SCS ENGINEERS Environmental Consulting & Contracting

August 3, 2018 File No. 09215600.06

Mr. Henry Freedenberg, P.E. Florida Department of Environmental Protection 2600 Blairstone Road, MS 4565 Tallahassee, FL 32399

Subject: Hillsborough County, Southeast County Landfill

Revised Leachate Management Plan

Operations Minor Modification Permit Application

FDEP Permit No. 35435-022-S0-01

Dear Mr. Freedenberg:

On behalf of the Hillsborough County Public Works Department, Solid Waste Management Division (SWMD), SCS Engineers (SCS) is pleased to submit this minor modification permit application and an electronic copy (pdf) for the operation of the Southeast County Landfill (SCLF). This minor modification application (Application) follows the Florida Department of Environmental Protection (FDEP) rules set forth in 62-701 (FAC). The enclosed permit document provides information regarding the revisions to the Leachate Management Plan (LMP), Operations Plan, and Operation Permit.

Section 2.A.6.d requires the SWMD to submit an updated Operations Plan no later than November 7, 2018. The SWMD and SCS reviewed the current Operations Plan dated June 2017 and LMP dated November 2015. Recent updates to the Operations Plan were submitted and approved by the FDEP as part of a minor modification application dated June 2017. However, upon review, sections and figures in the LMP require updates. A description of the changes made to the updated LMP are provided below.

APPLICATION

Enclosed with this application is a check in the amount of \$250 made payable to the Department of Environmental Protection in accordance with the fee schedule listed in Rule 62-701.320(4)(b), FAC.

This minor modification application includes updated information previously submitted to the FDEP as part of the permit renewal application, dated June 2013, and subsequent response, dated August 1, 2013. Sections with no changes are marked as such on the Application Form 62-701.900(1), or may have a reference to direct the reader to a copied or re-typed area of the Application.



BRIEF SUMMARY OF PERMIT MODIFICATIONS

SWMD REFERENCES

Throughout the updated document, all references to the SWMD were left as the former name and acronym, Hillsborough County Public Utilities Department, Solid Waste Management Group (SWMG). This was done to avoid confusion and conflict with other SCLF documents. The name will be changed during the next permit renewal.

LEACHATE MANAGEMENT PLAN UPDATES

Perimeter Berm Liner Clarification

Section 3.1 of the LMP has been updated to remove a statement regarding the use of high-density polyethylene (HDPE) liner along the perimeter berm. The containment liner barrier throughout Phases I-VI of the SCLF is composed of a 36-mil chlorosulfonated polyethylene (Hypalon). A copy of the revised LMP is provided as Application **Appendix A**.

Supplemental Leachate Removal

As part of an on-going dewatering effort, SWMD has installed clean-out pipes in Phases I, II, and III to facilitate cleaning of the leachate collection and removal system (LCRS). The SWMD has also installed additional pumps in Phases I and II of the SCLF. These pumps provide supplemental leachate removal from Phases I-VI of the SCLF. The new locations include:

- PS-2 This consists of a permanent vacuum assisted diesel pump located at cleanout CO 2-1. PS-2 pumps leachate from the Phase II LCRS header pipe. Leachate from PS-2 is pumped to the Main Leachate Pump Station (MLPS) via a 3-inch HDPE forcemain. A copy of the proposed PS-2 construction drawings is provided as Application Appendix D.
- **DW-1** This consists of two 8-inch diameter wells installed in one borehole in Phase I. The wells consist of perforated HDPE pipe and are set at about 88-feet below ground surface. A pneumatic pump is installed in each well to pump liquid from the waste and drainage sand layer. The pneumatic pumps are operated by air supply from the Landfill Gas Collection and Control System (LFGCCS). The leachate pumped from the dewatering wells is conveyed to the MLPS via a 3-inch HDPE forcemain.

• **DW-2** - This consists of two 8-inch diameter wells installed in one borehole in Phase II. The wells consist of perforated HDPE pipe and are set at about 68-feet below ground surface. A pneumatic pump is installed in each well to pump liquid from the waste and drainage sand layer. The pneumatic pumps are operated by air supply from the LFGCCS. The leachate pumped from the dewatering wells is conveyed to the MLPS via a 3-inch HDPE forcemain.

