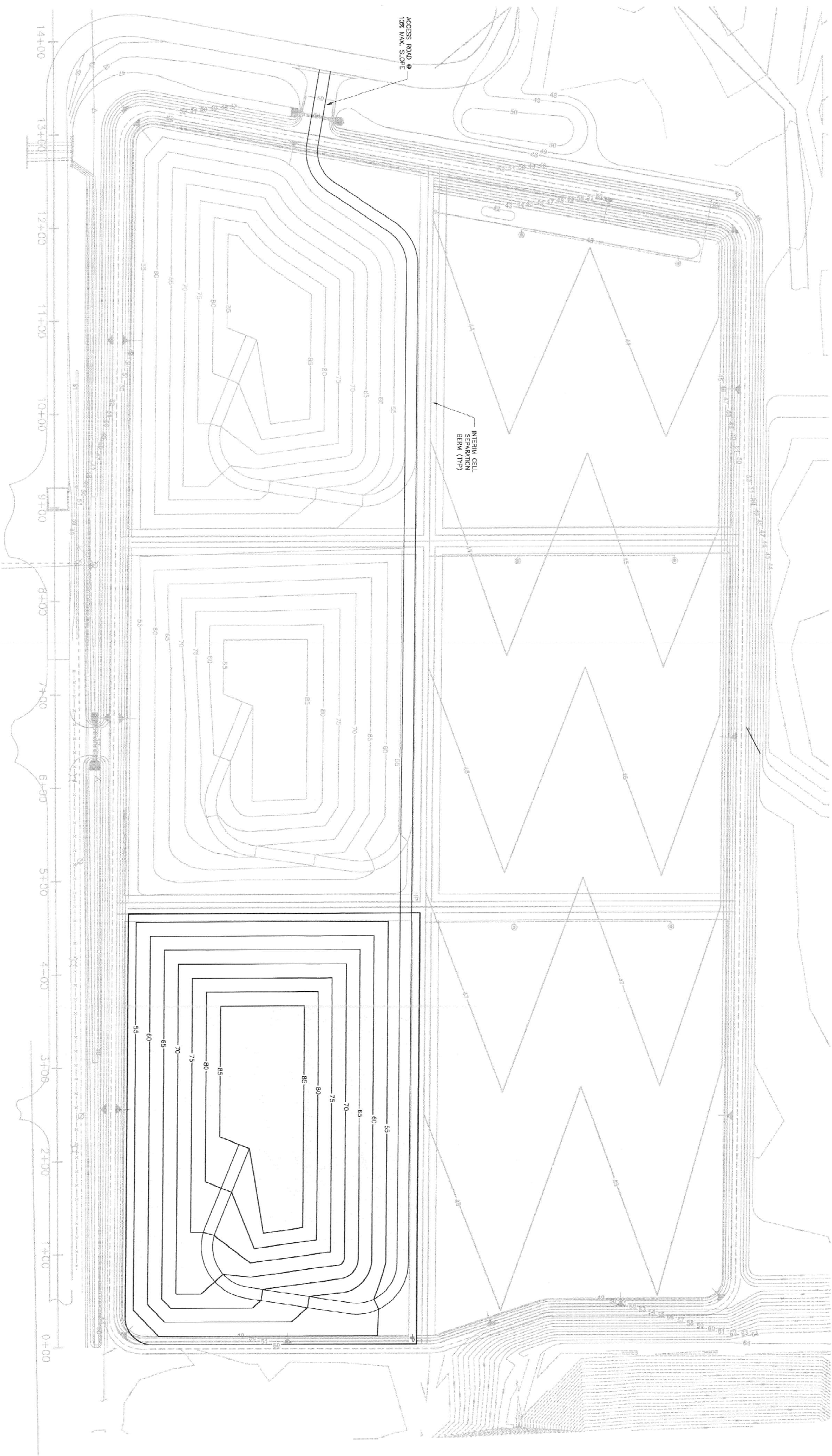
PHASE 2 PLAN FOR
CELL A-4

DATE:	
NAME:	AMOD S. SONAWANE
P.E. NO.	625256
PROJECT NO.	6704-46136
FILE NAME:	CCD075TPL
SHEET NO.	C-7



NOTE:
1. TEMPORARY TARP DETAIL WILL BE AS DETAILS K & L SHEET CD-3, TO BE USED AS NECESSARY.
2. SEE LANDFILL OPERATIONS PLAN 3.6.1, PHASE 2





NOTE:
1. TEMPORARY TARP DETAIL WILL BE AS DETAIL K, SHEET CD-3, TO BE USED AS NECESSARY.

ENVIRONMENTAL PROTECTION
JUL 28 2009
SOUTHWEST DISTRICT
TAMPA

DATE: - 1984
AAMOD S. SONAWANE
P.E. NO. 62526

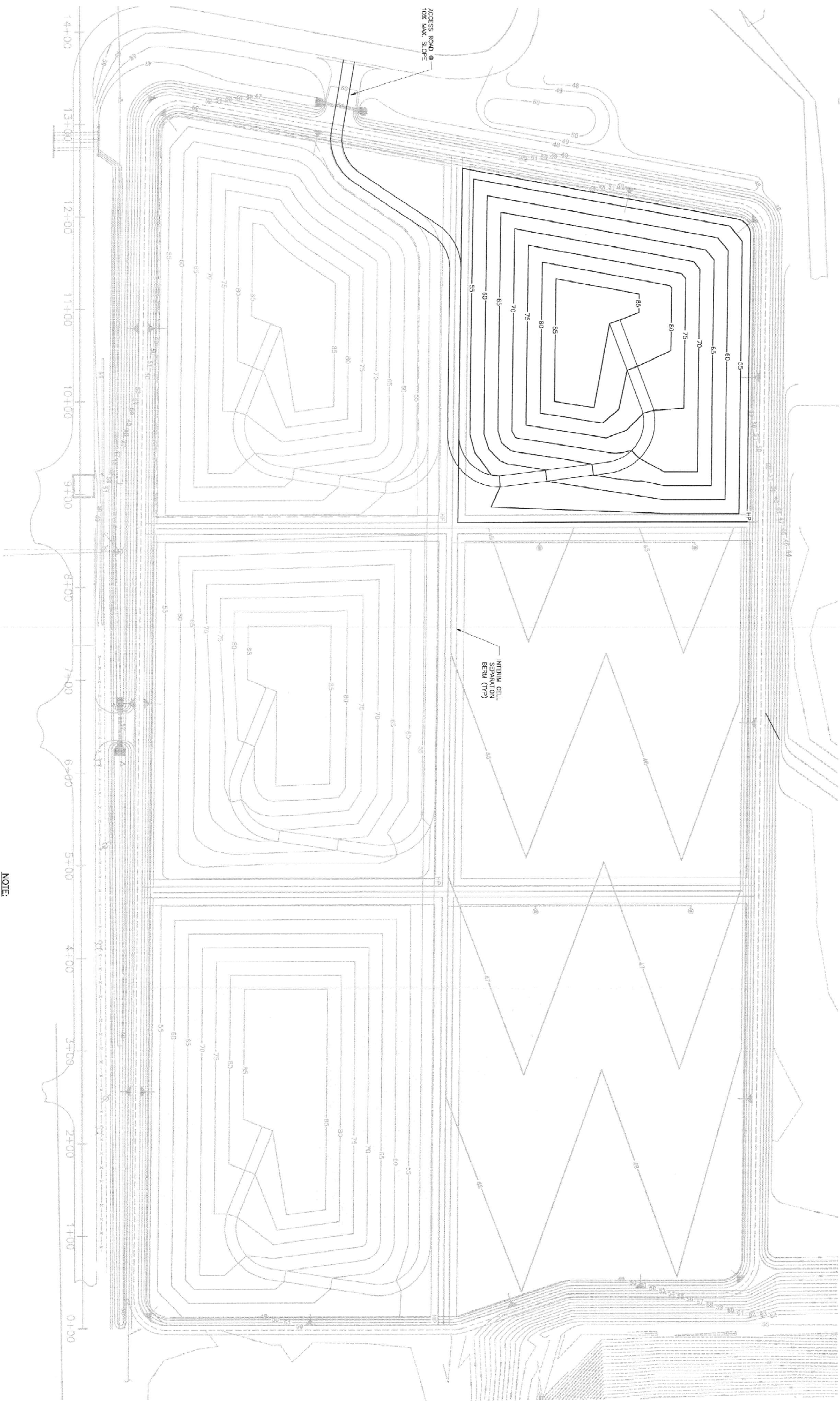
PROJECT NO.	6104-45.36
FILE NAME:	C008STP1

PASCO COUNTY, UTILITIES SERVICES BRANCH
PASCO COUNTY FLORIDA

WEST PASCO COUNTY LANDFILL
EXPANSION CELL A-4

PHASE 3 PLAN FOR

CELL A-4



NOTE:
1. TEMPORARY TARP DETAIL WILL BE AS DETAIL K, SHEET CD-3, TO BE USED AS NECESSARY.

FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION
JUL 28 2008
SOUTHWEST DISTRICT
TAMPA

C-9
 SHEET NO.
 6104-46136
 C009STPL
 S. SOUVANE
 62526
 STATE OF FLORIDA
 08-08-2008

PASCO COUNTY, UTILITIES SERVICES BRANCH

PASCO COUNTY FLORIDA

WEST PASCO COUNTY LANDFILL

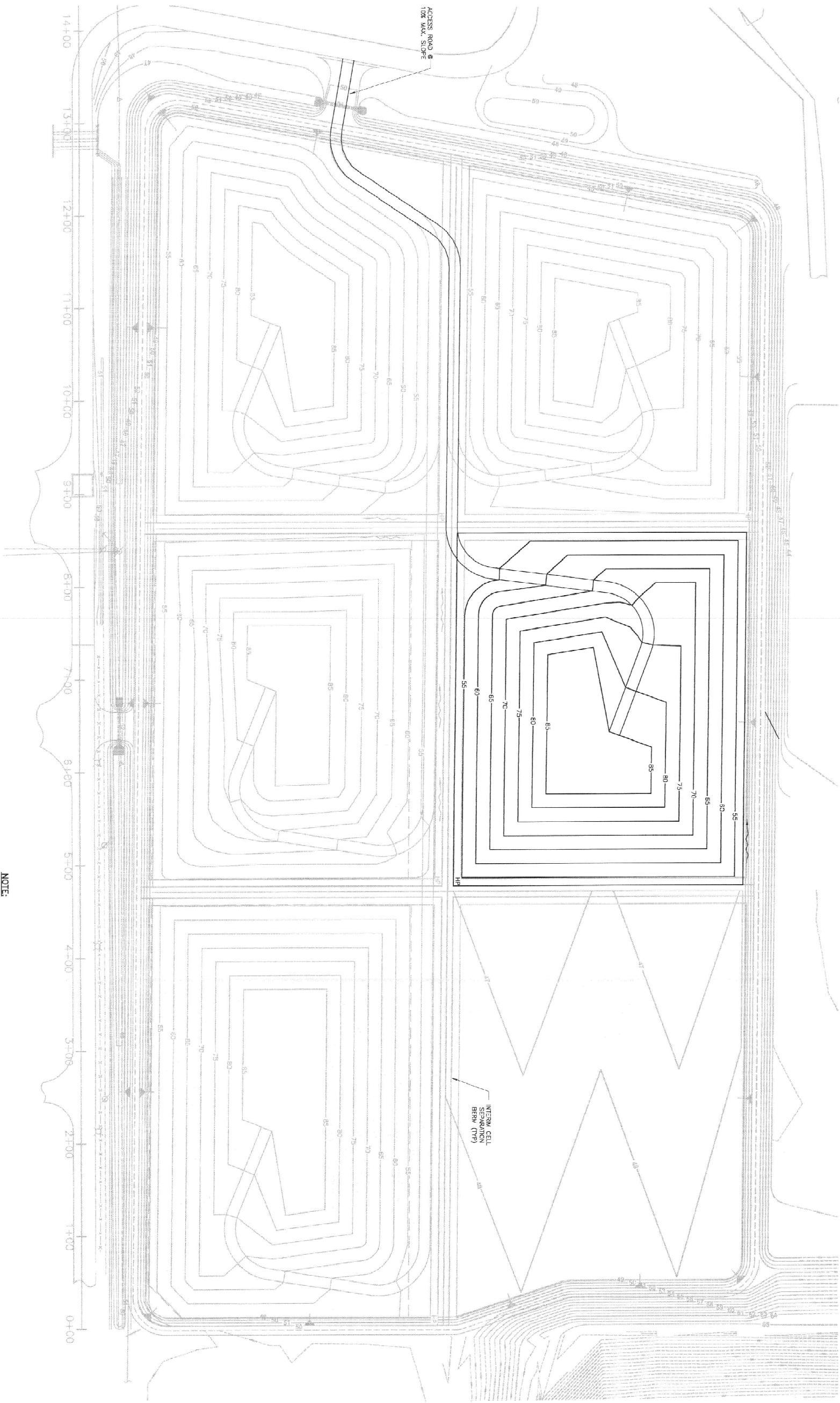
EXPANSION CELL A-4

PHASE 4 PLAN FOR

CELL A-4

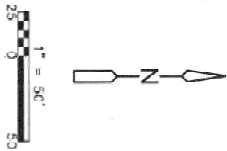
6-6

REV. NO.	DATE	DRWN	CHGD	REMARKS
				DESIGNED BY: A. SPURWANE
				DRAWN BY: P. ANDZE
				SHEET C-K-D BY: J. LADNER
				CROSS C-K-D BY: P. STROBERKE
				APPROVED BY: A. SPURWANE
				DATE: JULY 2008



NOTE:
1. TEMPORARY TARP DETAIL WILL BE AS DETAIL K, SHEET CD-3, TO BE USED AS NECESSARY.

FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION
JUL 28 2008
SOUTHWEST DISTRICT
TAMPA



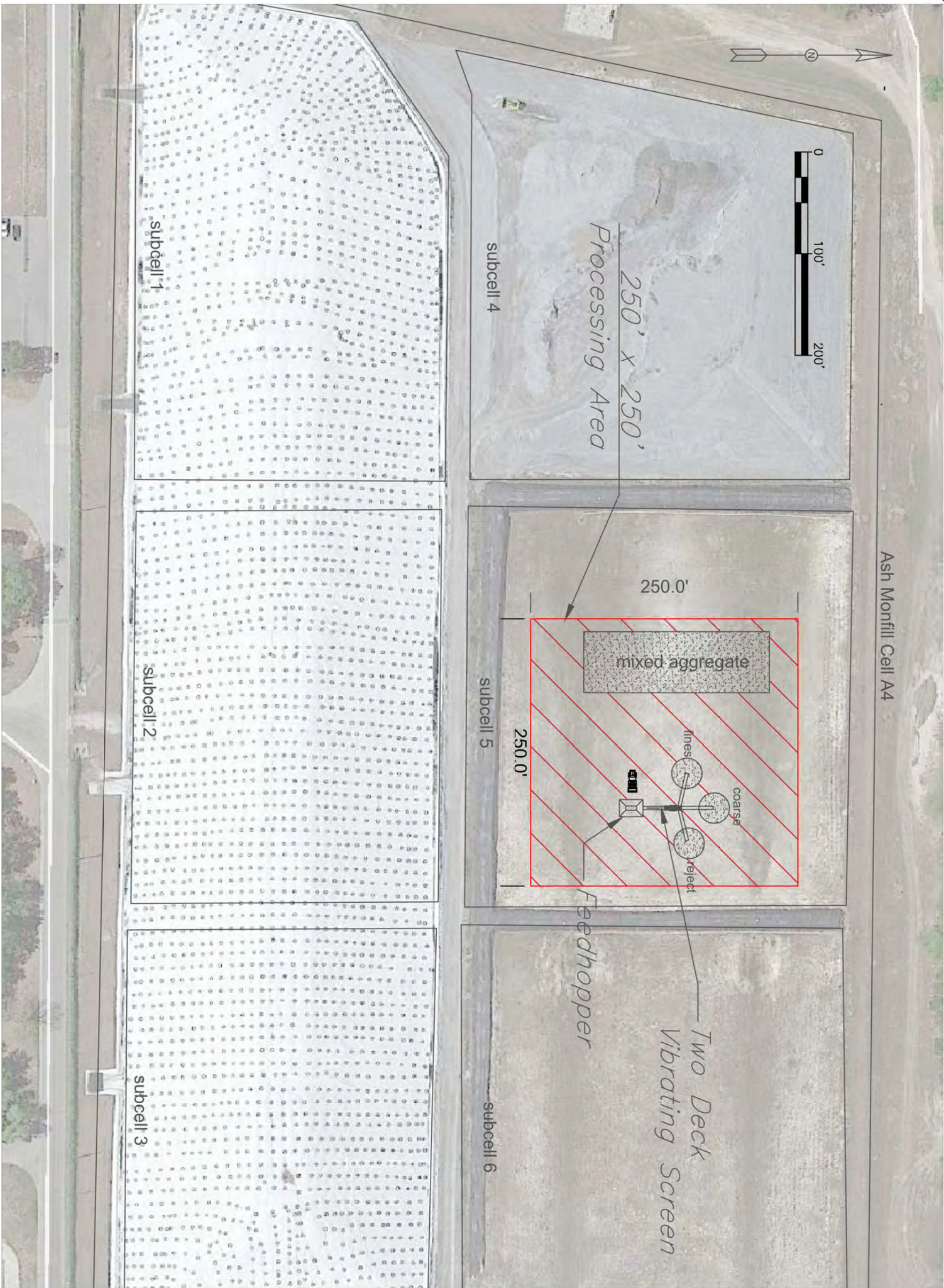
PASCO COUNTY, UTILITIES SERVICES B-RANCH
PASCO COUNTY FLORIDA
WEST PASCO COUNTY LANDFILL
EXPANSION CELL A-4

PHASE 5 PLAN FOR
CELL A-4

DATE: 6/10/45
 NAME: AAMOD S. SONAWANE
 P.E. NO. 62526
 PROJECT NO. 6104-45-36
 FILE NAME: C01G5TPL

DATE: 6/10/45
 NAME: AAMOD S. SONAWANE
 P.E. NO. 62526
 PROJECT NO. 6104-45-36
 FILE NAME: C01G5TPL

C-10



Generalized Layout Ash Processing Equipment



Project Name and Address
Pasco County Class I Landfill
14230 Hoy's Rd
Spring Hill, FL

Project	Sheet
Date 12/18/2018	6-1
Scale 1" = 100'	

6.6 ENGINEERED AGGREGATE PROCESSING

In 2019, the Pasco County Resource Recovery Facility's Conditions of Certification (PA 87-23D) were updated to include beneficial ash reuse. These are codified in Attachment E Part 6 of the Conditions of Certification – Solid Waste Construction and Operation Requirements. This allows for the use of processed bottom ash as an engineered aggregate in certain roadway and building construction applications. A copy of the relevant section of the conditions of certification is included as **Attachment 1**. To enhance the properties of the bottom ash for use as a construction material, it is necessary to process the bottom ash to achieve a specified gradation. To accomplish this, a two-deck vibrating screen will periodically be leased and positioned on subcell 5 of A-4 as shown on **Figure 6-1**. The frequency of the screening operation is dependent upon the need for engineered aggregate destined for beneficial reuse. The screen will segregate raw bottom ash into three size fractions: $> 1\frac{1}{4}"$, $\frac{3}{8}" - 1\frac{1}{4}"$, and $< \frac{3}{8}"$. The screening operation will occupy an approximate 250' x 250' area within the cell.