Additional sub-sections have been added to Section 4 of the LMP that further describe the construction and operation of the supplemental leachate removal locations. Figures 3.1 and 4.1 have been updated to incorporate these supplemental leachate removal points.

Temporary Leachate Forcemains

Two separate forcemains were installed in order to facilitate leachate conveyance from areas of temporary operations at the SCLF. These forcemains will be removed when the operations are completed or the operations are moved to other areas of the site.

Temporary Biosolids Compost Area

The SWMD operates a Temporary Biosolids Compost Area (Compost Area) on top of Sections 7, 8, and 9 of the Capacity Expansion Area. This project receives waste activated sludge from the Hillsborough County's (County) Falkenburg Road Advanced Wastewater Treatment Facility and blends the sludge with ground yard waste from the County's FDEP registered yard waste processing facilities. The project is managed in accordance with the "Composting Operation & Maintenance Plan" dated September 2015, and approved by FDEP on June 6, 2016 as part of a modification to permit number35435-022-S0-01.

The Compost Area is subdivided into two liquids management areas, the Active Compost Area and the Final Curing Area. Liquids generated in the Final Curing Area are considered by the FDEP to be similar to stormwater runoff and are managed as such. The stormwater runoff from the Active Compost Area is handled as leachate. Upon collection at the Active Compost Area sump, it is pumped to the Storage Pond B, a double-lined pond that can store 236,000 gallons of effluent or leachate. The leachate is pumped from Storage Pond B to the Leachate Treatment and Reclamation Facility (LTRF) for onsite treatment or to tanker trucks for offsite treatment. A subsection describing the Compost Area leachate collection and removal has been added to Section 8 of the LMP. Figure 4.1 has been updated to account for the additional leachate collection and removal piping. The as-built survey of the Compost Area leachate collection and conveyance system is included as Application **Appendix E**.

Temporary Ash-Reuse Aggregate Screening and Storage Project

The SWMD operates a Temporary Ash-Reuse Aggregate Screening and Storage Project (Ash-Reuse Project) on top of Phase III of the Phases I-VI landfill. The Ash-Reuse Project receives ash from the County's Resource Recovery Facility Waste-to-Energy plant to be processed for use in construction activities. The project is managed in accordance with the "Temporary Ash Aggregate Screening and Storage Project Operation & Maintenance Plan" dated August 2017 and approved by FDEP on August 23, 2017.

The stormwater runoff from the Ash-Reuse Project is treated as leachate. Upon collection at the Ash-Reuse area sump, it is pumped to the Storage Pond B. The leachate is pumped from Storage Pond B to the LTRF for onsite treatment or to tanker trucks for offsite treatment. A subsection describing the disposal of leachate generated from the Ash-Reuse Project has been added to Section 8 of the LMP. Figure 4.1 has been updated to account for the additional leachate collection and removal piping. As requested by the FDEP, the as-built survey of the Ash-Reuse Project leachate collection and conveyance system is included as Application **Appendix E**.

LANDFILL OPERATIONS PLAN UPDATES

As stated earlier, no changes are proposed to the Operations Plan. However, the Operations Plan currently references the 2015 LMP in Section K. The references to the LMP in Sections K.2.j and K.8 of the Operations Plan have been updated to refer the current LMP. The date of the Operations Plan has been updated to July 2018. A copy of the recent Operations Plan is provided as Application **Appendix B**.

OPERATION PERMIT UPDATES

Upon review of the latest Operation Permit and discussions with the FDEP, SCS identified some errors that should be corrected through this permit modification. A copy of the updated Operation Permit, number 35435-025-SO-MM, is provided as Minor Modification Application Appendix C.

Section C.12.c

Section C.12.c in the Operation Permit references Specific Condition A.7, which no longer exists. The reference should be to Specific Condition A.6.

Attachment 1

The third item in Attachment 1 of the Operation Permit, referencing Specific Permit Condition C.12.c, should list a date of November 1, 2018, instead of March 1, 2018.

Mr. Henry Freedenberg August 3, 2018 Page 5

Please do not hesitate to contact us should you have any questions or require additional information.

Sincerely,

Ken E. Guilbeault, P.G.

Toy m

Project Director

SCS ENGINEERS

Robert B. Curtis, P.E. Senior Project Manager

SCS ENGINEERS

KEG/RBC:kls

cc:

Kimberly Byer, SWMD Larry Ruiz, SWMD Joseph O'Neill, SWMD Melissa Madden, FDEP

Ron Cope, EPC

Attachments

Minor Modification Application Leachate Management Plan Southeast County Landfill Hillsborough County, Florida



Hillsborough County - Public Works Department Solid Waste Management Division (SWMD) 332 N. Falkenburg Road Tampa, FL 33619

Florida Board of Professional Engineers Certificate No. 00004892

SCS ENGINEERS

09215600.06 | August 2018

3922 Coconut Palm Drive, Suite 102 Tampa, FL 33619 813-621-0080

Minor Modification Application Leachate Management Plan SOUTHEAST COUNTY LANDFILL HILLSBOROUGH COUNTY, FLORIDA

Presented To:
Hillsborough County
Public Works Department
Solid Waste Management Division (SWMD)
332 N. Falkenburg Road
Tampa, FL 33619

Presented From:

SCS ENGINEERS 3922 Coconut Palm Drive, Suite 102 Tampa, FL 33619

Florida Board of Professional Engineers
Certificate No. 00004892

August 2018 File No. 09215600.06

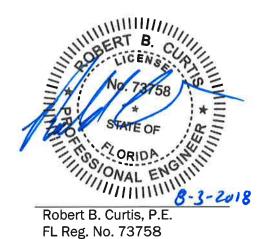


Table of Contents

Lett	ter of Transmittal	Attached
Арр	lication Form	Attached
200	ction	Dago
		Page
A.	General Information	
_	A.1 Landfill Description	
В.	Disposal Facility General Information	
C.	Prohibitions	
D.	Solid Waste Facility Permitting Requirements, General	
	D.1 Application Form and Supporting Documents	
	D.2 Engineering Certification	
	D.3 Transmittal Letter	
	D.4 Application Forms	
	D.7 Operations and Closure Plan D.12 Enforcement History	
_	Landfill Permit Requirements	
E.	Gerneral Criteria For Landfill	
F.	Landfill Construction Requirements	
G.		
H.	Hydrogeological Investigation Requirements	
l. •	Geotechnical Investigation Requirements Vertical Expansion of Landfill	
J.		
K.	Landfill Operation Requirements	
ı	-	
L.	Water Quality Monitoring	NA 4
M.	Special Waste HandlingGas Management System Requirements	
N.		
0. D	Landfill Closure Requirements Other Closure Procedures	
P.		
Q.	Long-Term Care	
R.	Financial Assurance	R-1

Table of Contents

Section		Page
	Tables	

Table 1. Enforcement Action History Hillsborough County Solid Waste Operations.. D-2

Appendices

Appendix A	Leachate Mangement Plan
Appendix B	Revised Operations Plan
Appendix C	Suggested Edits to Operation Permit
Appendix D	Proposed PS-2 Construction Drawings
Appendix E	As-Built Survey of the Compost and Ash Reuse Area Leachate Collection System



Florida Department of Environmental Protection

Bob Martinez Center 2600 Blair Stone Road Tallahassee, Florida 32399-2400 DEP Form #: 62-701.900(1), F.A.C.

Form Title: Application to Construct, Operate, Modify, or Close a Solid Waste Management Facility

Effective Date: February 15, 2015

Incorporated in Rule: 62-701.330(3), F.A.C.

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

APPLICATION TO CONSTRUCT, OPERATE, MODIFY, OR CLOSE A SOLID WASTE MANAGEMENT FACILITY

APPLICATION INSTRUCTIONS AND FORMS

INSTRUCTIONS TO APPLY FOR A SOLID WASTE MANAGEMENT FACILITY PERMIT

I. General

Solid Waste Management Facilities shall be permitted pursuant to Section 403.707, Florida Statutes (FS) and in accordance with Florida Administrative Code (FAC) Chapter 62-701. A permit application shall be submitted in accordance with the requirements of Rule 62-701.320(5)(a), F.A.C., to the appropriate Department office having jurisdiction over the facility. The appropriate fee in accordance with Rule 62-701.315, FAC, shall be submitted with the application by check made payable to the Department of Environmental Protection (DEP).