Raw bottom ash will be placed in the screening equipment feedhopper and processed into separate piles of the size fractions discussed above. Processing will continue until each pile is approximately

20-feet high as depicted on

Figure 6-2. The material greater than $1\frac{1}{4}"$ is unsuitable for beneficial reuse and will remain as waste in the ash cell. Depending upon the specified use, the two remaining piles (referred to as the coarse fraction and the fine fraction) will either be used "as-is" or blended together to achieve the desired gradation. In

addition to screening of ash, the processing area in

A-4 may also be utilized to remove residual ash from ferrous and non-ferrous metals (*additional information on this process is presented in Section 15*).



Figure 6-2
Segregated Aggregate Piles

7.0 MUNICIPAL SOLID WASTE LANDFILL OPERATIONS (SW-1 AND SW-2)

The Solid Waste Landfill portion of the Class I Landfill receives municipal solid waste delivered to the Complex that is unable to be processed by the Resource Recovery Facility because the Facility is either at capacity or is unavailable during maintenance periods. The Resource Recovery Facility is the primary disposal option for all of the municipal solid waste generated within the County, however, it becomes necessary from time to time to divert MSW from the RRF. The diverted waste is directed to disposal cells SW-1 and SW-2. Diversion periods typically last for up to one month before all maintenance at the Resource Recovery Facility is completed and all waste once again is processed at the Resource Recovery Facility.

Following is a detailed description of the fill sequence for the Solid Waste cells (SW-1 and SW-2)

7.1 VALLEY FILL CELLS SW-1 AND SW-2 FILL SEQUENCE

The Class I Landfill at the West Pasco Landfill and Resource Recovery Facility consists of two 10-acre cells – SW-1 and SW-2. Cell SW-1 is nearly at capacity and Cell SW-2 is the active cell. Cell SW-2 was designed with features and filled in such a manner to reduce leachate generation from stormwater. The filling of SW-1 and SW-2 to-date has been conducted as two separate cells, which resulted in a valley between the two cells. The general filling sequence will be accomplished by filling the valley between the cells and then area-filling SW-2 until the final build-out grades are achieved. Before valley filling begins, the temporary rain tarp will be removed, and protective cover soil will be placed in preparation for accepting waste. The filling sequence is as follows:

7.1.1 LIFTS 1 AND 2, VALLEY FILL, PART 1

The following liner preparations and valley filling may be progressed all at one time or in three or more phases depending upon site conditions and operational needs. Work will progress within the valley from west to east.

Liner Preparation

1. Remove temporary rain tarp and stormwater interceptor berm from side slope of SW-1 exposing geocomposite (geonet and geotextile), as shown in **Figure 7**, Stormwater Interceptor Control. Inspect geocomposite for damage. Geocomposite should not be exposed to sunlight for more than 21 days.
2. Install 2 feet of sand protective cover on the geocomposite side slope where the rain tarp has been removed. Verify sand depths on a 50-foot grid by potholing taking care not to damage the geocomposite or geomembrane.

Filling Lifts 1 and 2

3. Selected waste filling - Selected solid waste will be unloaded and spread over the two feet of protective sand cover. The waste will be inspected for large objects that shall be removed so there is no damage to the liner system. The initial selected waste lift shall be a minimum of 4 feet thick.
4. Fill Lift 1 of the Phase IV valley area between SW-1 and SW-2 from west to east. Fill the area by constructing approximately 10-foot lifts working in the general direction from south to north and west to east. Lift 1 may be progressed across the entire width of the cell or lifts may be placed in phases depending upon site conditions and operational needs. Continue the filling operation until the solid waste match waste elevation in Cell SW-2 as shown in **Figure 7-1** and **Figure 7-2**.

7.1.2 LIFTS 3 AND 4

1. Lifts 3 and 4 will be area fills over the SW-2 cell and the previous valley fill. Filling will generally begin in the northwest and will proceed from north to south in rows such that the lift is filled to the outer buildout grades. Once a row is complete, additional rows will be filled moving from west to east.
2. Lifts 3 and 4 are approximately 10 feet thick and will fill up to elevation 95 feet. Slopes will be modified to meet the final build out criterion of 3H:1V.

7.1.3 LIFT 5

1. Lift 5 will be an area fill over the SW-1 and SW-2 cells. Lift 5 varies in thickness and may be up to 15 feet thick. Filling will generally begin in the northwest and will proceed from north to south in rows such that the lift is filled to the outer buildout grades. Once a row is complete, additional rows will be filled moving from west to east.
2. Lift 5 will be filled so that the outer slopes are at build out grades of 3H:1V.

7.1.4 LIFT 6

1. Lift 6 will be an area fill over the SW-1 and SW-2 cells. Filling will generally begin in the northwest and will proceed from north to south in rows such that the lift is filled to the outer buildout grades. Once a row is complete, additional rows will be filled moving from west to east.
2. Lift 6 is approximately 10 feet thick and will fill up to elevation 111 feet. Slopes will be modified to meet the final buildout criteria of 3H:1V.

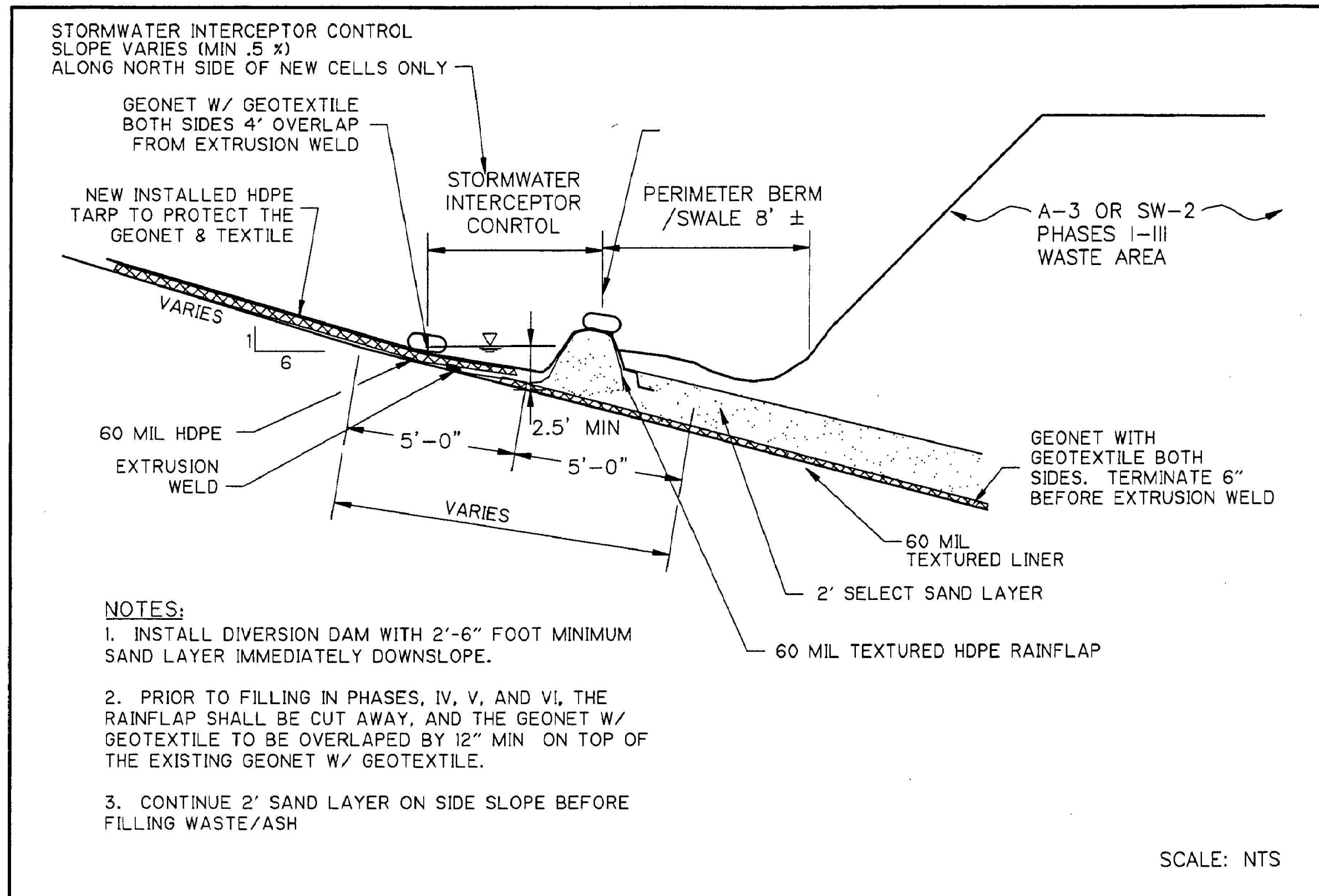
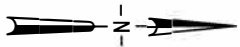
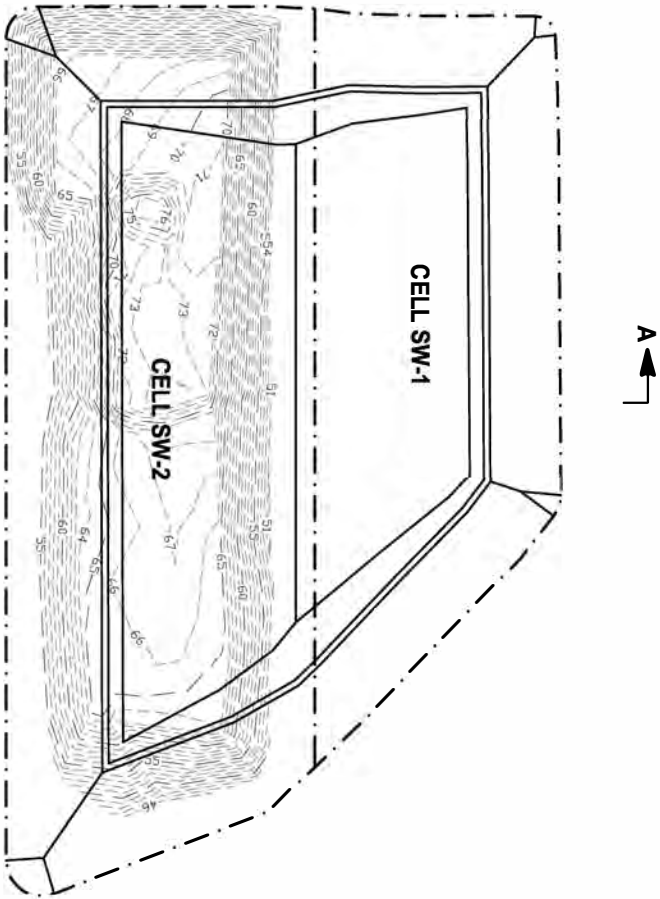
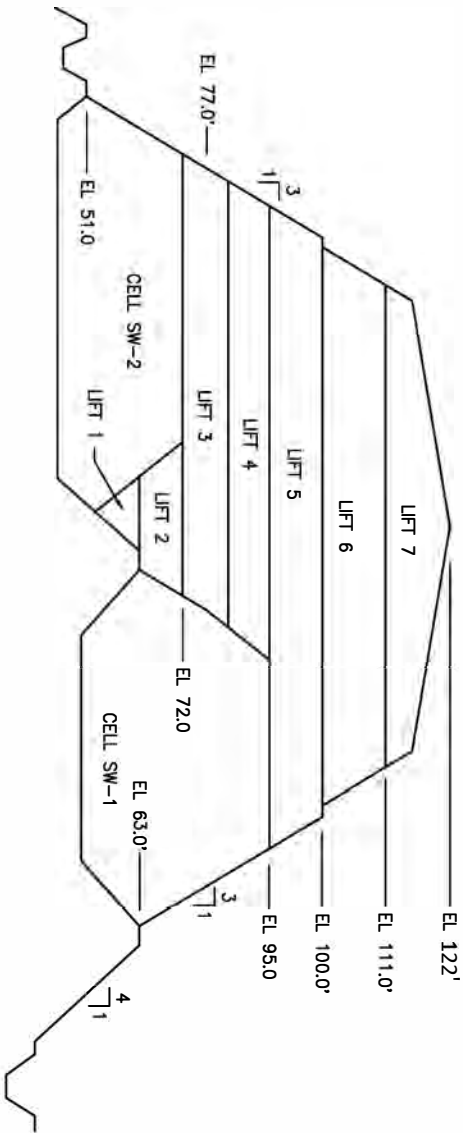


Figure No. 7
Stormwater Interceptor Control

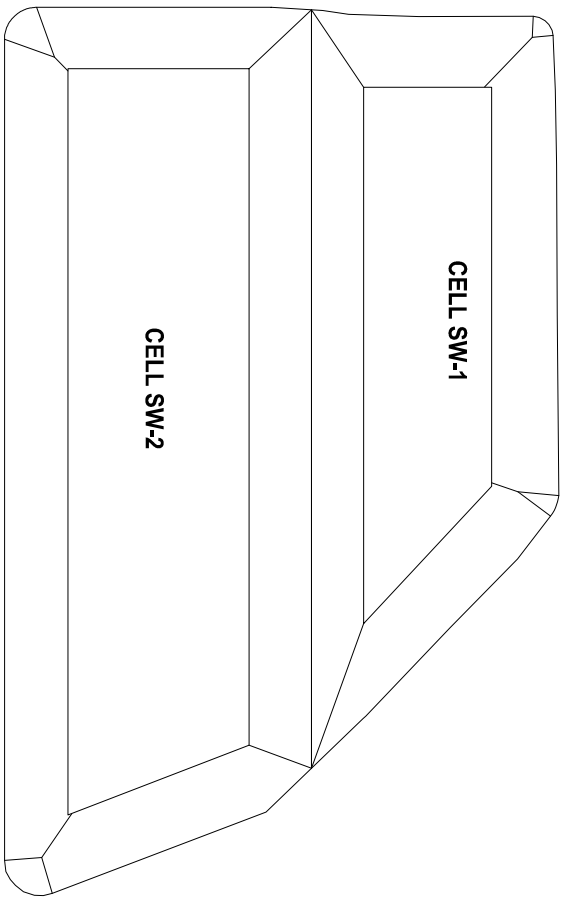
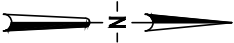


PLAN
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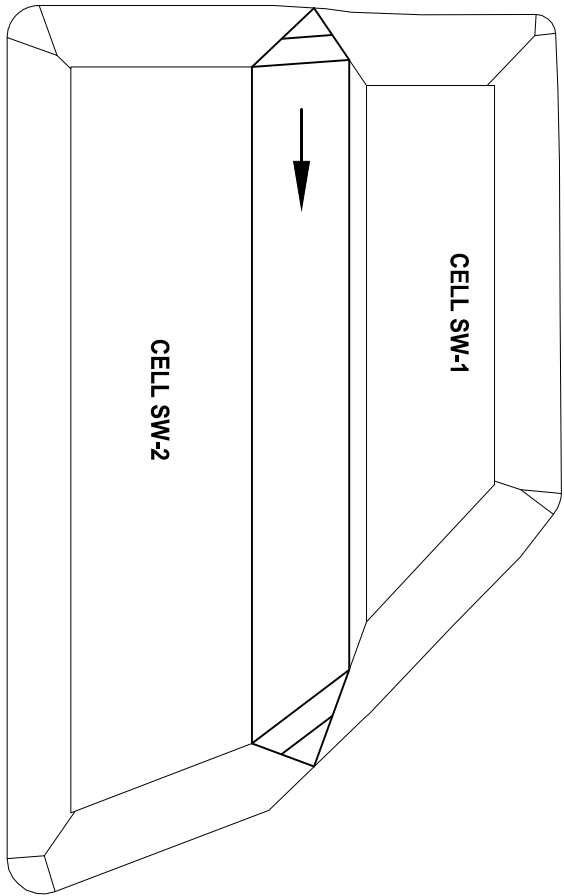
SECTION A-A
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**FIGURE 7-1 PHASING PLAN
WEST PASCO LANDFILL AND
RESOURCE RECOVERY FACILITY
PASCO COUNTY, FLORIDA**



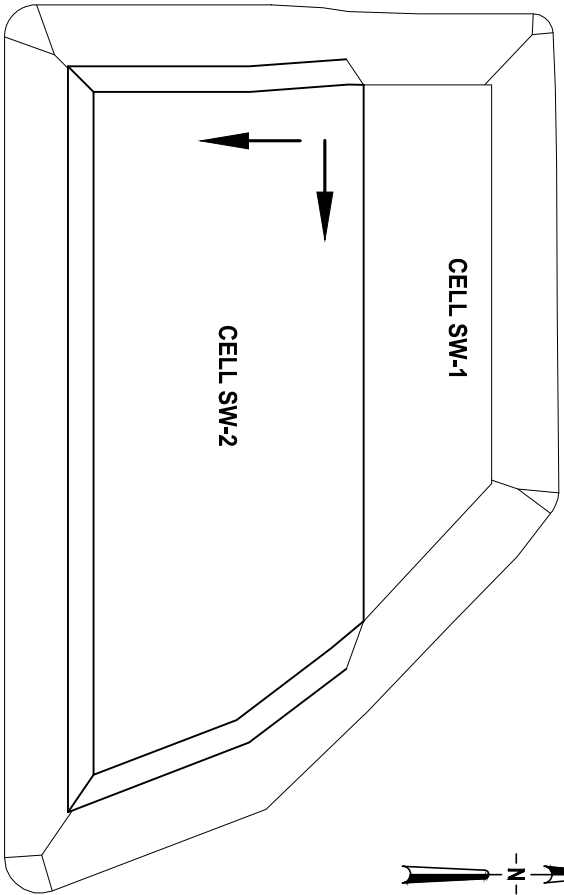
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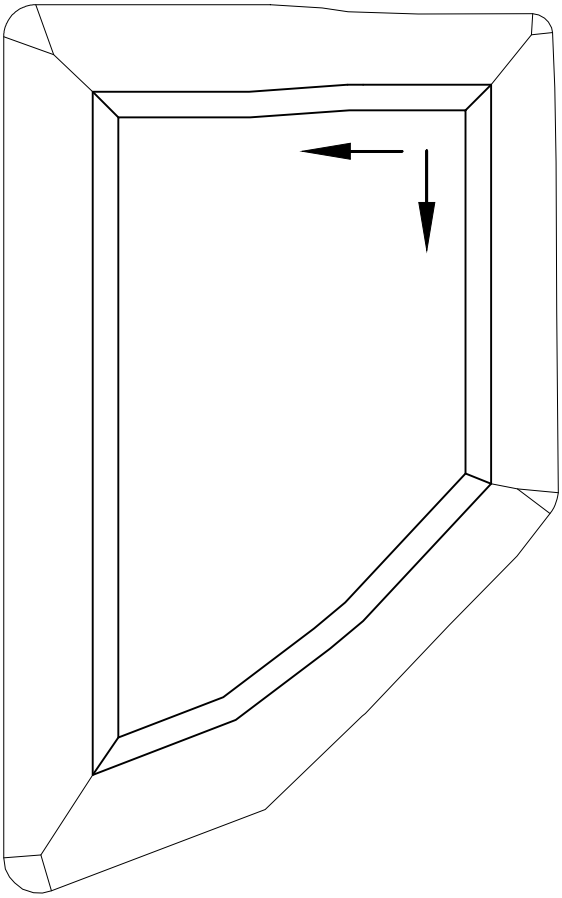
LIFTS 1 AND 2

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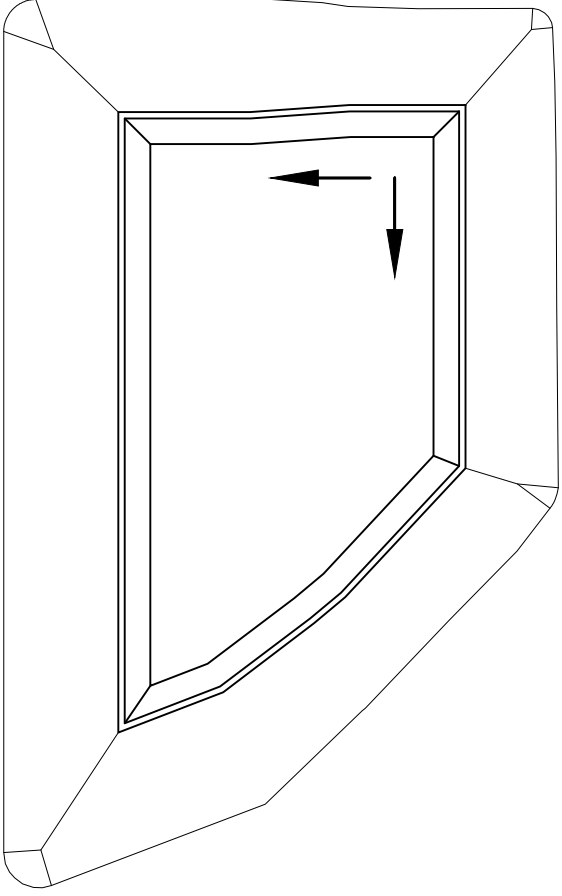
LIFTS 3 AND 4

NTS



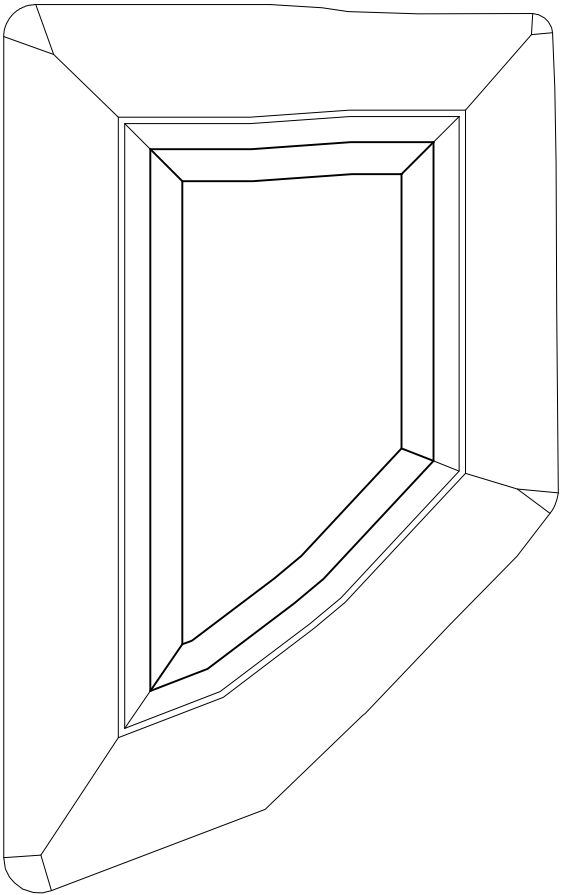
LIFT 5

NTS



LIFT 6

NTS



LIFT 7

NTS

FIGURE 7-2
CELLS SW-1 AND SW-2 FILLING SEQUENCE
WEST PASCO LANDFILL AND
RESOURCE RECOVERY FACILITY
PASCO COUNTY, FLORIDA

7.1.5 LIFT 7

1. Lift 7 will be an area fill over the SW-1 and SW-2 cells. Filling will generally begin in the northwest and will proceed from north to south in rows such that the lift is filled to the outer buildout grades. Once a row is complete, additional rows will be filled moving from west to east.
2. Lift 7 is approximately 10 feet thick and will be fill up to an elevation of 118 feet to account for the 3 feet of soil cover resulting in the final elevation of 122 feet.

7.2 SOLID WASTE INSPECTION

All Operators and Spotters are trained according to the requirements of Section 5.0. Pasco County Solid Waste maintains at a minimum one trained Spotter at the active working face during waste disposal operations. The Spotter (trained) is stationed where they can inspect each shipment of waste for unauthorized/prohibited waste before being compacted. The Spotter (trained) will be located on heavy equipment spreading the waste at the working face. Although this section is written to generally address Spotters on heavy equipment, Spotters trained on the ground may be used periodically if Equipment Operators are used that are not trained Spotters. Additionally, trained Operators may also serve as Spotters. Generally, two Operators are onsite available to assist at the active working face.

A Pasco County employee will direct incoming traffic to the appropriate area at the working face. If the Equipment Operator identifies unauthorized/prohibited materials, they will do one of the following as allowed by the Florida Administrative Code:

- Move the unauthorized waste away from the active area for later removal and proper management. These wastes will be moved to temporary storage points as addressed below as soon as ground labor is available (same day).
- Stop operation and notify another person on the ground or on other equipment who will come to the active area and remove the unauthorized waste before operations are resumed.

A Spotter or Operator is inspecting waste at all times when a waste-hauling vehicle is unloading. Waste materials such as white goods, and tires are pulled from the working face and placed in pick-up trucks or to the side away from traffic if the pickup truck is not close to the Spotter. To ensure the health and safety of the spotters, if tires are observed in the waste while the waste is being pushed, the tires will be staged at the end of the slope and picked up at the end of the day. Other landfill staff have been trained to be aware of materials that are prohibited from disposal in a Class I Landfill and to help identify and remove these materials as required.

If suspicious wastes are identified, the waste load is cordoned off and the Landfill Operations Supervisor is contacted. They will examine the suspicious waste and determine whether to accept or reject the load. Loads are rejected if they contain hazardous waste or prohibited material that cannot feasibly be separated from the rest of the load or when

separation would cause possible contamination such as the presence of liquids or powders that cannot be removed from the landfill once the load is dumped. If the waste material is determined to be an unacceptable waste, the hauler is contacted and asked to remove the waste themselves from the waste stream. All incidents of attempted unauthorized waste disposal will be documented and maintained in the Administration Office.

Scavenging and salvaging by the employees or the public are strictly forbidden at the landfill for the safety of everyone at the landfill. Employees have been informed of this prohibition.

7.3 HAULER QUEUING

The Pasco County employees (who may be trained Spotters) at each working area shall control the number of vehicles allowed at that working face to afford comfortable maneuverability. Additional vehicles will be held at a distance from the working face to allow existing vehicles sufficient room to maneuver and unload.

Unloading vehicles should be spaced adequately to allow the crews sufficient space to work safely. For their own safety, vehicle crews are not permitted to wander from their vehicle for any reason. As vehicles leave the working face, the next vehicle is directed to a vacant unloading area. Pasco County employees move traffic into and out of the working face as quickly as possible while maintaining safe working conditions.

The trained Landfill Equipment Operators or Spotters inspect all loads discharged from the unloading vehicles, remove all unacceptable wastes, and spread the waste as soon as the vehicle moves. Another vehicle is permitted to unload its waste load in an area only after the previous waste load has been inspected, the prohibited wastes have been removed, and the load has been moved to the working face for compaction.

7.4 WASTE PLACEMENT AND COMPACTION

The active face width will be kept as small as practical to accommodate waste delivery vehicles. The actual working face width may vary depending on the daily vehicle traffic volume. The maximum width of the active face will be maintained at approximately 250 feet. Landfill Management may consider expanding the size of the working face if the backup of waste vehicles become too large.

For health and safety reasons and due to weather, fill-sequencing two working faces may be necessary to accommodate traffic in some situations. This second working face will be bermed and use the same traffic area. This area will be in the immediate vicinity of the Primary Active Area. Given the limited use of the Solid Waste cells, the use of two working faces is unlikely.

Solid waste shall be formed into horizontal lifts to construct cells. The working face of the cell and side grades above land surface shall be at a slope no greater than 3 feet horizontal to 1 foot vertical rise (3H:1V). Normal lift depths should not exceed 20 feet of compacted

solid waste. However, during initial filling of the bottom lift of waste or when completing the last lifts in a phase, larger depths may be necessary.

7.5 COVER MATERIALS AND METHODS

All soil used for daily, intermediate, and final cover over the required impervious cover or synthetic liner required for closure consists of material excavated from the landfill property, other County-owned lands, or purchased from offsite sources.

7.5.1 INITIAL DAILY COVER

At the end of each working day, a compacted 6-inch layer of soil (daily cover) shall be placed over the working face to control odor, litter, fires, and vector control. Pasco County will use Alternative Daily Cover (ADC) in place of soil for daily cover, such as plastic tarps, Posi-Shell or other FDEP-approved materials, to extend the life of onsite soil sources. This includes a 50% soil and mulch mixture. Posi-Shell or mulch may also be utilized to stabilize erosion of covered side slopes as necessary.

Daily cover material is applied in a manner that prevents wasting material or exposing wastes. In areas where the initial waste layer is being installed or the lift is near the side slope, daily cover shall be applied from the top down the face of the fill cell. Inner slopes or plateaus are covered from the top or bottom depending on working conditions.

Throughout the day, cover soil and mulch may be delivered to the active area and spread when possible to reduce the area needing cover at the end of the working day. Additional landfill equipment is used to transport cover soil to the working face area. A dozer is used to spread the cover soil and compact it over the working face. Pasco County maintains excavating equipment and off-road dump trucks to perform this work.

7.5.2 INTERMEDIATE COVER/TEMPORARY COVER

Intermediate cover consisting of 12 inches of soil will be placed on areas that are not expected to receive additional wastes within 180 days. This intermediate cover is in addition to the 6-inch initial cover required. When an ADC is used in lieu of the 6-inch initial soil cover, the intermediate cover shall be 18 inches thick. Before additional wastes are placed in areas previously covered with intermediate cover, the intermediate cover will be removed and stockpiled adjacent to the active face to use as daily cover.

7.5.3 FINAL COVER

Cell closure will begin immediately after final receipt of waste, when all grades have reached their final elevations. Final cover and seeding or planting of vegetative cover will be fully described in a separate Application for Landfill Closure Permit.

7.6 SPECIAL WASTE RECOVERY

Special wastes prohibited from disposal in the Class I Landfill are addressed in Section 4.2. Small amounts of special and hazardous wastes may be contained within a load of refuse

unloaded from a vehicle. While spreading the wastes onto the working face from a discharged load, the Spotters/Equipment Operators will be looking for special and hazardous wastes, which will be removed from the discharged load before being compacted into the landfilled waste. These prohibited waste materials will be placed to the side of the working face, in pick-up trucks, or 20-yard bins that are away from vehicle traffic. The materials collected in the bins and pick-up trucks will be removed from the site daily.

Spotters/Equipment Operators will remove items such as white goods and tires more frequently throughout the day if a stockpile accumulates. These materials are taken to the white goods and tire storage areas within the Solid Waste Complex.

Operators are to be aware of containers that could contain prohibited hazardous wastes. These containers include the following:

- 55-gallon drums.
- 5-gallon chemical drums or paint containers.
- Marked medical wastes.
- Small containers of paints or pesticides and other HHWs.

As discussed in Section 4.2, these non-allowed wastes are isolated and the Landfill Operations Supervisor will be contacted for closer inspection. The vehicle will be detained until the material is identified for proper disposal. If the material is identified as a hazardous waste, it is loaded back into the hauler vehicle for proper disposal, if practical. Otherwise, the area should be cordoned off to prevent other loads from being dumped in the vicinity. The Solid Waste Director will contact a contracted hazardous waste hauler. The identified hazardous waste will be loaded onto this vehicle as soon as it arrives at the landfill. All identified hazardous wastes must be removed the same day they are identified or stored in the Household Hazardous Waste Area if transportation cannot occur until the next working day.

7.7 LITTER CONTROL

Litter fences will typically be used near the active cells and working face to collect and prevent the spread of litter. Due to the shifting waste operations, fences may periodically not be in place. Litter that escapes the landfill working area shall be picked up by the end of the working day but no later than the next working day. The Landfill Operations Manager or Landfill Construction/Lead Operator inspects the normal traffic areas surrounding SW-2 daily when the cell is in use. The operational boundaries of the entire Solid Waste Complex are inspected weekly.

Pasco County staff will collect litter continually on windy days. Temporary labor may be used as needed to support County staff for litter control if the volume of litter becomes too much for existing staff. The use of trustees and community service workers is also available as needed.

All open vehicles delivering waste to the Pasco County Solid Waste Complex must have a tarp or some type of enclosure to prevent litter on the site as well as all roads within the

County, as required by Florida law. All open-top vehicles entering the Complex without a tarp or enclosure will be informed by the Scalehouse Attendant that a tarp or enclosure is required to transport solid waste within the County.

8.0 SPECIAL WASTE MANAGEMENT

8.1 HOUSEHOLD HAZARDOUS WASTE

Household hazardous waste (HHW) is accepted for disposal at the HHWCF north of the Class III Landfill (see **Figure 1-1**). This facility is operated for Pasco County residents Monday through Saturday, 7:00 A.M. to 5:00 P.M.

The personnel at the facility manage a diverse range of HHWs according to the characteristics of each waste. All personnel at the HHW are 40-hour HAZWOPER-certified and receive 8-hour refresher courses annually. The facility is capable of accepting and managing nearly any waste produced in a household including oils, paints, solvents, fertilizers, pesticides, herbicides, fluorescent tubes, oxidizers, and propane. However, explosive, radioactive, and bio-hazardous materials like hypodermic needles, lancets, and wound dressings are not accepted for disposal at the HHW.

At the HHW, personnel only accept materials for disposal from households within Pasco County. Wastes from Conditionally Exempt Small Quantity Generators (CESQGs) may be accepted under specific circumstances, such as a special business waste collection event. However, if a customer has an especially large amount of waste, if they have numerous containers of a particular brand of product, or if the waste they have brought for disposal is typically produced by a business, the customer will be asked additional questions. These questions may include, but are not limited to, what the product was used for.

Once collected, wastes are disposed of using a hazardous waste transporter and delivery to treatment, storage, and disposal facilities (TSDFs) operating under a permit issued pursuant to Subtitle C of the Federal Resource Conservation and Recovery Act (RCRA) and issued by the U.S. Environmental Protection Agency (USEPA) or an authorized state.

All packaged materials are shipped by a licensed hazardous waste transporter every 60 days to a fully permitted TSDF as defined in 40 CFR 264. No waste remains at the HHWCF for more than 120 days.

8.2 UNKNOWN AND UNMARKED WASTES

If containers accepted for disposal are unmarked, have illegible labels, or have contents that do not resemble their labels, the customer is questioned about the purchase and use of the material to determine its waste characteristics (i.e., flammability, reactivity [oxidizers], toxicity, or corrosivity). Many household products have uniquely shaped containers to help determine their use and waste characteristic. Materials are further grouped according to physical appearance (e.g., solid, liquid, color, viscosity etc.). The unknown material is then stored in chemical storage lockers with blast-proof doors. Ultimately, Pasco County uses their Hazardous Waste Contractor to identify waste types before bulking or lab packing the material for disposal.

Liquids suspected of being acidic or basic are tested using pH paper. Smelling a container to determine its contents is forbidden at the HHW. However, most poisons, petroleum products, and some cleaners have strong, distinct aromas that are detectable simply by opening their container. Any HHWs that are found to be potentially reactive by these tests are stored separately from antagonistic chemicals (e.g., acids are stored in the locker marked "Corrosive"). The caustic materials are stored in the "Corrosive" locker. Flammable liquids must be kept away from oxidizers, so they are stored in the "Flammable" locker while the oxidizers are stored in the "Corrosive" locker. Regardless of the results of these tests, all collected materials are stored at the HHW until they have been prepared for reuse or disposal. Any material determined to be reactive is stored in a locker with fire suppression and blast-proof doors. If material in unlabeled drums can be identified, it will be bulked with compatible material.

8.3 USED OIL

Used motor oils, hydraulic fluids, transmission fluids, and similar petroleum lubricants are consolidated into 55-gallon drums. The Used Oil Contractor is responsible for testing for the halogen content in these materials when they are collected. The drums are removed by a contracted Used Oil Contractor. Used oil is not permitted to be disposed of in the Class I Landfill.

8.4 LATEX PAINTS

The HHW uses a wire rack to store 1- and 5-gallon paint cans. These racks are typically capable of holding about 60 cans of paint. Approximately two-thirds of the paint that arrives at the HHW is latex-based. Useable latex paint is opened and consolidated into 5-gallon buckets. This paint is given to citizens of Pasco County.

Paint that is not suitable for give-away is combusted at the Resource Recovery Facility.

8.5 OIL BASED PAINTS

The HHW uses wire racks to store 1- and 5-gallon paint cans. These racks are typically capable of holding about 60 cans of paint. Approximately one-third of the paint that arrives at the HHWCF is oil-based. Useable oil-based paint is consolidated into 5-gallon buckets. This paint is given to citizens of Pasco County. Paint that is unusable is bulked into 55-gallon drums for disposal. A hazardous waste transporter moves the filled drums to a fully permitted TSDF for proper disposal.

8.6 POISONS

Herbicides and pesticides are the largest group of poisons that are accepted at the HHW. They are prepared as "combination packages" or "lab packs" for disposal by the Hazardous Waste Contractor. Small individual containers are placed with similar wastes into a larger container (5-gallon bucket or 55-gallon drum) with Vermiculite to provide shock absorption and hold any liquids that may escape during shipment. The material is moved by a hazardous waste transporter to a fully permitted TSDF for proper disposal. A few specialized

wastes such as pentachlorophenol and arsenic compounds are packed by and managed separately by the Hazardous Waste Contractor. These specialized wastes are shipped by a hazardous waste transporter to a fully permitted TSDF in the same way that the lab packs are. However, they are subject to different treatment standards.

8.7 LEAD ACID BATTERIES

Lead-acid batteries are stacked on wooden pallets. The stacked batteries are then shrink wrapped onto the pallets and stored on a large containment pallet inside the HHW. The containment pallet has enough room to store three wooden pallets and have room for other products. The wooden pallets are picked up by a Lead-Acid Battery Contractor for recycling.

8.8 ELECTRONICS RECYCLING

Electronics waste, including televisions, VCRs, computer towers, monitors, digital cameras, and PDAs are collected and stored at the HHW for recycling. Electronics wastes are stored and managed in a manner that prevents breakage. The e-waste is stored in enclosed roll-off containers and transported to an electronics recycler.

8.9 CONTAMINATED SOILS

Pasco County will accept minor amounts of contaminated soils for disposal in SW-2. Soil that has been contaminated with petroleum products or any other materials that are not hazardous wastes may be disposed of in permitted Class I landfills. Petroleum-contaminated soil that has been treated pursuant to Chapter 62-713, FAC may be disposed of at permitted disposal facilities and may, if it meets the criteria of Rules 62-701.200 (53) and (55), FAC, be used as initial or intermediate cover material at solid waste disposal facilities. Contaminated soil that has the potential to leach constituents in excess of FDEP groundwater standards or criteria may be used only at Class I landfills and only in those areas of the landfill where runoff or infiltration is captured by the leachate collection system.

8.10 BIOLOGICAL WASTES

Bodies of captive wildlife, as well as bodies of domestic animals that have not died due to disease, may be disposed of in the SW cells of the Class I Landfill.

Disposal of bodies of domestic animals, after death due to natural or accidental causes or euthanasia, shall be accomplished according to Section 823.041(1), FS. This statute requires the disposal of the bodies of domestic animals by burning or burying at least 2 feet below the ground surface. This provision does not prohibit the disposal of such animals in Class I landfills.

Disposal of dead poultry and hatchery residue shall be accomplished according to Section 583.181(2), FS, which provides for disposal of dead poultry and hatchery residue by every poultry producer, egg producer, and poultry hatchery in Florida. The statute includes disposal of the dead poultry and hatchery residue in a sanitary landfill as an acceptable

method of disposal. Furthermore, the transporter of the poultry or hatchery residue will transport the material in containers that are sufficiently sealed to prevent spillage.