Complete appropriate sections for the type of facility for which application is made. Entries shall be typed or printed in ink. All blanks shall be filled in or marked "Not Applicable" or "No Substantial Change". Information provided in support of the application shall be marked "Submitted" and the location of this information in the application package indicated. The application shall include all information, drawings, and reports necessary to evaluate the facility. Information required to complete the application is listed on the attached pages of this form.

II. Application Parts Required for Construction and Operation Permits

- A. Landfills and Ash Monofills Submit Parts A through S
- B. Asbestos Monofills Submit Parts A, B, C, D, E, F, I, K, M, O through S
- C. Industrial Solid Waste Disposal Facilities Submit Parts A through S

NOTE: Portions of some Parts may not be applicable.

NOTE: For facilities that have been satisfactorily constructed in accordance with their construction permit, the information required for A, B and C type facilities does not have to be resubmitted for an operation permit if the information has not substantially changed during the construction period. The appropriate portion of the form should be marked "no substantial change".

III. Application Parts Required for Closure Permits

- A. Landfills and Ash Monofills Submit Parts A, B, L, N through S
- B. Asbestos Monofills Submit Parts A, B, M, O through S
- C. Industrial Solid Waste Disposal Facilities Submit Parts A, B, L through S

NOTE: Portions of some Parts may not be applicable.

IV. Permit Renewals

The above information shall be submitted at time of permit renewal in support of the new permit. However, facility information that was submitted to the Department to support the expiring permit, and which is still valid, does not need to be re-submitted for permit renewal. Portions of the application not re-submitted shall be marked "no substantial change" on the application form.

V. Application Codes

S - Submitted

LOCATION - Physical location of information in application

N/A - Not Applicable

N/C - No Substantial Change

VI. Listing of Application Parts

PART A: GENERAL INFORMATION

PART B: DISPOSAL FACILITY GENERAL INFORMATION

PART C: PROHIBITIONS

PART D: SOLID WASTE MANAGEMENT FACILITY PERMIT REQUIREMENTS, GENERAL

PART E: LANDFILL PERMIT REQUIREMENTS

PART F: GENERAL CRITERIA FOR LANDFILLS

PART G: LANDFILL CONSTRUCTION REQUIREMENTS

PART H: HYDROGEOLOGICAL INVESTIGATION REQUIREMENTS

PART I: GEOTECHNICAL INVESTIGATION REQUIREMENTS

PART J: VERTICAL EXPANSION OF LANDFILLS

PART K: LANDFILL OPERATION REQUIREMENTS

PART L: WATER QUALITY AND LEACHATE MONITORING REQUIREMENTS

PART M: SPECIAL WASTE HANDLING REQUIREMENTS

PART N: GAS MANAGEMENT SYSTEM REQUIREMENTS

PART O: LANDFILL CLOSURE REQUIREMENTS

PART P: OTHER CLOSURE PROCEDURES

PART Q: LONG-TERM CARE

PART R: FINANCIAL ASSURANCE

PART S: CERTIFICATION BY APPLICANT AND ENGINEER OR PUBLIC OFFICER

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION APPLICATION FOR A PERMIT TO CONSTRUCT, OPERATE, MODIFY OR CLOSE A SOLID WASTE MANAGEMENT FACILITY

Please Type or Print

PART A	A. GENERAL INFORMATION		
1.	Type of disposal facility (check all that apply): ☑ Class I Landfill ☐ Class III Landfill ☐ Industrial Solid Waste ☐ Other (describe):	□ Ash Monofill □ Asbestos Monofill	
NOTE:	Waste Processing Facilities should apply on Yard Trash Disposal Facilities should notify o Compost Facilities should apply on Form 62-7 C&D Disposal Facilities should apply on Form	n Form 62-701.900(3), FAC; 709.901(1), FAC; and	
2.	Type of application: ☐ Construction ☐ Operation ☐ Construction/Operation ☐ Closure ☐ Long-term Care Only		
3.	Classification of application: ☐ New ☐ Renewal	☐ Substantial Modification☐ Intermediate Modification☑ Minor Modification	
4.	Facility name: Southeast County La	andfill	
 . 5.	DEP ID number: SWD/29/41193	County: Hillsborough	
6.	Facility location (main entrance): 15960 County Road 672, Lithia, Florida	33547 (8.8 miles east of US Highway 301 on CR 672)	
7.	Location coordinates: Section: 13-15, 18, 19, 22, 23, 24 Latitude: 27 46 26	nip: 31S Range: 21E, 22E Ongitude: 82 0 11 0 01 (Phas	es LVIV
			C3 I-VI)
	Datum: NGVD 1929 Coordina:	te method: WGS 84	
	Collected by: Sherry A. Grymko, PS	M Company/Affiliation: Pickett & Associates, Inc.	