Treated biomedical waste (i.e. autoclaved waste) is not accepted at the Class I landfill but is accepted at the Resource Recovery Facility. Biomedical waste that has been treated may be disposed of as solid waste that is not biomedical. Such treated waste must be in containers clearly labeled with the phrase "Treated Biomedical Waste." The local governments that are responsible for solid waste collection and disposal shall be notified that treated biomedical waste will be disposed of in their facility before such disposal. All transport vehicles transporting treated biomedical waste to a solid waste facility for disposal shall be fully enclosed and secured when unattended. Treated biomedical waste shall be disposed of only at permitted Class I landfills or incinerators used to combust solid waste.

8.11 TIRES

Segregated tires that are brought to the Facility are stored and processed in a Waste Tire Processing Area just north of the Class III Landfill. A chipping contractor is brought in approximately every six months to process the tires, which are then hauled to a permitted off-site disposal facility.

8.12 WHITE GOODS

White goods are removed from the site at least every 3 months. White goods containing chlorofluorocarbons (CFCs, such as Freon) are stored upright and managed carefully so that CFCs are not discharged to the atmosphere. White goods with the refrigerant removed are marked as such. Because Freon is extracted from all units, the compressors are not removed. Other scrap metals, such as lawnmowers, are processed (by removing tires, oil, and gasoline, as needed) and compacted with the white goods into 40-cubic-yard containers.

8.13 MERCURY-CONTAINING LAMPS AND DEVICES

Fluorescent and Mercury-Containing Lamps are collected and packaged into cardboard boxes designed to prevent breakage. These boxes are stacked into wooden pallets, secured with shrink-wrap for storage at the HHW. Mercury-Containing Devices are collected and deposited into air-tight 5-gallon HDPE containers to prevent breakage and the release of mercury vapors and stored inside the HHW.

Both Mercury-Containing Lamps and Mercury-Containing Devices containing elemental mercury are picked up for recycling and/or disposal by a Universal Waste Contractor fully permitted to transport and dispose of universal wastes.

9.0 LEACHATE MANAGEMENT

As defined in Rule 62-701.200 (59), FAC, leachate is liquid that has passed through or emerged from solid waste and may contain dissolved, suspended, or mixed materials. Leachate must be contained and kept separate from any groundwater or surface waters. This section will provide Pasco County Solid Waste employees with a general understanding of the requirements for managing the leachate generated from the Class I (Ash and Solid Waste) Landfill operations. **Figure 9-1** identifies all locations for the leachate collection system. Rule 62-701.500(8) FAC establishes requirements for leachate management and provides the criteria for this section.

9.1 LEACHATE REDUCTION

Leachate is generated from rainfall that is absorbed into the landfill and water within the waste at the time of disposal. The leachate is collected by the Class I Landfill bottom liner system and treated as wastewater. One of the goals of the landfill design and daily operation is to minimize leachate production from the landfill to reduce the cost associated with leachate treatment and to minimize the potential environmental contamination risks. The methods described in this section can be used separately or simultaneously to achieve leachate reduction.

9.1.1 RAIN COVERS

In addition to the leachate/stormwater separation intrinsic to the design of the A-4 and SW-2 cells, Pasco County may use rain covers (or tarpaulins) to minimize leachate generation. Areas of the landfill that will not be utilized for at least 180 days may be covered with a 20-mil geomembrane and anchored using tires. Stormwater that collects on the rain cover in areas utilizing this technique is managed as non-contact stormwater, which discharges to the perimeter stormwater ditch.

9.1.2 STABILIZED SIDESLOPES

As filling progresses, side slopes that will not receive solid waste for 2 months or more will be stabilized with sod, seed and mulch, or rain covers. Exterior side slopes that are up to design grade and interior side slopes that will not be filled again for longer than 180 days will be covered with either intermediate cover and sod or a rain cover.

9.1.3 CLOSING

Pasco County Solid Waste plans to achieve an effective runoff factor of at least 30% and will work toward a goal of 50% or more upon final closure in the Class I Landfill. The methods described above represent the present plan; however, as operations continue, they may be modified if alternate methods prove more efficient or allow a higher percentage of stormwater runoff resulting in greater leachate minimization.

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Note: THIS FIGURE IS NOT TO SCALE AND THE LOCATIONS OF SOME ITEMS HAVE BEEN EXAGGERATED FOR CLARITY

9.2 LEACHATE COLLECTION

The leachate collection system encompasses the Ash Monofill (Cells A-1, A-2, A-3, and A-4) and the Solid Waste Landfill (Cells SW-1 and SW-2). Monitoring the collection, pumping and storage components occurs daily, Monday through Friday. All of these phases have been included in this Operation Plan.

9.2.1 ASH MONOFILL CELL A-1

Cell A-1 of the Ash Monofill is the original cell of the landfill constructed in 1990. It is approximately 10 acres in size and received ash between approximately 1990 and 1995. The cell was constructed with a double liner system, with intrinsic leachate removal systems for both liners (primary and secondary).

Leachate in the cell is collected by perforated laterals running north-south which drain to a 12-inch PVC leachate header pipe that runs (east to west) on the southern perimeter of the cell. The leachate collection pipes (primary and secondary) penetrate the liner(s) and discharges into one of two leachate manholes on the east side of the cell, one for the primary leachate collection system and one for the secondary leachate collection system. Leachate from the secondary liner is allowed to accumulate in the metering manhole and is periodically pumped (and metered) into the primary manhole. Leachate drains from the metering manholes by gravity to a pump station adjacent to the metering manholes. From the pump station, leachate is pumped to a 2,000,000-gallon concrete storage tank for eventual disposal off-site.

9.2.2 ASH MONOFILL CELL A-2

Cell A-2 was constructed circa 1995 and is of a similar configuration to that of Cell A-1. The leachate collection system for Cell A-2 was modified circa 2000 from its original design by converting the leachate evacuation method from a pumped principle to a gravity principle. The original design and construction of the cell directed leachate from the primary liner system and the secondary liner system to headers running east-west along the northern perimeter of the cell. The headers discharged into a sump in the northeast corner of the cell, and the accumulated leachate was pumped through a side-slope riser pipe to the pump station located adjacent to cell A-1. In 2000, the side slope riser pumping system was abandoned, and new gravity pipes with liner penetrations (one for leachate collected by the primary liner and one for leachate collected by the secondary liner) were installed and directed to new leachate metering manholes. As with Cell A-1, leachate flows by gravity from the metering manholes to the master pump station adjacent to A-1. From the pump station, leachate is combined with the leachate from Cell A-1 and pumped to a 2,000,000-concrete storage tank for eventual disposal off-site.

9.2.3 ASH MONOFILL CELL A-3

Cell A-3 was constructed circa 2003 and is of a similar configuration to cell A-1. It is approximately 10 acres in size and received ash between approximately 2003 and 2008.

The cell was constructed with a double liner system, with intrinsic leachate removal systems for both liners (primary and secondary).

Leachate in the cell is collected by perforated 8-inch PVC leachate header pipes that run (east to west) on the interior of the cell. The leachate collection pipes (primary and secondary) penetrate the liner(s) and discharges into one of two leachate manholes on the east side of the cell, one for the primary leachate collection system and one for the secondary leachate collection system. Leachate from the secondary liner is allowed to accumulate in the metering manhole and is periodically pumped (and metered) into the primary manhole. Leachate drains from the metering manholes by gravity to a pump station adjacent to cell A-1. From the pump station, leachate is combined with the leachate from Cells A-1 and A-2 and pumped to a 2,000,000-gallon concrete storage tank for eventual disposal off-site.

9.2.4 ASH MONOFILL CELL A-4

Cell A-4 was constructed circa 2008 and currently serves as the active ash disposal cell for the landfill. It is approximately 20 acres in size and has been receiving ash since 2009. The cell was constructed with a double liner system, with intrinsic leachate removal systems for both liners (primary and secondary).

Leachate in the cell is collected by perforated laterals running north-south which drain to four 12-inch PVC leachate header pipes that run (east to west) on in the interior of the cell. The leachate collection pipes (primary and secondary) penetrate the liner(s) and discharges into one of two leachate holding tanks on the west side of the cell, one for the primary leachate collection system and one for the secondary leachate collection system. Leachate drains from the holding tanks by gravity to a pump station adjacent to the holding tanks. From the pump station, leachate is pumped to a 2,000,000-gallon concrete storage tank for eventual disposal off-site.

9.2.5 SOLID WASTE CELL SW-1

Cell SW-1 of the Solid Waste Landfill is the original cell of the landfill constructed in 1990. It is approximately 10 acres in size and received waste between approximately 1990 and 1998. The cell was constructed with a double liner system, with intrinsic leachate removal systems for both liners (primary and secondary).

Leachate in the cell is collected by perforated laterals running north-south which drain to an 8-inch PVC leachate header pipe that runs (east to west) on the southern perimeter of the cell. The leachate collection pipes (primary and secondary) penetrate the liner(s) and discharges into one of two leachate manholes on the east side of the cell, one for the primary leachate collection system and one for the secondary leachate collection system. Leachate from the secondary liner is allowed to accumulate in the metering manhole and is periodically pumped (and metered) into the primary manhole. Leachate drains from the metering manholes by gravity to a pump station adjacent to the metering manholes. From the pump station, leachate is pumped directly to the adjacent Shady Hills Wastewater Treatment Facility.

9.2.6 SOLID WASTE CELL SW-2

Cell SW-2 of the Solid Waste Landfill was constructed circa 2001. It is approximately 10 acres in size and has been receiving waste since 2002. The cell was constructed with a double liner system, with intrinsic leachate removal systems for both liners (primary and secondary).

Leachate in the cell is collected by perforated laterals running north-south which drain to an 8-inch PVC leachate header pipe that runs (east to west) on the southern perimeter of the cell. The leachate collection pipes (primary and secondary) penetrate the liner(s) and discharges into one of two leachate manholes on the east side of the cell, one for the primary leachate collection system and one for the secondary leachate collection system. Leachate from the secondary liner is allowed to accumulate in the metering manhole and is periodically pumped (and metered) into the primary manhole. Leachate drains from the metering manholes by gravity to a pump station adjacent to the metering manholes. From the pump station, leachate is pumped directly to the adjacent Shady Hills Wastewater Treatment Facility.

9.3 ASH LEACHATE STORAGE TANK

As described above, leachate that is collected in the ash disposal cells is pumped to a 2-million gallon concrete storage tank located to the south of cell A-3. From the pump station, the leachate flows through a 6" PVC forcemain, through a totalizing meter, and into the storage tank. The tank has a 100-foot interior diameter and is 34 feet tall (excluding the domed roof). Each foot of depth in the tank holds approximately 60,000 gallons.

9.3.1 TANK INSPECTIONS

Pasco County staff visually inspect the exterior of the tank weekly. The inspector will look for any structural damage to the tank, damage to the coating system, loose connections, visible leaks, and maintenance deficiencies. The inspector also looks for any structural damage to the secondary containment system (described below) and visible leaks.

The interior of the tank is inspected at least once every 3 years. During an interior inspection, the inspector looks for any damage to the interior two-part epoxy coating system, structural damage or cracking of the tank, and/or visible leaks.

If inspections reveal any deficiencies with the interior and/or exterior of the tanks that could result in the system failing to contain leachate, Pasco County will take immediate action to remediate the situation. The tank manufacturer (Crom Corporation), coordinating with Pasco County, will handle failures or damage to the tank. Pasco County will immediately notify the manufacturer of the situation; the tank manufacturer will perform a detailed damage assessment report and remediation of the tank. FDEP will be immediately notified in writing by Pasco County of the situation and of the proposed corrective action for significant deficiencies that require more than 48 hours to repair.

9.3.2 SECONDARY CONTAINMENT SYSTEM

The secondary containment design includes a bermed area lined with 60-mil HDPE geomembrane. This area is designed to provide 2,200,000 gallons of storage capacity or 110 percent of the tank volume. Two feet of freeboard is provided at the maximum design capacity. The containment area liner material is high density polyethylene (HDPE), which is compatible with the leachate. The liner is continuous under the storage tank slab, separated by a soil drainage layer for protection of the liner.

The secondary containment area is designed with a 12-inch drain line which discharges to a stormwater swale leading to stormwater retention pond No. 1. The 12-inch discharge line is designed to discharge up to 5.4 cubic feet per second (cfs). This rate is equal to the accumulation rate of a 25-year/24-hour storm event at the point in time when 10 percent of the secondary containment volume has accumulated.

A valve is also provided on the gravity discharge line for the secondary containment system. The valve will normally remain closed. Within 24 hours of any significant rainfall accumulation, Stormwater collected in secondary containment will be visually inspected to determine if the stormwater has been contaminated. Signs of contamination include the following:

- An oily sheen on the surface of the liquid.
- A dark or nontransparent appearance of the liquid.
- An excess of suspended solids in the liquid.
- An odor coming from the liquid.

If no contamination is noted, the valve will be opened to discharge the accumulated stormwater. Once the stormwater is drained from the secondary containment area, the valve will be closed by the operator. If it is contaminated, the stormwater will be treated as leachate and pumped to the storage tank.

9.4 ASH LEACHATE DISPOSAL

Once produced, leachate must be disposed of. Disposal of leachate generated by the ash disposal cells is achieved by loading leachate onto tanker trucks and hauling it to a WWTP for treatment. Leachate is normally loaded into tanker trucks from a dedicated pump station located adjacent to the 2-million-gallon storage tank, but can also be loaded from different areas (such as the metering manholes or the pump station sump) as needed based on the conditions at the site. The primary disposal mechanism for leachate generated from the ash monofill is the City of Tampa's Howard F. Curren Wastewater Treatment Facility. Pasco County maintains a contract with the City of Tampa for leachate disposal rights at the wastewater treatment plant. If changes in the facility receiving leachate occur, FDEP will be notified.

In 2019, Pasco County initiated construction of a Class V exploratory well to investigate the feasibility of leachate disposal by way of underground injection. The Class V well will be converted to a Class I well upon completion in August 2022 and will be capable of disposing

approximately 1 million gallons per day (MGD) of leachate from the ash cells. Prior to underground injection, the leachate will be treated by pH adjustment and filtration then pumped through a 6" HDPE forcemain from the storage tank to the well. During periods when the well is unavailable for disposal (such as periodic capacity testing), the leachate will be hauled to the Howard F. Curren Facility.

9.5 SOLID WASTE LEACHATE DISPOSAL

Leachate collected by the leachate collection systems serving Cells SW-1 and SW-2 is pumped directly to the adjacent Shady Hills Wastewater Treatment Plant, owned by Pasco County, for disposal. An intra-Department account has been established to charge Solid Waste for the amount of leachate delivered to the wastewater plant.

9.6 LEACHATE MONITORING, DATA COLLECTION, AND REPORTING

Rule 62-701.500(8)(f), F.A.C. requires that the quantity of leachate collected by the leachate collection and removal system be recorded in gallons per day before on-site treatment and transport off-site. To accurately record the amount of leachate collected, Pasco County utilizes in-line magnetic flow meters on the discharge side of the three pump stations (the first serving A-1, A-2, and A-3; the second serving A-4; and the third serving SW-1 and SW-2). Each of the flow meters totalizes the volume of leachate (in gallons) passing through the respective leachate transmission pipeline. On a daily basis (Monday through Friday), an Operator records the totalized value and the time of day that the reading was recorded. The records are compiled on monthly basis into a spreadsheet and submitted semi-annually to the FDEP.

Separate from the flow measuring requirements of 62-701.500(8)(f) is an obligation to monitor the effectiveness of the liner systems serving each of the individual cells. Pasco County accomplishes this by separately collecting leachate generated off of the secondary liner system(s). Anything but a trivial amount of leachate collected off of a secondary liner system could indicate a possible breach (or other problem) of the primary liner. On a daily basis, Pasco County operators inspect the metering manholes for all of the secondary liner systems. Anything more than a small amount of leachate collected in a secondary liner metering manhole is immediately reported to the Solid Waste Manager.

9.7 LEACHATE SYSTEM MAINTENANCE

Leachate flow rates from the pump stations are observed at least weekly. An extremely low (or high) flow rate, when compared to recent flow rates, may indicate a problem with the leachate-collection system. This problem could be a malfunction with pumps or its instrumentation controls. The problem could also be a blockage in or a collapse of the leachate-collection pipe. If a block is suspected, Pasco County will hire the services of a jet-cleaning and video-inspection company. An emergency purchase order for jet-cleaning and/or video-inspection of the leachate collection lines can be prepared as soon as an inspection is determined to be required. Pasco County expects that an emergency purchase order can be approved and a contractor can be hired within a maximum of 1 month. The jet-cleaning and video-inspection company will first jet-clean the pipes from the clean-outs

and then video-inspect the pipes from the same clean outs. If major problems within the system are found, Pasco County will propose a remedial action plan and submit it to FDEP for approval before beginning the remedial work.

In accordance with 62-701.500(8)(h), FAC water pressure cleaning or video recording inspection is conducted at least once every five years.

9.8 LEACHATE CONTINGENCY PLAN

9.8.1 LEACHATE PUMPS, HAULING, AND FLOW METERS

If all pumps (onboard vehicle pump, storage tank transfer pumps, and leachate wet well pumps) fail, portable pumps are available from other County Departments. In addition, a rental transfer pump can be obtained from a local rental source.

If the sewer discharge pipeline is not functioning (for the Solid Waste cells) and the existing hauling contractor is unable to transport the leachate offsite (for the Ash Cells), an emergency can be declared to select another hauler so that unnecessary delays caused by bidding and selection can be prevented.

If the primary flow meter (the compliance meter) ceases to operate for either the Solid Waste cells or the Ash cells, contracted maintenance personnel will remove the instrument and insert a spare flow meter supplied by Pasco County Water & Wastewater. The faulty instrument will be shipped to the service representative or manufacturer to repair or replace.

9.8.2 ELECTRICAL POWER FAILURE

The leachate collection and leak detection metering manholes that receive leachate from all primary and secondary leachate collection systems are all gravity based and do not require electrical power. However, the pump stations that evacuate the manholes require electrical power. In the event of a prolonged electrical outage, back-up generators will be brought in to operate the leachate collection pump stations.

If electrical power is not available at the ash monofill tanker loadout station, leachate can be pumped from the Crom tank directly into tankers using the onboard vehicle pumps or a portable 3-inch pump or an electrical generator can be provided to supply backup power to the pump station. Backup generators are available from Pasco County Public Infrastructure.

9.8.3 LEACHATE TREATMENT CONTINGENCY

If the primary disposal facilities (City of Tampa for ash leachate and Shady Hills for solid waste leachate) are unable to accept the leachate, Pasco County will implement a contingency plan consisting of hauling the leachate to an industrial disposal facility or another treatment facility for disposal. Pasco County retains one or more vendors who can haul leachate off-site for disposal. If leachate is determined to be hazardous, it will be

managed in accordance with the requirements of Rule 62-730, FAC, for hazardous waste generators and transporters.

10.0 SURFACE WATER MANAGEMENT

The Class I Landfill utilizes two surface water drainage areas as shown on **Figure 10-1**. The ponds have been sized to accommodate surface water runoff from the entire landfill at buildout and are at this time largely over-sized. Surface water flowing from the landfill drains to perimeter swales that discharge to the large retention ponds east of the landfill. Stormwater modeling indicates that any runoff that will overflow the ponds will travel essentially along the natural drainage paths that existed pre-development to undeveloped depressional areas west of the power line easement. However, because the retention pond capacity is largely underutilized at this time, overflow from the ponds is not expected to occur.

Drainage ditches have been constructed adjacent to the operating landfill cells and the closed landfill areas. These drainage ditches lead to the surface water ponds described above. These ditches are designed to receive the stormwater runoff from the landfill cells, paved areas and roads for collection and infiltration (and/or evapotranspiration) in the ponds.