8.	Applicant name (operating authority): Hillsborough County	Public Works Department, Solid Waste Management Division
	Mailing address: 332 North Falkenburg Roa	
	Street or P.O. Box	City State Zip
	Contact person: Kimberly A. Byer	_{Telephone: (} 813 ₎ 612-7718
	Title: Director, Solid Waste Management	Division
		byerk@hillsboroughcounty.org
		E-Mail address (if available)
9.	Authorized agent/Consultant: SCS Engineers	
	Mailing address: 3922 Coconut Palm Drive	Suite 102, Tampa, FL 33619
	Street or P.O. Box	City State Zip
	Contact person: Robert B. Curtis, PE	Telephone: (813 ₎ 621-0080
	Title: Senior Project Manager	
		bcurtis@scsengineers.com
		E-Mail address (if available)
10.	Landowner (if different than applicant): Same as A	pplicant
	Mailing address:	
	Street or P.O. Box	City State Zip
	Contact person:	Telephone: ()
11	Cities towns and group to be conved.	E-Mail address (if available)
11.	Cities, towns, and areas to be served: City of Tampa, Temple Terrace and Unir	acorporated Hillsborough County
	ony on rampa, rempie remade and onin	
12.	Population to be served:	
12.		Five-Year Projection:1,575,100 (2021)
13.	Date site will be ready to be inspected for completion:	4// (
14.	Expected life of the facility: 28 years	
15.	Estimated costs:	N1/A
	Total Construction: \$ N/A	Closing Costs: \$ N/A
16.	Anticipated construction starting and completion dates:	
	From: N/A	To: N/A
17.	Expected volume or weight of waste to be received:	
	yds³/day 2,000 tons	/daygallons/day

PART B. DISPOSAL FACILITY GENERAL INFORMATION

current Leachate Management Plan.	The intent of the proposed revised Leachate Management Plan	_
is to incorporate changes regarding	g supplemental leachate removal points and to account for the	_
management of leachate generated	from the temporary compost and the temporary ash-reuse areas.	_
Facility site supervisor: Mr. Larry R	uiz	<u>-</u>
Title: Operations Manager	Telephone: (813) 671-7707	_
	ruizle@hillsboroughcounty.org	
	E-Mail address (if available)	
Disposal area: Total acres: 162.4	Used acres: 162.4 Available acres: 162.4 34.5	(Phases
Weighing scales used: ✓ Yes No		
Security to prevent unauthorized use:	Yes No	
Charge for waste received:	_{\$/yds³} 61.81 _{\$/ton}	
Surrounding land use, zoning:		
☑ Residential	☑ Industrial (Phosphate Mining)	
☑ Agricultural	□ None	
□ Commercial	□ Other (describe):	-
		-
Types of waste received: ☑ Household	☑ C & D debris	
☑ Commercial	☑ C & D debits ☑ Shredded/cut tires	
☑ Incinerator/WTE ash	☑ Yard trash	
☐ Treated biomedical	□ Septic tank	
☑ Water treatment sludge	☑ Industrial	
☑ Air treatment sludge	☑ Industrial sludge	
	☑ Domestic sludge	
☑ Asbestos	☐ Other (describe):	
Yard waste accepted at the co	,	
Tara waste accepted at tile of	on poor radiity	
		-