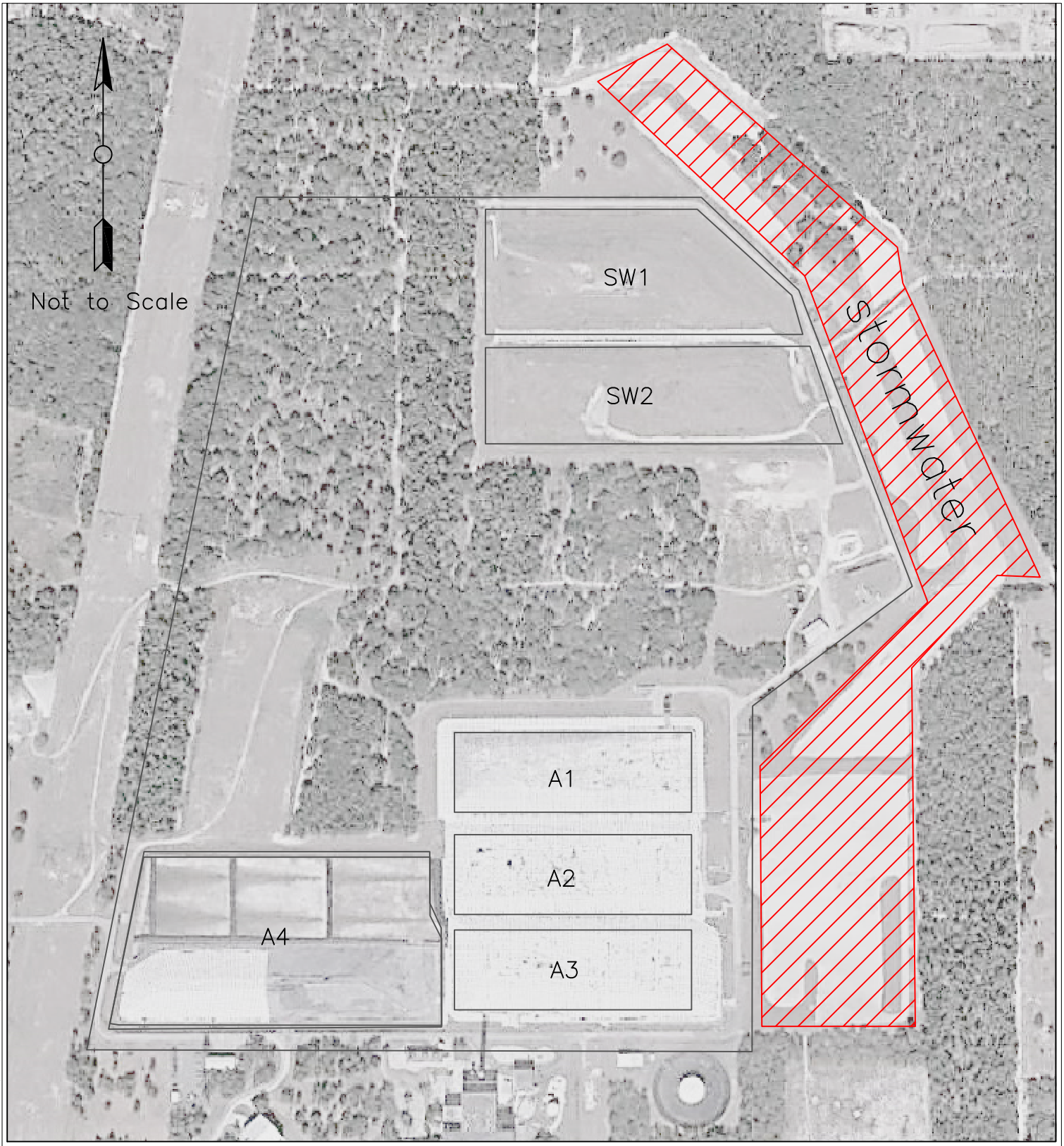
10.1 STORMWATER SYSTEM MAINTENANCE

The following maintenance activities are performed as needed on an appropriate frequency to ensure the proper collection, conveyance, and disposition of surface waters associated with the Class I Landfill:

- All conveyance swales and ditches on the project site will be kept cleared of dense vegetation, debris, and trash that would impede the flow of stormwater runoff.
- All disturbed areas, swales, and basin side slopes that do not have living grass to prevent erosion will be sodded or seeded and mulched.
- All culverts that are damaged thereby inhibiting design flow rates will be cleaned, repaired, or replaced.
- The ditches, side slopes, and stormwater pond side slopes and berms will be mowed and kept clear of vegetation that would impede the discharge or receiving of stormwater.

In accordance with Rule 62-701.500(7)(k), F.A.C., the landfill will repair within 3 days erosion that causes waste to be exposed or the stormwater management system to malfunction. If the major erosion cannot be repaired within 7 days, the Pasco County will notify FDEP and propose an erosion correction schedule for the repairs.

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Note: THIS FIGURE IS NOT TO SCALE AND THE LOCATIONS OF SOME ITEMS HAVE BEEN EXAGGERATED FOR CLARITY

11.0 LANDFILL GAS MANAGEMENT

Because the solid waste disposal cells SW-1 and SW-2 are relatively small and are intended to be utilized infrequently, there is no active landfill gas management associated with them. In addition to a series of passive vents, Pasco County maintains a robust landfill gas monitoring program to ensure that landfill gas does not migrate laterally. The monitoring program is described below.

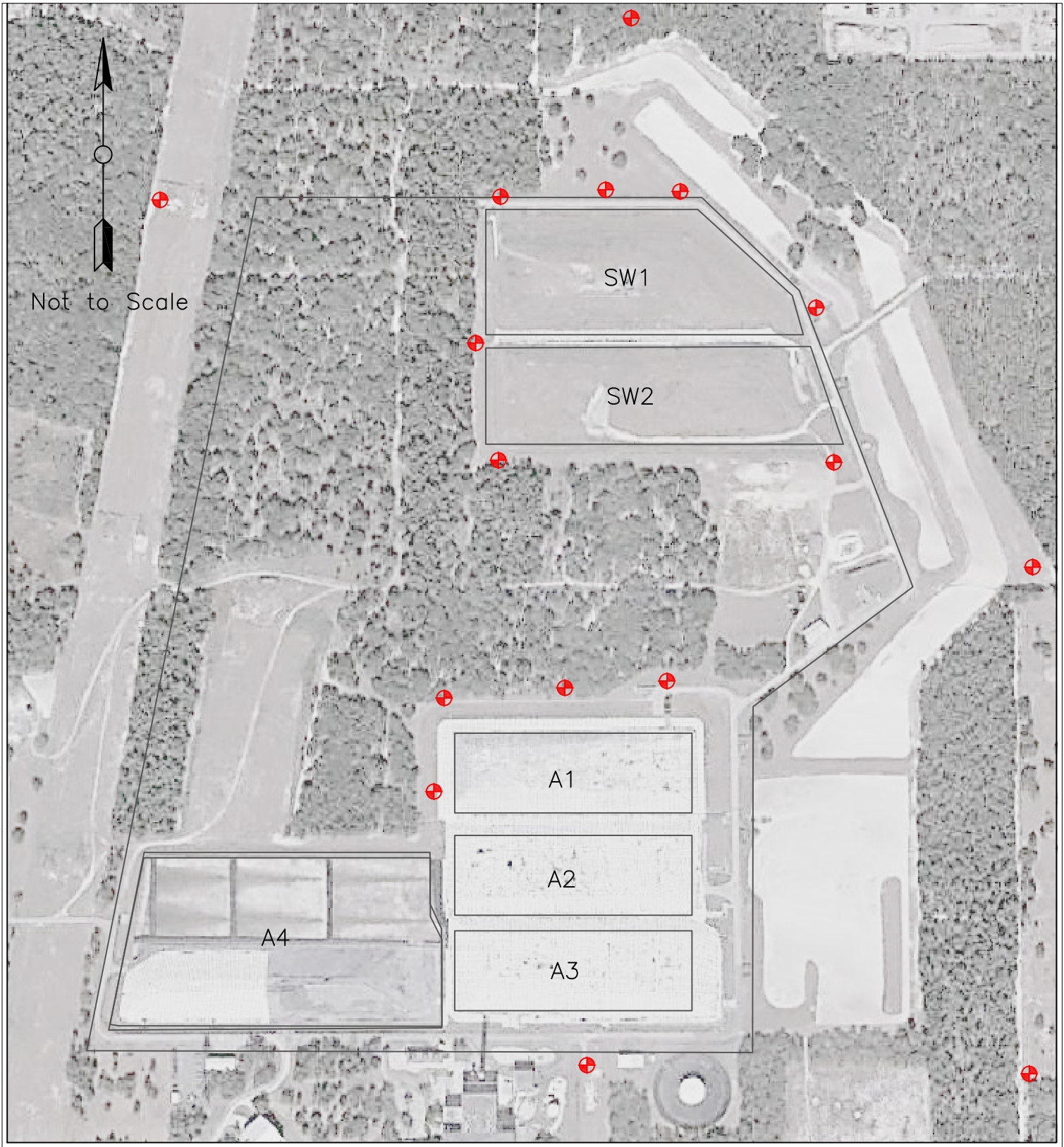
11.1 LANDFILL GAS MONITORING PROGRAM

Pasco County Environmental Services is responsible for implementing the Gas Monitoring Program at the landfill. The LFG monitoring program consists of quarterly monitoring of six LFG monitoring wells, in addition to monitoring gas levels in nineteen groundwater monitoring wells. Gas monitoring is also conducted within the enclosed structures at the Class III scalehouse and the Class III Operations Building. **Figure 11-1** depicts the location of each of the gas monitoring locations. Gas monitoring is conducted in accordance with Rule 62-701.530(2)(c), F.A.C.

A portable landfill gas analyzer is used to measure the levels of combustible gases (primarily methane) at each of the monitoring locations. Part of the monitoring program is inspection of the monitoring wells for any symptoms of LFG leakage such as dead grass in the vicinity of the monitoring well or other locations. All field measurement data and observations are provided to FDEP no later than 15 days after the end of the quarter in which the monitoring occurred.

If results indicate that gas is present in excess of the 25% of the lower explosive limit (LEL) in a structure or 100% of the LEL at or beyond the landfill property boundary, a Gas Remediation Plan will be prepared in accordance with Rule 62-701.530(3)(a), F.A.C., and Pasco County Public Infrastructure will:

- Immediately take all necessary steps to ensure protection of human health and notify FDEP.
- Within 7 days of detection, submit to FDEP for approval a remediation plan for the methane gas releases. The plan shall describe the nature and extent of the problem and the proposed remedy.



Note: THIS FIGURE IS NOT TO SCALE AND THE LOCATIONS OF SOME ITEMS HAVE BEEN EXAGGERATED FOR CLARITY

12.0 SITE CONTINGENCY PLAN

Emergency conditions that may constitute a special waste-handling event at the Solid Waste Complex may be created by a natural disaster (i.e., hurricane, tornado, and/or flooding), explosion, or fire. The Landfill Operations Manager is responsible for implementing the contingency operations.

12.1 LANDFILL FIRE

A fire extinguisher is maintained in all Pasco County landfill equipment. The quantity, type, and location of fire extinguishers located throughout the site is subject to change as conditions change on the site. Landfill fires can be very dangerous with the presence of LFG, which includes methane. Fire-fighting should only be attempted if the fire is relatively small and controllable. The area should be immediately evacuated of operating staff and outside personnel if a fire is ignited that cannot be easily and quickly controlled. The Solid Waste Manager should be contacted, and the fire should be reported to the Administration Office via field communications. The Administration office will immediately call the fire department. During a fire, incoming trucks will be prevented from using the landfill.

Once the fire is extinguished, appropriate cover will be applied to the waste and operations will continue at the original active face. If the fire is extensive and a temporary active face cannot be established, incoming trucks will be redirected to another landfill.

Landfill fires can be ignited from several sources or causes. These causes include the following:

- A gas pocket ignited from a spark generated from smoking.
- Sparks generated from pushing metal wastes.
- Chemical reactions.
- Sparks from operating equipment.
- Introduction of smoldering waste into the working face.

Onsite materials and equipment of fire protection consist of soil stockpiles near the working face, fire extinguishers carried on landfill equipment, and onsite water trucks.

The daily cover used in the landfill operation provides an effective firewall. Instructions in firefighting procedures will be routinely provided to site personnel through the prescribed TREEO training. If a fire occurs within the waste pile at the landfill, the fire department will be immediately notified, and additional soil cover will be applied to cut off the flow of oxygen to the burning area. If the fire cannot be extinguished or controlled within 1 hour, the landfill shall cease accepting waste for disposal in those areas of the facility impacted by the fire. The local fire department will again be notified via 911 of the conditions at the site and may be requested to assist site personnel and provide additional equipment, if necessary. Pasco County officials and FDEP will also be notified of conditions at the site and of the fire control plan being implemented.

Collection vehicles entering the landfill with smoldering loads shall be directed to the Hot Load area at the Resource Recovery Facility. The truck should remain closed to minimize the amount of oxygen available to feed the fire. The local fire department shall be notified by dialing 911; Pasco County HHW staff shall be notified as well as landfill operations.

13.0 RECORDKEEPING

In addition to records and reporting required by other sections of this operation plan, Pasco County Solid Waste will maintain the following the following:

- Keep records of all information used to develop or support the permit applications and any supplemental information submitted to comply with FDEP requirements pertaining to the construction of the landfill throughout the design period. Records pertaining to the operation of the landfill, except for weigh tickets, shall be kept for the design period of the landfill. Weigh tickets shall be kept for a minimum of 5 years.
- Retain records of all monitoring information, including calibration and maintenance records and copies of all reports required by permit, for at least ten years. Background water quality records shall be kept for the design period of the landfill.
- Maintain an annual estimate of the remaining life and capacity in cubic yards of each active disposal facility for the Class I landfill. The annual estimate shall be based on a summary of the heights, lengths, and widths of the solid waste disposal units. The estimate shall be made and reported annually to FDEP.

All records 5 years or older may be archived offsite given that the records can be retrieved within 7 days for inspection.

14.0 OFF-SITE BENEFICIAL ASH REUSE

Section 403.7045(5) of the Florida Statutes authorizes the Department to allow beneficial reuse of ash residue when an applicant demonstrates that “no significant threat to public health will result and that applicable Department standards and criteria will not be violated.” Beginning in 2012, Pasco County began working with the FDEP to investigate the recycling of bottom ash for beneficial reuse as a building construction material. A series of roadway test strips and associated groundwater monitoring wells were constructed under an FDEP research and development project (Permit No. 26254-004-SO-21). Through the research and development process, the County demonstrated that the requirements of Chapter 403.7045(5), F.S., could be achieved and the Department issued a Standing Authorization specifying the conditions under which bottom ash could be beneficially utilized within the County’s geographic boundaries. In 2019, the Pasco County Resource Recovery Facility’s Condition of Certification (PA 87-23D) was updated to include beneficial ash reuse. These are codified in Attachment E Part 6 of the Conditions of Certification – Solid Waste Construction and Operation Requirements. A copy of the relevant section of the conditions of certification is included as Attachment 1.

To render the bottom ash usable for targeted recycling projects, the County follows the procedures described in Section 6.6 of this Operation Plan. Following processing, the engineered material is beneficially reused consistent with the requirements in the attached conditions of certification.

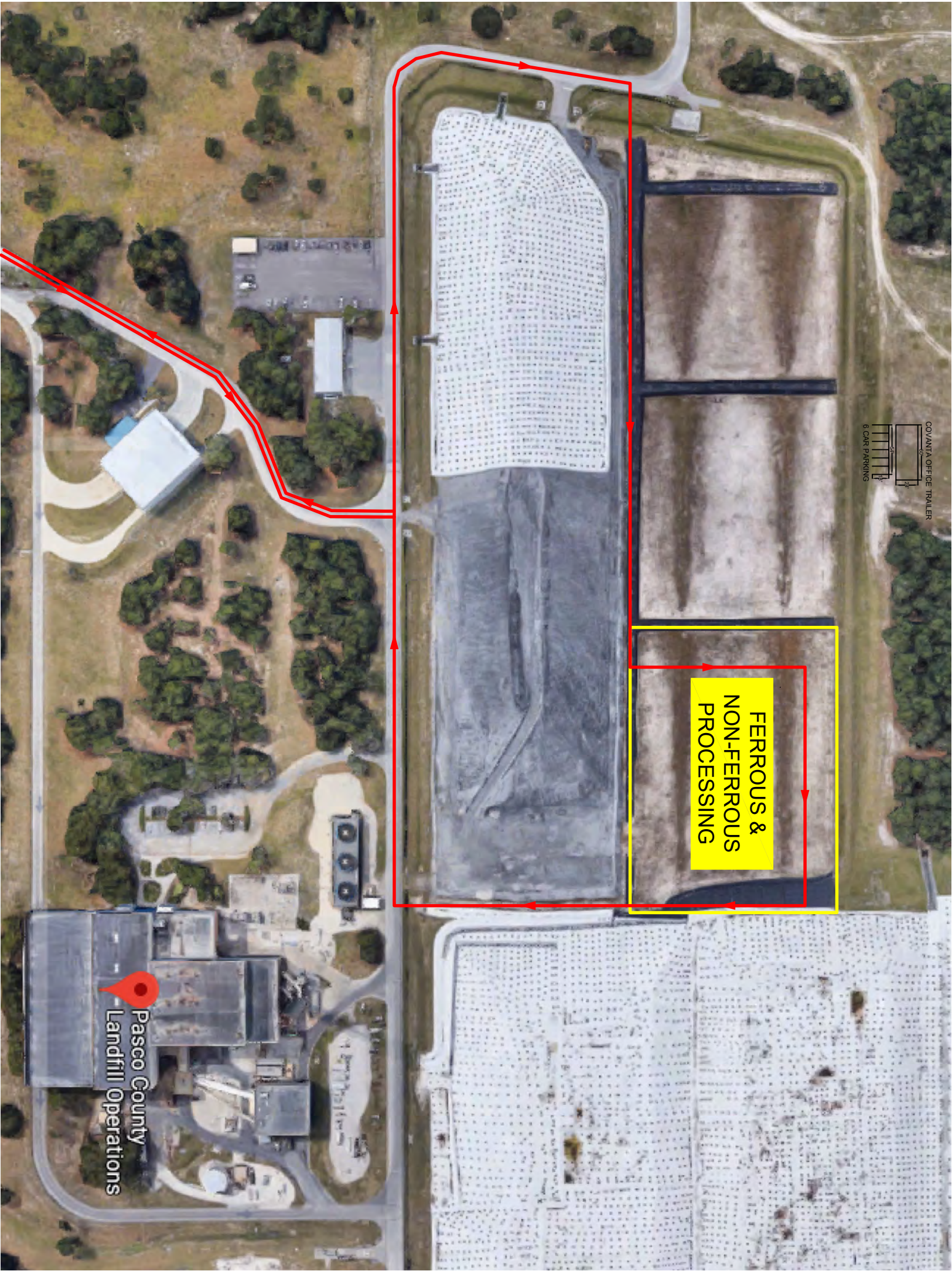
15.0 ASH MONOFILL FERROUS AND NON-FERROUS METALS PROCESSING

The 6th subcell of ash cell A-4 will be temporarily used to process ferrous and non-ferrous metal to remove residual ash prior to transport to a third-party recycling facility. This will include metal generated at the Pasco County Resource Recovery Facility as well as metal from other waste-to-energy (WTE) facilities within the state. Metal from all facilities will be brought over the County's scales and weighed. This metal will be stored in discrete storage bunkers and then processed through a series of screens and magnets to remove the residual ash. Following processing, the ash and metal will be loaded into separate bunkers. All ash not generated from Pasco County will be returned to the facility of origin. The mass of outgoing metal and ash for all facilities be weighed and recorded.