,	Salvaging permitted: Yes 🗸 No				
,	Attendant: Yes No	Trained operator: ✓ Yes	No		
	Trained spotters: ✓ Yes No	Number of spotters used	Minimum of 1		
	Site located in: □ Floodplain Upland, Closed phosphate mine	□ Wetlands	☑ Other (describe):		
-					
	Days of operation: Monday through Sa	turday			
ı	Hours of operation: 7:30am to 5:30pm				
	Days working face covered: Daily during	operations (Class I),	Weekly (Class III)		
	Elevation of water table: 123.7 SHGWT	ft. Datum Used: NG	SVD 1929		
	Number of monitoring wells: 12 (Phases				
	Number of surface monitoring points: 5				
	Gas controls used: ✓ Yes No	Type controls: ✓ Active	Passive		
(Gas flaring: ✓ Yes No	Gas recovery: ✓ Yes ☐ I	No		
ı	Landfill unit liner type:				
	□ Natural soils	☑ Double geomembrane	•		
	□ Single clay liner	□ Geomembrane & com	posite		
	☐ Single geomembrane	☑ Double composite			
	☐ Single composite	□ None			
	□ Slurry wall	☑ Other (describe):			
	Phosphatic clay, 4-18 feet in thick	ness (Phase I-VI only)		
-	Leachate collection method:				
	☑ Collection pipes	□ Double geomembran	е		
	☑ Geonets	☑ Gravel layer			
	□ Well points	☑ Interceptor trench			
	□ Perimeter ditch	□ None			
☑ Other (describe):					
Pump station and chipped tire layer					

Leachate storage method:	
☑ Tanks	☑ Surface impoundments
☐ Other (describe):	
Leachate treatment method:	Chaminal transfers and
☐ Oxidation	☐ Chemical treatment
☑ Secondary	□ Settling
☐ Advanced ☑ Other (describe):	□ None
	watom
On-site biological treatment s	system.
Leachate disposal method:	
□ Recirculated	☑ Pumped to WWTP
☑ Transported to WWTP	□ Discharged to surface water/wetland
☐ Injection well	☐ Percolation ponds
	☑ Spray irrigation
☑ Evaporation	= opia, migation
☑ Evaporation ☑ Other (describe):	= opia, ingalion
☑ Other (describe):	
☑ Other (describe):	spray irrigation on intermediate closed portions
☑ Other (describe): Storage pond evaporation or	spray irrigation on intermediate closed portions
☑ Other (describe): Storage pond evaporation or	spray irrigation on intermediate closed portions
☑ Other (describe): Storage pond evaporation or	spray irrigation on intermediate closed portions on-site treatment facility.
☑ Other (describe): Storage pond evaporation or landfill after treatment at the describe of the storage pond evaporation or landfill after treatment at the describe of the storage of t	spray irrigation on intermediate closed portions on-site treatment facility.
☑ Other (describe): Storage pond evaporation or landfill after treatment at the describe of the storage pond evaporation or landfill after treatment at the describe of the storage of t	spray irrigation on intermediate closed portions on-site treatment facility.
☑ Other (describe): Storage pond evaporation or landfill after treatment at the describe of the storage pond evaporation or landfill after treatment at the describe of the storage of t	spray irrigation on intermediate closed portions on-site treatment facility.
☑ Other (describe): Storage pond evaporation or landfill after treatment at the describe of the storage pond evaporation or landfill after treatment at the describe of the storage of t	spray irrigation on intermediate closed portions on-site treatment facility.

Storm Water:						
Collected: ✓ Yes No						
Type of treatment: Detention/Filtration, Infiltration						
Name and Class of receiving water: A tributary of Long Flat Creek						
Environmental Resources Permit (ERP) number or status: ERP Permit #29-0270881-004 (Operation Phase)						
National Pollution Discharge Elimination System (NPDES) Permit #FLR05B138						
Southwest Florida Water Management District Permit #100330						

PART C. PROHIBITIONS (62-701.300, FAC)