Figure 15-1 outlines the location of the processing area and a traffic pattern for the transfer truck operations. **Figure 15-2** provides an illustration of the equipment and storage bunkers which will be located within the ash cell. The processing area (Cell A-4 – subcell 6) will be floored with 4 feet of select waste (ash) before the processing equipment is brought on site. All equipment will be placed on top of the floored ash and will not be anchored into the ash or underlying leachate collection system in any way. The metals processing system is designed as a mobile operation.

To prevent the mixing of leachate and stormwater, the cell will be floored such that all rainwater that contacts the area will be introduced into the leachate collection and removal system. This will be accomplished by establishing a floored area no less than 10 feet inward from the extent of the liner. The aerial displayed in **Figure 15-1** is several years old; to reduce leachate generation the entire south 10 acres of the cell have been covered with a temporary rain cap and the metals processing area in operation in the north 10 acres of the cell will be open. Consistent with practices previously described in the Operation Plan, fugitive dust emissions within the processing area will be controlled by wetting on an as-needed basis.

Figure 15-1



- NOTES:
1. ALL TRUCK MUST CHECK IN AND OUT AT THE SCALE HOUSE LOCATED AT THE ENTRANCE TO THE PASCO FACILITY.

COMPANY
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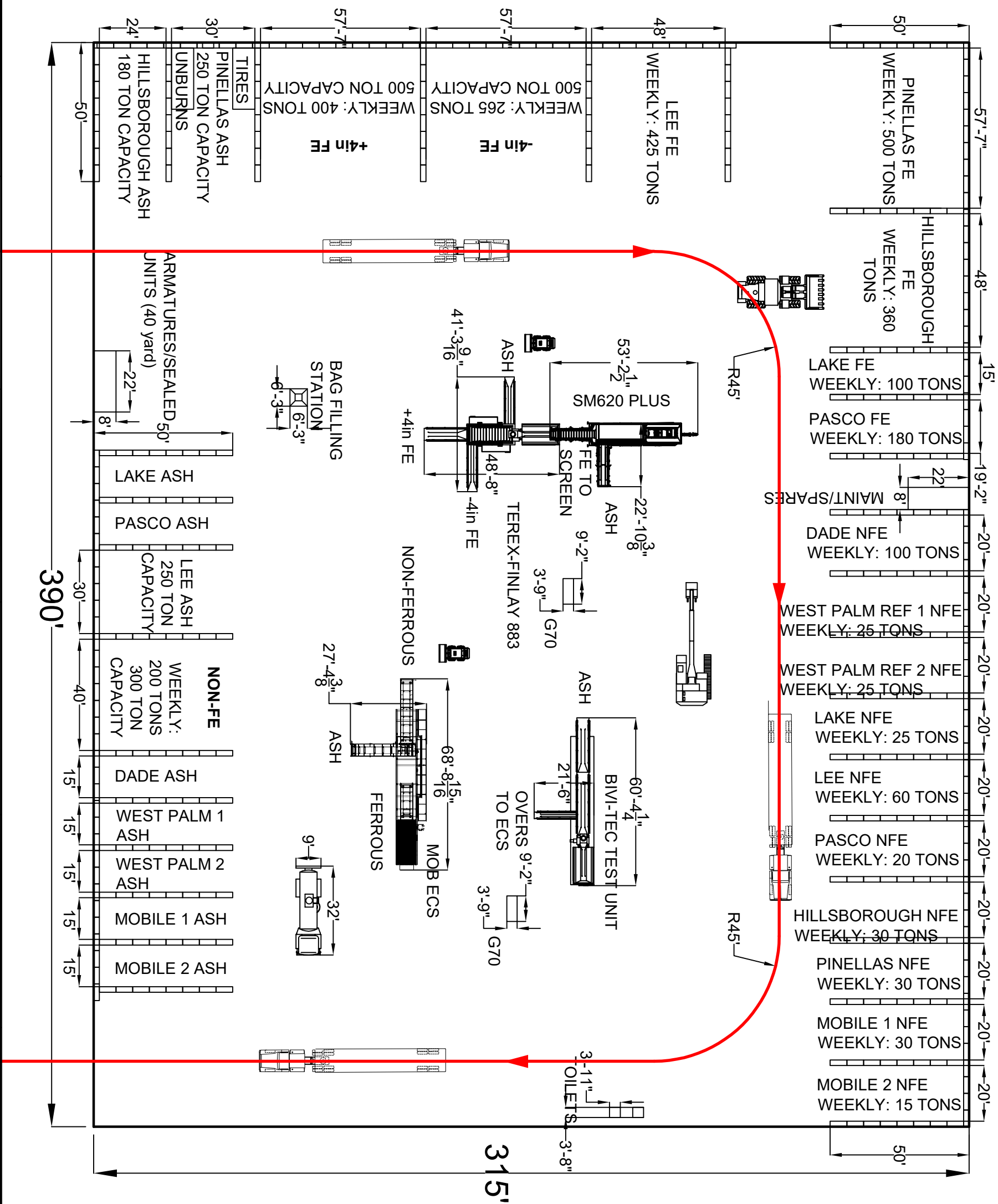
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PROPOSED PASCO
MOBILE NFE/FE PLANT



COVANTA ENGINEERING SERVICES, INC.
445 SOUTH STREET
MORRISTOWN, NEW JERSEY 07960

APPROVED	DATE	DRAWING NO.	SHT. NO.	REV.
	10/01/19	PASCO-1	1 OF 2	1



1. ALL NFE BUNKERS HAVE 150 TON CAPACITY, CAN BE INCREASED IF NECESSARY.
2. ALL ASH BUNKERS HAVE 100 TON CAPACITY UNLESS OTHERWISE SPECIFIED.
3. ARMATURES/SEALED UNITS TO BE PICKED OUT AND STORED IN ROLL-OFF 40 YARD CONTAINER 8'X22'.
4. PINELLAS ASH: TIRES AND UNBURNS TO BE SEPARATED INTO TWO ROLL-OFF CONTAINERS 8'X22'.
5. TWO (2) G70 GENERATORS WILL BE USED TO POWER THE MOBILE PROCESSING EQUIPMENT. 9'-2" BY 3'-9".
6. SIX (6) PARKING SPOTS AVAILABLE FOR EMPLOYEES.
7. TWO (2) PORTABLE TOILETS AVAILABLE FOR EMPLOYEES IN ADDITION TO FACILITIES IN COVANTTA OFFICE TRAILER.

PROPOSED PASCO
MOBILE NFE/FE PLANT

COMPANY
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GO AHEAD

COVANTA ENGINEERING SERVICES, INC.
445 SOUTH STREET
MORRISTOWN, NEW JERSEY 07960

APPROVED	DATE	DRAWING NO.	SHT. NO.	REV.
	10/22/19	PASCO-2	2 OF 2	1

3. PROCEDURES FOR RECEIVING, HANDLING, AND FEEDING MSW

3.1 PROCEDURES FOR RECEIVING MSW

3.1.1 RULES AND REGULATIONS FOR WASTE DELIVERY HAULERS

3.1.1.1 FACILITY OPERATION

1. The facility will open to receive waste at the following times:

Monday - Saturday 7:00 a.m. - 5:00 p.m.

The facility is closed on Thanksgiving, Christmas Day, and New Years Day.

3. The speed limit at the facility is fifteen (15) MPH, unless otherwise posted. The speed limit will be strictly enforced.
4. Haulers shall proceed through the main entrance and form lines at the weight scale. The Scalehouse attendant will direct the drivers to the appropriate scale.
5. Upon exiting the scale, trucks shall enter the enclosed tipping floor area through the door at the southwest corner of the tipping floor area and position for an available bay to unload. Upon unloading, the driver, before exiting the facility, shall make sure all refuse is off all external parts of the vehicle. Any personnel outside of the delivery vehicle must remain at least 6 feet away from the edge of the storage pit.
6. Haulers shall exit the tipping floor in single file through the door at the southeast corner of the tipping floor area.

3.1.1.2 HAULER IDENTIFICATION

1. Each waste hauler shall properly display and comply with their respective jurisdiction rules regarding truck and equipment identification and permitting. Vehicle and container identification shall be made visible to the tipping floor Equipment Operator by placing permit identification on both sides of the vehicle.

3.1.1.3 TIPPING FLOOR INSPECTIONS

1. Upon request of the tipping floor Equipment Operator, or Pasco County Representative, trucks may be directed to a specific area on the floor for examination of the waste being delivered. This inspection can occur due to a suspected problem or on a random basis as part of the facility's inspection program. The inspection may result in some materials being rejected. Haulers shall follow the instructions below

if unacceptable waste is detected:

- a. For Prohibited Waste (as defined in Exhibit A) which is not Hazardous Waste, the Hauler may be required to reload such materials for disposal at another location.
 - b. For Hazardous Waste (as defined by Federal, State, and Local law, haulers shall remain at the facility until appropriate facility management representative(s) arrive. A decision will be reached at that time as to the most appropriate disposal option.
 - c. Waste coming to the facility from areas other than Pasco County without prior approval will be directed to the appropriate disposal site.
2. The truck shall not leave the facility until released by the Equipment Operator, Covanta Pasco Management or Pasco County Representative. At the time of release, the Hauler may be given a Notice of Inspection or Infraction.

3.1.1.4 BREAKDOWNS/EMERGENCIES/DAMAGES

1. Trucks with mechanical problems shall exit the facility, or, if disabled, request immediate towing at the Hauler's expense. Should the vehicle have to stay on site for a short period of time, Haulers should attempt to "park" the vehicle outside of the main traffic flow.
2. Trucks with hydraulic leaks will be allowed to unload but not permitted further use of the facility until the leak is repaired. Vehicles with repeated mechanical problems will be referred to the proper county authority for appropriate action.
3. Haulers who discover a fire in their truck (hot load) shall be directed to a designated area outside to unload. Under no circumstances are these loads to be unloaded into the refuse storage pit. Covanta Pasco employees and/or Pasco County Fire Department personnel shall use available equipment to extinguish all fires.

3.1.1.5 DRIVER REGULATIONS

1. Obey all posted traffic control signs.
2. Obey the instructions of the Scalehouse Operator and the Equipment Operator.
3. No external cleaning of vehicles or vehicle maintenance may be performed at the facility site.
4. No firearms, explosives or other weapons are permitted on the facility site.
5. No smoking at any time, anywhere.
6. Open-topped containers must be cleaned of all debris and paper or recovered after unloading to minimize litter at the facility site.
7. All hauler personnel using the facility will be informed of the facility's Hazardous and Unacceptable Waste Screening Program.
8. Foul language and inappropriate behavior are not permitted on the facility site.
9. Consumption of alcoholic beverages or controlled substances (drugs) is not allowed on facility site at any time.

3.1.1.6 TIPPING FLOOR / REFUSE PIT FUEL MANAGEMENT

Covanta Standard Tipping Floor/Refuse Pit Fuel Management Procedure #2

Purpose:

The purpose this procedure is to establish a safe, effective fuel management on the tipping floor and refuse pit at our operating facilities, with the expressed goal of mitigating any associated potential negative events or consequences to facility personnel, equipment, structures, or to the surrounding environment. This fuel management approach is intended to slow the progression of a fire until it can be controlled by automatic sprinkler protection and manual firefighting response.

Facility management is directed to review and revise their current facility Fuel Management procedures using this standard as a guideline.

It is recognized that each Covanta facility is different and present challenges to fuel management on the Tipping Floor and Refuse Pit. The facilities are encouraged to contact Covanta's fire protection group for assistance in the implementation of this operating procedure.

Definition:

Fire Watch: The assignment of a person or persons to an area for the express purpose of notifying the fire department, the building occupants, or both of an emergency; preventing a fire from occurring; extinguishing small fires; or protecting the public from fire or life safety dangers.

- The fire watch shall be trained to understand the inherent hazards of the work site.
- The fire watch shall be familiar with the facilities and procedures for sounding an alarm in the event of a fire.
- The fire watch shall have fire-extinguishing equipment readily available and shall be trained in its use.
- The fire watch shall watch for fires in all exposed areas and try to extinguish them only when the fires are obviously within the capacity of the equipment available. If the fire watch determines that the fire is not within the capacity of the equipment, the fire watch shall sound the alarm immediately.
- The fire watch shall be permitted to perform additional tasks, but those tasks shall not distract him or her from his or her fire watch responsibilities.

Fuel: For this document is defined as MSW based on a composition of 34% paper, 17% food waste, 8% plastic and rubber, 10% glass, 11% metal and 14% leaves and grass. (*NFPA 850 Recommended Practice for Electric Generating Plant and High Voltage Direct Current Converter Stations, Section A.9.3.3.1*).

Fuel Storage: For this document Fuel Storage is defined as fuel storage on the Tipping Hall floor for a period of 24 hours or longer.

Temporary Fuel Storage: For this document Temporary Fuel Storage is defined as fuel storage on the Tipping Hall floor during non-operating hours of the Tipping Hall floor.

Preparations:

1. Each Covanta facility shall establish a “Fuel Management Procedure” for the tipping floor and refuse pit.
2. The fuel management procedures are specific to each facility and shall written instruction as to the size of the fuel pile(s) length x width x height.
3. A drawing shall be developed by the facility showing the location on the tipping floor of the fuel pile(s) and the separations from the refuse pit, side walls and access aisle between fuel pile(s). An up to date copy of the drawing shall be kept in the tipping floor supervisor’s office and in the crane operator’s pulpit.
4. At minimum, annually, the “Fuel Management Procedure” for the tipping floor and refuse pit shall be reviewed by the tipping floor operating personnel and crane operators.

Precautions:

1. Recommend that there be NO storage of fuel on the Tipping Floor; but there are many circumstances that may result in the need to use this area for fuel.
 - The use of the tipping floor for fuel storage shall be documented in the Fuel Management Procedures.
 - Fuel storage on the tipping floor shall not violate the operating permit(s) for the facility.
2. Inspections and prohibitions on dumping hot loads in building. Outdoors area for hot load dump/extinguishment. Refer to Hot Load Procedures SOP No. 1.
3. Prohibition on moving hot loads/fires forward
4. Loader/Machines – No low or under hung exhaust components

Tipping Hall Fuel Management:

1. Maintain a clear space of at least 10 ft. between the waste piles and all non-fire rated structural steel columns along the building's exterior walls and means of egress from the building.
 - Barriers similar to Jersey Barriers can keep piles away from the structure and means of egress.
2. Limit the potential for fire spread into the refuse bunker by maintaining an aisle/clear space of approximately 10 - 15 ft. between the waste piles and the edge of the refuse bunker.
 - *Example: When a bay is stacked out and fuel needs to be stored on the Tipping Hall floor; for a long weekend, boiler outage, etc., a clear space shall be maintained between the bay and fuel pile to help prevent a fire originating in the fuel pile propagating to the Refuse Pit.*
3. Clear spaces and aisle spaces should be immediately cleared of all combustibles (included in facility fire response procedures) upon discovery or declaration of a fire on the tipping floor, provided it is safe for equipment operator to do so.
4. All aisles and clear spaces shall be inspected and cleared of all combustibles prior to the tipping floor being shut down (during unmanned shifts)
5. Provide an aisle between refuse piles on the tipping floor of at least the operating requirements of the material handling equipment.
6. Number of refuse piles on the tipping floor to be determined by site conditions and permit limitations:
 - Maximum pile dimension 100'-0" *
 - Maximum pile height 20'-0" **
 - Maximum pile volume 200,000ft³ *

7. When storage of fuel is required on the tipping floor due to operational issues a fire watch shall be established. A fire watch shall consist of trained personnel who continuously patrol the affected area. Ready access to fire extinguishers and the ability to promptly notify facility personnel and the fire department in the event of an emergency. (NFPA 1 *Fire Code*, Section 1.7.17)

** International Fire Code, Chapter 32 High Pile Combustible Storage, Table 3206.2*

***NFPA 850 Recommended Practices for fire Protection for Electric Generating Plants and High Voltage Direct Current Converter Stations, Section A.9.3.3.1*

8. Mobile Material Handling Equipment:

- When not, in-service Material Handling Equipment should not be parked on the Tipping Floor.
- If Material Handling Equipment must be parked on the Tipping Floor due to facility space limitations the following shall apply:
 - No combustible materials within 25'-0" of the equipment.
 - Combustible materials shall be removed from air intakes, hot surfaces and from around the exhaust.
 - Maintenance/Hot Work on Material Handling Equipment shall not be performed on the Tipping Hall floor.
 - If hot work must be performed on the Tipping Hall floor, Covanta's hot work procedures shall be followed.

Refuse Pit Fuel Management:

1. Provide Restrictions on pile heights and shape:
 - a. Provide laser marking or painted lines as work aids for operator reference for pile area limitations, height, and width.
2. Manage pile shape, see Appendix B:
 - a. Trough maintenance across pit opening
 - b. One slope against back wall, no V-shaped piles or wing stacks

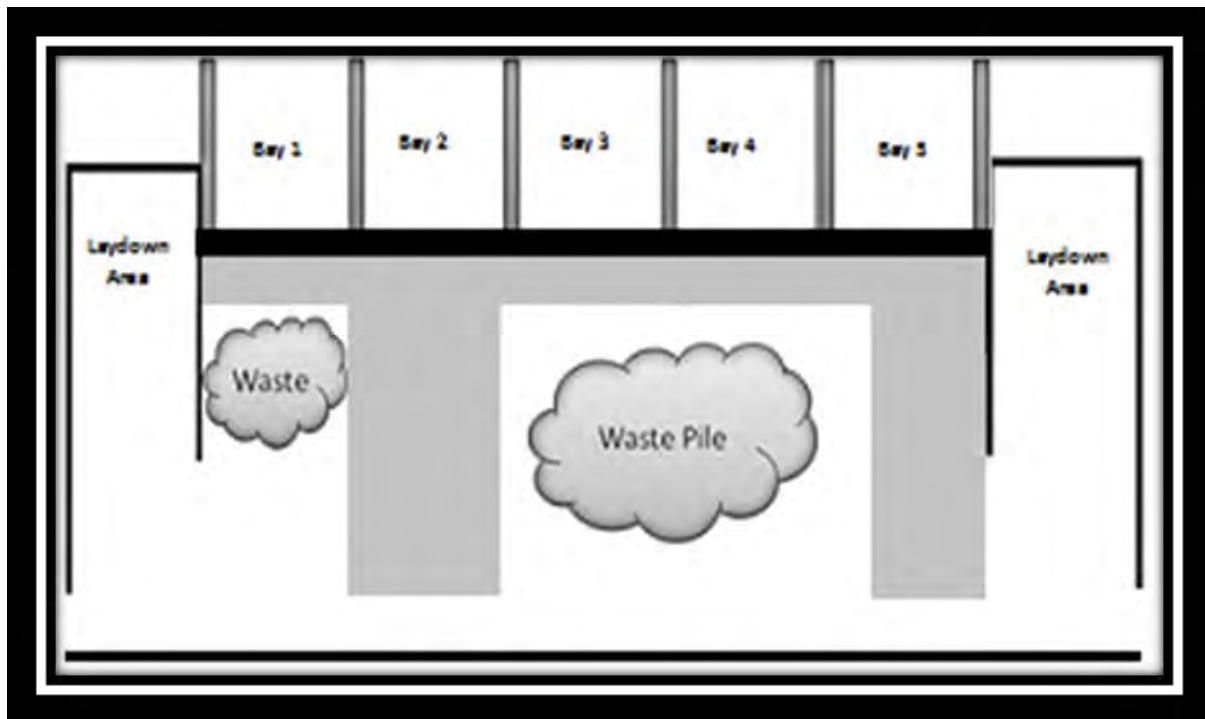
Tipping Hall Fuel Management Appendix A

Covanta Pasco Tipping Hall Fuel Management Enhancement

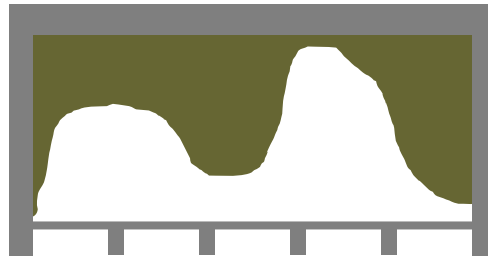
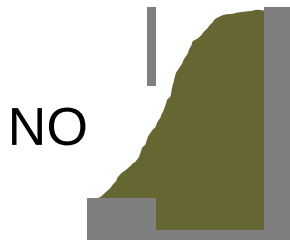
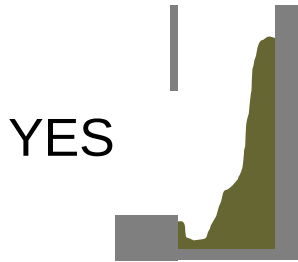
There are 5 tipping bays across tipping floor into the refuse bunker

In the event that waste is stored on the tipping floor, Operating procedures are in place to leave a bay open between the storage piles on the tipping floor

Operating procedures will be implemented to maintain an approximately 10 - 15 foot aisle between refuse bunker and tipping floor storage piles. An audible horn has been installed to detect any vehicle entering the tipping floor.



Refuse Pit Fuel Management Appendix B



Side view

Plan view

EXHIBIT A

PROHIBITED WASTE

Prohibited waste shall include the following material (A) if present in concentrations or quantities that, in the reasonable judgment of the Company, (1) would post a substantial threat to public health or safety, (2) may cause applicable air quality or water effluent standards to be violated by the normal operation of the facility, (3) are so large and bulky as to present a risk of blocking the facility's waste feed chutes (6 ft. in length and 30 inches in width), or (4) would result in ash residue from the facility being hazardous.

1. EXPLOSIVES

- Dynamite
- Hand grenades
- Blasting caps
- Shotgun shells
- Any other explosives
- Fireworks

2. LIQUID WASTE

Gasoline	Fungicides
Kerosene	Alcohol
Acids	Turpentine
Hydraulic oil	Waste oil
Petroleum	Ether
Caustics	Naphtha
Sewage or process waste waters	Acetate
Leachate	Solvents
Sewage sludge	Paints
Inflammable or volatile liquids	

3. DEMOLITION DEBRIS

Aggregate	Asbestos
Brick	Sawdust
Stone	Roofing materials
Pallets (unless halved)	Plaster
Cement	Porcelain fixtures
Gravel	Boilers
Sand	Other non-combustible demolition debris
Structural clay products	Creosote treated lumber
Soil	Dry wall
Tree stumps	Metal pipes

EXHIBIT A

PROHIBITED WASTE (CONTINUED)

4. MISCELLANEOUS MATERIALS

Offal	Radioactive materials
Tar	Ashes
Asphalt	Human remains
Sealed drums	Animal remains
Pressurized containers (over one quart in size)	
Car batteries	
Automobile parts	

5. TIRES

Tires or rims

6. HAZARDOUS WASTE as defined under Federal, State, and local laws and regulations.

7. SPECIAL WASTE as defined by paragraph 62-701.300(9), F.A.C., “Special wastes for waste-to-energy facilities. No person who knows or who should know of the nature of such solid waste shall dispose of lead-acid batteries, mercury-containing devices, or spent mercury-containing lamps in any waste-to-energy facility.”

NOTE: Loads whose major components are acceptable non-combustible metal items must off-load to process rejects box as directed by Equipment Operator. (i.e., appliances, water heaters, metal furniture and equipment, etc.)

Haulers who transport appliances with motors that may have capacitors containing PCB may be required, at the discretion of Covanta Pasco, to certify that these capacitors have been removed before disposal.

Haulers are encouraged to transport metal goods to a scrap dealer.

EXHIBIT B

HAZARDOUS WASTE

"Hazardous Waste" means: (A) any material or substances the treatment, storage or disposal of which, because of the composition or characteristics of the material or substance, is unlawful to treat, store, or dispose of at the Facility is (i) regulated as a toxic or hazardous waste as defined under either Subtitle C or the Solid Waste Disposal Act, 42 U.S.C 69921-6939a, or section 6 (e), of the Toxic Substances Control Act, 15 U.S.C. 2605(e), as replaced, amended, expanded or supplemented, and any rules or regulations promulgated hereunder, or under the State of Florida, as replaced, amended, expanded or supplemented, and any rules or regulations promulgated hereunder, or (ii) special nuclear or by-products materials within the meaning of the Atomic Energy Act of 1954; and (B) any other materials which any governmental agency or unit having appropriate jurisdiction shall lawfully determine from time to time to be ineligible for disposal through waste to energy facilities similar to the Facility because of the harmful, toxic or dangerous composition or characteristics of the material or substance.

All commercial and industrial establishments are required by federal and state law to determine whether any wastes which they generate are Hazardous Wastes, and to dispose of all Hazardous Wastes at a permitted Hazardous Waste disposal facility. You are responsible for assuring that industrial and commercial establishments from which you collect waste, have excluded all Hazardous Waste from waste which you collect for disposal at the Facility.

HAZARDOUS/NON-PROCESSABLE WASTE DOCUMENTATION

DATE _____

TIME _____

COMPANY NAME _____ TRUCK AND/OR TRAILER NO. _____

MATERIAL NOTED _____ DID MATERIAL GO INTO PIT? YES ____ NO ____

IS MATERIAL CLASSIFIED AS HAZARDOUS? YES ____ NO ____

WAS MATERIAL REMOVED FROM PIT? YES ____ NO ____

IF NOT REMOVED, GIVE DETAILS FULLY: _____

CHECKING OF LOADS

WHAT INSTIGATED CHECK?

_____ RANDOM CHECK

_____ SUSPICION OF HAZARDOUS OR NON-PROCESSABLE MATERIAL

IN DETAIL, DESCRIBE WHAT WAS FOUND IN LOAD

LOAD CHECK BY _____ COUNTY OFFICE NOTIFIED BY _____ AT _____

COVANTA PASCO, INC.
INCIDENT REPORT

DATE

TIME

TRUCK AND/OR TRAILER NO.

DUMPSTER NO.

INCIDENT

REPAIRS

SUPERVISOR'S SIGNATURE

3.1.2 UNACCEPTABLE AND HAZARDOUS WASTE PROGRAM

3.1.2.1 INTRODUCTION

Federal and State regulations require that waste-to-energy facilities establish contractual relationships or other appropriate notification or inspection procedures to ensure that hazardous wastes are not received at or burned in such a facility. The following Unacceptable and Hazardous Waste Screening Program was developed by Covanta Pasco (the "Company") in consultation with Pasco County to comply with such laws and regulations. The intent of this program is to ensure that neither Unacceptable Waste nor Hazardous Waste is received or processed at the Covanta Pasco Facility (the "Facility"). As used herein, Hazardous Waste refers to waste which by law is defined as hazardous; Unacceptable Waste is waste which the Company determines is unacceptable for processing pursuant to its contract with the County.

At the outset, it is important to keep in mind that most commercial generators of Hazardous Wastes, including those legally defined as small quantity generators, are already required to handle their Hazardous Wastes in accordance with provisions of the Resource Conservation and Recovery Act (RCRA), and to be registered with Federal and State regulatory agencies. These agencies are authorized to hold criminally liable, and to impose fines up to \$27,500 per day against those who knowingly violate laws and regulations regarding Hazardous Waste management. These laws already minimize the likelihood that significant quantities of Hazardous Waste will reach the Facility. The Facility is not, and is not intended to become or be operated as, a facility to receive, store or process Hazardous Waste pursuant to RCRA.

Most of the waste handled by the Facility is delivered by haulers licensed by the County. The County will co-operate with the Company in enforcing the implementation of this Program against Licensed Haulers. The provisions of this program apply as well to other haulers who make occasional deliveries to the Facility. With respect to these other haulers, the Company may refuse entry to the Facility for any violation of the rules.

3.1.2.2 PROGRAM OPERATION

1. NOTICE TO HAULERS

All arriving solid waste vehicles are weighed at an inbound scale. At this scale, there will be posted a clearly visible notice that Unacceptable and Hazardous Waste is prohibited, together with clear warning of potential hauler bans and other legal penalties for violators.

2. INSPECTION PRIORITIES FOR HAULERS

Although all vehicles are subject to inspection, priority for manual screening will be given to:

- those haulers known to serve industrial areas,
- those haulers whose service areas are not well known,
- front-end loaders and roll-off drop boxes, and
- packer trucks with commercial pick ups.

3. SCREENING PROCEDURES FOR UNACCEPTABLE AND HAZARDOUS WASTE

The screening procedures to be used at the Facility will include the following activities:

- Visual inspection of trucks by Equipment Operator for unusual looking loads (e.g. smoldering, uncovered, etc.);
 - Routine visual inspection by tipping floor personnel and crane operator of material in the refuse vehicles as they are unloading;
 - Visual inspection by the crane operator and other Facility personnel of the materials in the refuse pit; and
 - Selection of vehicles to be screened as part of the spot-check portion of the screening program outlined below will be done both on a judgmental basis using criteria in Section 2 above and on a random load basis.
- a. As detailed in Section 6, all personnel directly involved in the handling of incoming refuse, (tipping floor personnel, front end loader operator and crane operator), will be trained to visually identify, and instructed on how to deal with, Unacceptable Wastes and suspected Hazardous Wastes.

Whenever Facility staff identifies a hauler with Unacceptable or suspected Hazardous Waste or screens a hauler for possible Unacceptable or Hazardous Waste, inspection reports will be completed. Notification letters will be sent, as set forth in paragraph f hereof.

- b. If the tipping floor personnel discover Unacceptable or suspected Hazardous Waste in an incoming truck, either at or before the truck reaches the pit area, the driver will not be permitted to discharge his load and will be directed to leave the site. The attempt to deliver will be recorded and repeat attempts could lead to disbarment from the facilities.
- c. Operations staff routinely visually screen the refuse being unloaded and in the pit, looking for Unacceptable Waste and other prohibited materials, including drums/containers possibly containing unused or waste chemicals, large numbers of filled sacks, or substantial quantities of soil or powdery debris. If suspected Hazardous Waste is discovered, the procedures in Section 4 will be applied.

If the tipping floor personnel or the crane operator (any observation by the crane

operator will be relayed by radio to the tipping floor equipment operator) observe Unacceptable or suspected Hazardous Waste being discharged into the refuse pit, that hauler will not be permitted to leave the Facility. The vehicle will be reloaded and the hauler will be required to remove the Unacceptable or suspected Hazardous Waste from the Facility site. If the waste is suspected to be Hazardous and cannot be moved safely, the procedures in Section 4 will be followed.

If the Unacceptable or suspected Hazardous Waste is observed in or going into the refuse pit, but the delivery vehicle exits the tipping floor before it can be stopped, the Scalehouse Operator will be notified and every attempt will be made to identify and halt the vehicle before it exits the Facility. The hauler will then be required to reload the Waste and remove it from the Facility site. If the hauler cannot be identified or timely stopped and the Waste is suspected to be Hazardous, the procedures in Section 4 will be followed. If the Waste is Unacceptable, it will be placed in the process rejects box on the tipping floor.

- d. Loads will be selected for inspection on a random basis. Loads selected for inspection will be directed to a designated screening area where an unloading spot will be provided. At the screening area, the load will either be discharged into the pit under the scrutiny of the tipping floor personnel, or haulers will be required to spread their load on the floor by dumping it in piles. If suspect materials are spotted, but are not readily accessible, the front end loader operator will spread the refuse tipped onto the floor using the loader bucket. If Unacceptable or suspected Hazardous Waste is found, the hauler will be required to remove it from the Facility. If the waste is suspected to be Hazardous and cannot be moved safely, the procedures in Section 4 will be followed. After conclusion of screening, Acceptable Waste will be charged to the pit by the front end loader. If no unacceptable materials are located, haulers will not be required to wait more than 10 minutes after the truck is emptied before exiting the tipping floor, unless in the reasonable judgement of the Company additional screening is warranted in which case the hauler must wait until the screening is completed.
- e. In order to ensure safe handling of waste during screening and inspection, appropriate personnel protective gear, fire fighting equipment, and clean up equipment will be stored near the tipping floor. Appropriate materials needed to isolate any prohibited waste (rope, pylons, etc.) will also be stored near the tipping floor.
- f. Whenever a vehicle is screened, a waste screening report will be completed by the Tipping Floor Equipment Operator. Attached as Appendix A is an illustrative example of a Waste Screening Report. If there is a violation of a

Facility rule, the driver of the offending vehicle will be immediately notified orally. The Pasco County Solid Waste Department will then be notified to transmit the information on the Unacceptable Waste so that the County can follow through and minimize this type of waste delivery. When the violation is committed by a Designated Hauler, a copy of the letter will be sent to the County.

4. HANDLING SUSPECTED HAZARDOUS WASTE

- a. Whenever suspected Hazardous Waste is found and the hauler can be identified and it is safely possible the hauler will be required to reload and leave the Facility site. If it is not possible to reload the vehicle safely, subject to local laws and regulations, municipal or the authorities will be requested to impound the vehicle until the hauler can arrange for and actually remove the Hazardous Waste. A Notice of Violation (Appendix B) will be sent by the Company to the owner of the vehicle; and, if the violation is committed by a Designated Hauler; a duplicate copy will be sent to the County. It is the responsibility of the hauler to arrange for removal and disposal of Hazardous Waste in compliance with the law.
- b. When haulers cannot be identified and the Company is required to handle suspected Hazardous Waste that does not appear to be an immediate threat, it will be set aside, roped off and isolated, away from traffic and personnel. Danger signs and warnings will be posted. No attempt will be made to open suspect waste containers. The Company will notify appropriate government agencies, including the local Fire and Rescue Department and Police Department, for dispatch to the Facility.
- c. In all cases where suspected Hazardous Waste is found and is considered to present a possible immediate threat (such as explosives or ruptured drums), no attempt will be made by Facility personnel to move it. The material will be left in place and the area roped off. Personnel and traffic will be prevented from operating in that section of the plant. The Company will notify appropriate Emergency Response Personnel (Appendix C).
- d. All sampling and identification of suspected hazardous Waste will be done by specially trained and equipped members of the local Fire and Rescue Department. If it becomes necessary, an independent contractor shall determine the status of any suspect material and identify the handling to be used. If a spill of a reportable quantity of an identified hazardous waste occurs, the Facility Manager and Pasco County Representatives will be notified either by the Company or local authorities. If the waste meets any of the hazardous waste identification criteria established by the controlling regulatory agencies, it will be properly packaged, labelled and transferred by appropriate local authorities. Its

transfer from the Facility will be accomplished in as expeditious a manner as practicable, using appropriate State/Federal forms and procedures, and only by appropriately-licensed hazardous waste transporters.

5. ENFORCEMENT PROCEDURES

a. UNACCEPTABLE WASTE

Haulers will be billed by the Company for any and all costs and expenses incurred as a result of bringing prohibited waste to the Facility. In addition, a special charge will be imposed by the Company on any hauler that attempts to deliver Unacceptable Waste to the Facility or otherwise violates the Facility's rules and regulations. With respect to Designated Haulers, written notice of the special charge will be sent to the hauler within seven business days of imposition, with a copy to the County; and any Designated Hauler that fails to pay the special charge or to reimburse the Company for its reasonable expenses for removing Unacceptable Wastes from the pit and disposing of it within 30 days of receipt may be refused entry to the Facility until the charges and any late payment interest have been paid. Also, the Company will request that the County revoke or suspend a Designated Hauler's license for repeat violations of Facility rules.

b. HAZARDOUS WASTE

All of the enforcement provisions outlined above may be applied against a hauler whose load includes Hazardous Waste.

The Company will take steps necessary to ensure that any hauler who knowingly brings Hazardous Waste to the Facility is permanently barred from the Facility.

6. EDUCATION

The Company will train its operations and supervisory staff on procedures needed to operate this Unacceptable and Hazardous Waste Screening Program. Training will include actions to be taken in the event suspect or identifiable Hazardous Waste. The employee training program will be implemented in the following manner:

Prior to assignments involving the management of incoming solid wastes, employees will be given classroom training. Following initial formal classroom training, employees will be given supervised on-the-job training. No new employee will be assigned to a position involving the management of incoming solid waste without supervision by an individual already trained or without having received formal training themselves. A master file which lists completed personnel training will be maintained at the Facility. This master file will include the trainee names, dates of sessions and instructors who participated in each training session.

Aggressive implementation of the screening, enforcement, and education program outlined above should effectively ensure that neither Unacceptable Wastes nor Hazardous Wastes is received at or processed at the Facility.

COVANTA PASCO, INC

EMERGENCY CONTACTS

TELEPHONE

1. Covanta Management

A.	Facility Manager Christopher Spence	work -	(727) 856-2917
		cell -	(256) 682-2225
B.	Operations Manager Bruce Hartmier	work-	(727) 856-2917
		home-	(727) 858-7134
C.	Maintenance Supervisor Terry Harrison	work -	(727) 856-2917
		cell -	(727) 401-2840
D.	Business Manager Patrick Walsh	work -	(727) 856-2917
		cell -	(813) 399-1773
E.	Environmental Specialist Jamie Rocco	work -	(727) 856-2917
		cell-	(941) 567-7472

2. Pasco County Consolidated Contact Number

Fire and Rescue Department (Emergency)	"911"
Fire (Non-Emergency)	(727) 847-8102
Ambulance (Non-Emergency)	(727) 847-8102

3. Police Department (Emergency)

Non-emergency	"911"
	(727) 847-5878

4. Local Hospital

Nearest: Regional Medical Center Bayonet Point	(727) 819-2929
2 nd Nearest: Bayfront Health Hospital	(352) 688-8200

5. Southwest Florida Department of Environmental Protection

(813) 470-5700

3.2 PROCEDURES FOR HANDLING MSW

3.2.1 REFUSE PIT MANAGEMENT

3.2.1.1 INTRODUCTION

During heavy delivery hours, trucks dump more refuse to the pit than can be fed to the stokers. The crane operator must arrange, or "stack," pit refuse to allow for efficient delivery truck dumping. Basically, this means keeping space open along the pit's front (north) wall where the trucks dump, while stacking excess refuse in other parts of the pit.

3.2.1.2 DESCRIPTION

The refuse pit divides into three bays along its length running east to west. This helps organize refuse delivery by designating specific areas for truck dumping. Although the bays are not physically separated, assume that they run through the width of the pit to the rear wall. In addition, assume that the pit further divides into three equal rows across its width. These rows; front, middle, and rear, are each slightly wider than a fully opened crane grapple. (Fig. 3.2.1-1)

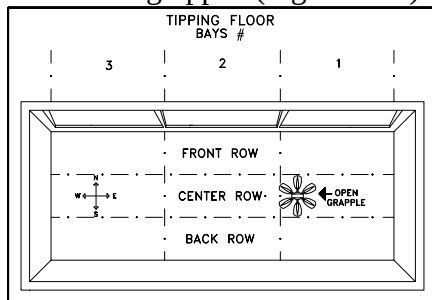


Figure 3.2.1.1: Refuse Pit

3.2.1.3 OPERATION

Proper pit management provides maximum refuse storage while keeping the front row sufficiently clear for arriving trucks to unload. The first goal is keeping the front wall dug well below tipping floor level so the trucks can dump directly to the pit. If overall refuse level is below the tipping floor, keep the rest of the refuse leveled.

When refuse deliveries exceed that fed to the stoker, stack it in the middle and rear pit rows. Use pit space effectively by building a "barrier wall" along the center row. Form this wall by moving refuse from the front row to the top of the center row. Take a grapple loaded from the front row and set it atop the center row. Let it overhang slightly toward the front row so the center row does not slope toward the front while building the wall of refuse. Open the grapple while slowly lowering atop this wall. This packs the refuse for a stable stack. Some refuse may tumble back to the front row.

Removing refuse from the front row, and stacking it along the center row, results in pit refuse as shown in Fig. 3.2.1-2. As the center wall rises, shift an occasional grab from the front row to the back row, behind the barrier wall. This quickly opens an area for arriving trucks to dump.

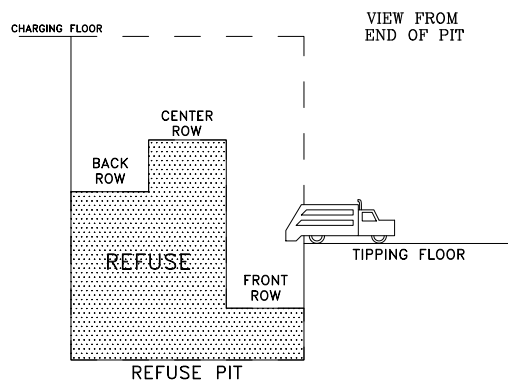


Figure 3.2.1-2: Properly Stacked Pit During Heavy Delivery Hours

The center and rear row height vary depending upon the amount of delivered refuse. However the rear row should always be six to ten feet below the center row.

It is important to form this center row barrier wall. If refuse is merely thrown back from the front row, a slope soon forms from the rear of the pit down to the front. Soon there is no way to stack refuse properly. It merely tumbles down the slope back to the truck unloading area along the front wall. (Fig. 3.2.1-3.)

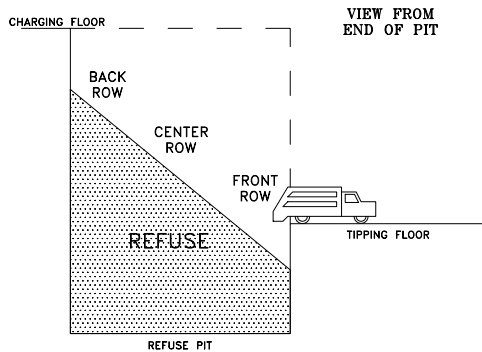


Figure 3.2.1-3 Improperly Stacked Refuse Pit

During extremely heavy delivery hours, it may be necessary to stack out entire bays. If required, begin stacking at the west end of the pit. Form a barrier wall along the centermost end of bay #3 when stacking out the west end. Build the wall as described above for the center row wall. This leaves lower areas in bay #3 for quick refuse displacement.

If refuse deliveries still exceed pit space, continue stacking from the west end of the pit toward the center. Always form the barrier walls as described above in the centermost bays for efficient use of pit space.

During non-delivery hours on weekdays, manage the pit as necessary to best prepare it for deliveries the next day. This includes digging out the front row and laying a firm foundation for the center barrier wall.

On weekends always try to empty at least one half of the pit on either end. Alternate the ends emptied every other weekend. Refuse that remains undisturbed too long begins to form a compost. This generates excessive heat and odor as well as degrading the refuse BTU value.

Close communications between the crane operator and tipping floor manager helps provide the most effective pit management. These two must always keep each other well informed as to intentions, unusual conditions, pit managing strategy as discussed above, etc. Cooperation is essential for efficient operation of the tipping floor, pit, and stoker charging. However if a conflict arises, the crane operator's instructions should be followed.

3.2.2 PREPARING FUEL WITH THE REFUSE CRANES

3.2.2.1 INTRODUCTION

Tasks discussed here prepare refuse before loading to the feedchute to provide smooth stoker combustion. They also help prevent stoker system plugs and dangerous operating conditions.

3.2.2.2 DESCRIPTION

Tasks for preparing refuse include:

1. Watch for, and reject from the fuel stream, any unacceptable waste. Unacceptable waste is:
 - a). Bulky material or items that may cause stoker system plugs and cannot be broken up.
 - b). Excessive amounts of incombustible material.
 - c). Anything posing a threat to health or safety.
 - d). Anything that may damage, or adversely affect operation of, the plant.

In general, unacceptable waste means excessive amounts of any material that is incombustible, bulky, or hazardous to process. This includes, but is not limited to; large machinery, whole or large parts of cars, trucks, or motorcycles, excessive amounts of incombustible construction or demolition debris (sheetrock, insulation, bricks, piping, etc.), metal drums, large household appliances, water heaters, large tree stumps, explosives, hazardous chemicals, animal carcasses, and large quantities of oil, paint, or other liquids, etc.

The tipping floor loader operator usually rejects unacceptable wastes. However this material is sometimes overlooked. Immediately notify the tipping floor equipment operator or the hauler not to unload a truck if you see unacceptable waste.

Still yet, unacceptable waste sometimes enters the pit. When uncovered, seize these items in the grapple. Lower to the lay down areas at the west end of the pit on the tipping floor. The crane operator cannot see the grapple during this procedure. Operate the crane according to hand signals (Fig. 3.2.2-1) given by the tipping floor equipment operator. Use these hand signals any time when coordinating crane movement with a worker remote from the crane cab.

If the crane operator or tipping floor equipment operator is busy, store these items in a

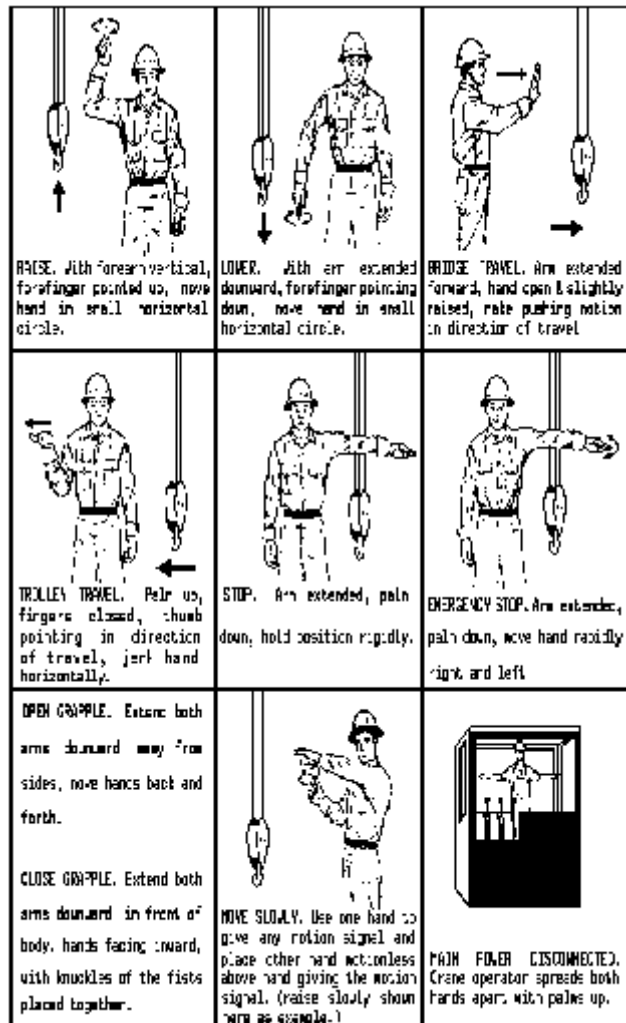


Figure 3.2.2-1: Standard Crane Operation Hand Signals

selected area of the pit, if available, until it is convenient to remove them. Once rejected from the pit, the tipping floor man transfers this material to the reject bin by the tipping floor's south wall with the front end loader.

2. Thoroughly mix pit refuse. Well blended fuel provides smooth combustion. Mixing is best accomplished by spreading freshly delivered fuel across the pit. Raise a loaded grapple above the pit refuse level. Bridge the crane along the length of the pit

while slowly opening the grapple.

3. Break up bulky refuse before loading to the feedchute.

Before taking a loaded grapple to the feedchute, raise it a few feet above the refuse in the pit and open the grapple. "Fluffing" the refuse in this manner also helps to mix the refuse as mentioned above.

4. Never feed refuse to the charging hopper if water is running from the grapple. Spread such a load back through the pit so it mixes with drier refuse.
5. Usually, when digging near the bottom of the pit, the refuse has not been disturbed for at least several days. The refuse here is dense and moist because it has been beneath tons of refuse. Mix it with fresher refuse before loading to the feedchute.
6. Once an acceptable bucket of refuse is found, load it into the desired feedchute.

3.3 PROCEDURES FOR FEEDING MSW

3.3.1 LOADING STOKER FUEL AND MISCELLANEOUS TASKS

3.3.1.1 INTRODUCTION

Use the refuse cranes to load fuel to the stoker feedchutes and clear feedchute plugs if necessary. Make complete and accurate crane log entries. Maintain crane cab and charging floor cleanliness.

3.3.1.2 FEEDCHUTE LOADING

After properly preparing a grapple of fuel as discussed in Section 3.2.2, load it to the feedchute as follows. (Fig. 3.3.1-1.)

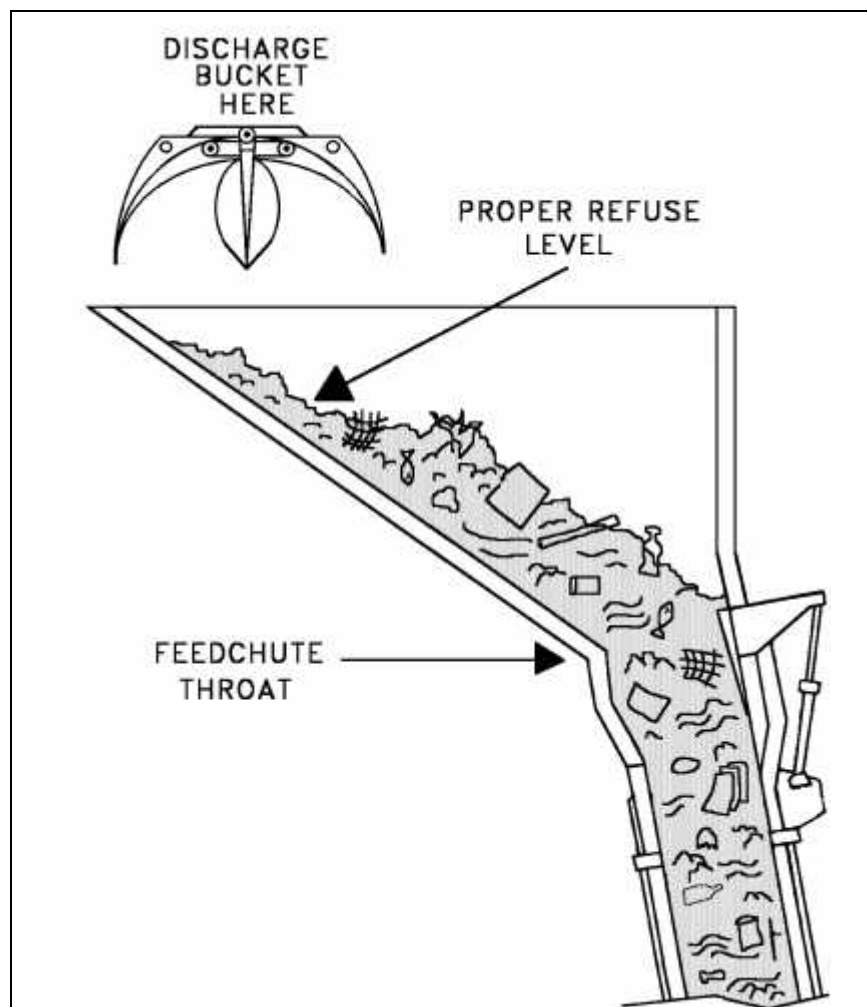


Figure 3.3.1-1: Proper Feedchute Loading

1. Refill the feedchute regularly, as soon as hopper capacity allows. A consistent feedchute level, in combination with point #2 below, supplies a steady head of refuse to the feedrams below. This is necessary for proper computer controlled stoker operation.
2. Spread fuel across the width of the feedchute to keep it level from side to side. "Feather" the grapple open while slowly bridging from one side of the feedchute to the other. Otherwise feed alternate grapple loads to opposite sides of the feedchute.
3. During normal operation, never allow the fuel level to fall below the feedchute throat. This condition could lead to loss of stoker seal from atmosphere as well as affecting the computer controlled fuel stoking.
4. Discharge fuel over the top of the feedchute's inclined face. This allows the refuse to break apart as it tumbles down the inclined face to help avoid hopper plugs at the feedchute throat.

3.3.1.3 CLEARING FEEDCHUTE PLUGS

Most feedchute plugs are avoided by properly preparing fuel as described in Section 3.2.2. However, if a plug occurs the following actions should be taken:

1. Immediately notify the shift engineer of the plug's nature, location and extent. The shift engineer must ensure negative draft so flames and burning materials do not blow to atmosphere if the boiler seal is lost.
2. Attack the plug using the gaff poles. These are long poles with pointed probes and hooks on the end to ram into, or hook and pull at, the plug. Probe for weak spots in the plug. If you can destroy the weakest area, the remainder of the "bridge" will collapse.
3. If the plug cannot be cleared within the first few minutes, request additional help and directions from the Lead Engineer.
4. Continue attacking the plug.

DANGER! NEVER LEAN OVER THE FEEDCHUTE EDGE WHILE CLEARING A PLUG. IT IS ALSO ABSOLUTELY FORBIDDEN TO CLIMB ATOP THE FEEDCHUTE EDGE WHILE THE STOKER IS OPERATING!

3.3.1.4 REFUSE CRANE LOG ENTRIES

Keep complete and accurate crane log entries. Information logged should include:

1. Times that any operator takes control of a refuse crane.
2. Extent and findings of any crane inspections, by operations or maintenance personnel.
3. Any crane repairs, such as cable or brake shoe replacement, etc.
4. Any crane damages or wear which may affect crane operation.
5. Any unusual or unsafe refuse delivery truck operation.
6. Any attempted delivery of unacceptable loads as described in Section 3.2.2.
7. Any unusual operating conditions.

In addition to making log entries, immediately report any of the information discussed above to the Lead Engineer as necessary.

3.3.1.5 CLEANING

1. The Crane Operator is responsible for maintaining charging floor area cleanliness. Wear a dust mask and goggles while working in the charging floor's high dust environment.
2. The crane operator is usually the responsible person for cleaning and inspecting the cranes. At times it will be necessary to designate another operator to clean the cranes due to unusual conditions.
3. The crane operator is responsible for cleanliness of the crane operating area.

3.3.2 REFUSE CRANE SAFETY AND OPERATOR RESPONSE TO REFUSE FIRES

3.3.2.1 SAFETY

In addition to safety items discussed throughout this training manual, follow all safety practices outlined in the Crane Manufacturers and Service vendor manual. A dust mask and goggles must be worn while working in the high dust areas of the charging or tipping floors.

3.3.2.2 REFUSE FIRE RESPONSE

The following are training guidelines. Do not substitute them for plant operating procedures.

Refuse trucks occasionally arrive at the plant carrying **hot loads**. A hot load is smoldering refuse. If the crane operator sees a hot load, he must immediately inform the Tipping Floor Equipment Operator or truck driver over the public address system or by using the crane warning horn not to unload to the pit.

After completing fire fighting preparations (man hoses, don protective gear, etc.) direct the truck to dump the load in the Hot Load Lay Down Area. After extinguishing the load, the Tipping Floor Equipment Operator carries the refuse with the front end loader to the pit. Feed this refuse to the stokers immediately. Maintain a close watch until the refuse descends below the feedchute throat.

Refuse pit fires include smoldering, smoking refuse as well as refuse with live flame. Upon seeing a refuse pit fire, the crane operator first notifies the control room. The fire's location, extent, and severity must be included in this initial report. Move the overhead refuse cranes as necessary to clear the hazard area.

If the refuse is smoldering, do not disturb it until fire fighting preparations are completed in case it ignites into live flame. The refuse atop the smoldering fire helps prevent ignition by keeping oxygen from reaching the smoldering refuse. Fire fighting preparations include manning fire hoses and cannons, donning protective gear and breathing apparatus as necessary, and assuring the shift engineer prepares to call the fire department if necessary.

Once completing fire fighting preparations, lower the grapple into the affected area while disturbing the refuse as little as possible. Feed the grapple directly to whichever feedchute has the lowest refuse level at the time. Continue feeding from the affected pit area until all smoldering refuse is removed. Maintain a watch over the loaded feedchute(s) until the affected refuse descends below the feedchute throat.

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Upon seeing live flame in the refuse pit, the crane operator first notifies the control room operator, providing the information outlined above. The control room operator immediately notifies the shift supervisor and calls the fire department. Move the cranes clear of the hazard area.

Put on protective gear and breathing apparatus as required. Fight the fire using the water cannons, hoses, or overhead sprinkler system as necessary. Once the fire department arrives on the scene, follow their instructions to fight the fire.

After extinguishing the fire, feed the affected refuse directly to the stoker feedchutes as described above.

Feedchute fires include smoldering, smoking refuse as well as refuse with live flame in the feedchute. They can occur upon a loss of boiler seal if fire travels back up from the grates. They can also occur if loading hot refuse.

The crane operator first notifies the control room, providing the same information as discussed above. Move the cranes clear of the hazard area. Complete fire fighting preparations. If conditions allow, wait for the lead engineer to determine whether to use water on a feedchute fire. If required, use water sparingly and only as a fine mist.

WARNING! DO NOT POUR WATER DOWN INTO THE FEEDCHUTE. THIS CAUSES EXTENSIVE WARPING OF HOT STOKER COMPONENTS.

The lead engineer may also decide to smother smoldering refuse by loading another grapple atop it in the feedchute.

If a feedchute fire's severity threatens to ignite the refuse pit, use whatever means necessary to extinguish quickly.

If a feedchute plug causes the fire by providing a path for fire from the grates, clear the plug to re-establish stoker seal.

Always watch the feedchute for re-ignition until all affected refuse descends well below the feedchute throat.

Once re-establishing normal operating conditions after any fire, always survey equipment used. Order fire extinguishers, oxygen bottles, etc. as needed. Dry and hang fire hoses and return all other fire fighting gear to readiness condition.

Upon seeing live flame in the refuse pit, the crane operator first notifies the control room operator, providing the information outlined above. The control room operator immediately notifies the shift supervisor and calls the fire department. Move the cranes clear of the hazard area.

Put on protective gear and breathing apparatus as required. Fight the fire using the water cannons, hoses, or overhead sprinkler system as necessary. Once the fire department arrives on the scene, follow their instructions to fight the fire.

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3.3.2.2 REFUSE FIRE RESPONSE

The following are training guidelines. Do not substitute them for plant operating procedures.

Refuse trucks occasionally arrive at the plant carrying **hot loads**. A hot load is smoldering refuse. If the crane operator sees a hot load, he must immediately inform the Tipping Floor Equipment Operator or truck driver over the public address system or by using the crane warning horn not to unload to the pit.

Covanta personnel will notify the site County Solid Waste Department to direct the refuse truck to a designated area at the landfill for unloading. After the load is dumped, extinguished and inspected the county will transfer the material to the refuse storage pit.

Refuse pit fires include smoldering, smoking refuse as well as refuse with live flame. Upon seeing a refuse pit fire, the crane operator first notifies the control room. The fire's location, extent, and severity must be included in this initial report. Move the overhead refuse crane(s) as necessary to a location clear of the hazard area so not to damage the festoons or any other part of the cranes.

If the refuse is smoldering, do not disturb it until fire fighting preparations are completed in case it ignites into live flame. The refuse atop the smoldering fire helps prevent ignition by keeping oxygen from reaching the smoldering refuse. Fire fighting preparations include assuring the fire pump is operational, manning fire hoses and cannons, donning personal protective gear and assuring the shift engineer is prepared to call the fire department.

Once completing fire fighting preparations, lower the crane grapple into the affected area while disturbing the refuse as little as possible. Feed the grapple load directly to whichever feedchute has the lowest refuse level at the time. Continue feeding from the affected pit area until all smoldering refuse is removed. Maintain a watch over the loaded feedchute(s) until the affected refuse descends below the feedchute throat.