	LOCATION		
s 🗆 _		N/A □ N/C ☑	1. Provide documentation that each of the siting criteria will be satisfied for the facility; (62-701.300(2), FAC)
s 🗆 _		N/A □ N/C ☑	2. If the facility qualifies for any of the exemptions contained in Rules 62-701.300(12), (13) and (16) through (18), FAC, then document this qualification(s);
s 🗆 _		N/A □ N/C ☑	3. Provide documentation that the facility will be in compliance with the burning restrictions; (62-701.300(3), FAC)
s 🗆 _		N/A □ N/C ☑	4. Provide documentation that the facility will be in compliance with the hazardous waste restrictions; (62-701.300(4), FAC)
s 🗆 _		N/A □ N/C ☑	5. Provide documentation that the facility will be in compliance with the PCB disposal restrictions; (62-701.300(5), FAC)
s 🗆 _		N/A □ N/C ☑	6. Provide documentation that the facility will be in compliance with the biomedical waste restrictions; (62-701.300(6), FAC)
s 🗆 _		N/A □ N/C ☑	7. Provide documentation that the facility will be in compliance with the Class I surface water restrictions; (62-701.300(7), FAC)
s 🗆 _		N/A □ N/C ☑	8. Provide documentation that the facility will be in compliance with the special waste for landfills restrictions; (62-701.300(8), FAC)
s 🗆 _		N/A □ N/C ☑	9. Provide documentation that the facility will be in compliance with the liquid restrictions; (62-701.300(10), FAC)
s 🗆 _		N/A □ N/C ☑	10. Provide documentation that the facility will be in compliance with the used oil and oily waste restrictions; (62-701.300(11), FAC)
s 🗆 _		N/A □ N/C ☑	11. Provide documentation that the facility will be in compliance with the CCA treated wood restrictions; (62-701.300(14), FAC)
s 🗆 _		N/A □ N/C ☑	12. Provide documentation that the facility will be in compliance with the dust control restrictions; (62-701.300(15), FAC)

PART D. SOLID WASTE MANAGEMENT FACILITY PERMIT REQUIREMENTS, GENERAL (62-701.320, FAC)

	LOCATION			
s 🗹	Eng Rep. D.1	N/A □	N/C □	1. A minimum of one completed electronic application form, all supporting data and reports; (62-701.320(5)(a), FAC)
s 🗹	Eng Rep. D.2	N/A □	N/C □	2. Engineering and/or professional certification (signature, date, and seal) provided on the applications and all engineering plans, reports, and supporting information for the application; (62-701.320(6), FAC)
s 🗹	Eng Rep. D.3	N/A 🗆	N/C □	3. A letter of transmittal to the Department; (62-701.320(7)(a), FAC)
s 🗹	Eng Rep. D.4	N/A □	N/C □	4. A completed application form dated and signed by the applicant; (62-701.320(7)(b), FAC)
s 🗹	Eng Rep. D.5	N/A □	N/C □	5. Permit fee specified in Rule 62-701.315, FAC in check or money order, payable to the Department; (62-701.320(7)(c), FAC)
s□		N/A □	N/C ☑	6. An engineering report addressing the requirements of this rule and with the following format: a cover sheet, text printed on 8 ½ inch by 11 inch consecutively numbered pages, a table of contents or index, the body of the report and all appendices including an operation plan, contingency plan, illustrative charts and graphs, records or logs of tests and investigations, engineering calculations; (62-701.320(7)(d), FAC)
s 🗹	Eng Rep. D.7	N/A □	N/C □	7. Operation Plan and Closure Plan; (62-701.320(7)(e)1, FAC)
s□		N/A □	N/C ☑	8. Contingency Plan; (62-701.320(7)(e)2, FAC)
s 🗆		N/A □	N/C ☑	9. Plans or drawings for the solid waste management facilities in appropriate format (including sheet size restrictions, cover sheet, legends, north arrow, horizontal and vertical scales, elevations referenced to NGVD 1929) showing: (62-701.320(7)(f), FAC)
s□		N/A 🗆	N/C 🗹	 a. A regional map or plan with the project location in relation to majo roadways and population centers;
s□		N/A □	N/C ☑	b. A vicinity map or aerial photograph no more than one year old showing the facility site and relevant surface features located within 1000 feet of the facility;
s 🗆		N/A 🗆	N/C ☑	c. A site plan showing all property boundaries certified by a Florida Licensed Professional Surveyor and Mapper;
s□		N/A 🗆	N/C ☑	 d. Other necessary details to support the engineering report, including referencing elevations to a consistent, nationally recognized datum, and identifying the method used for collecting latitude and longitude data;

PART D CONTINUED LOCATION S \square N/A \square N/C \square 10. Documentation that the applicant either owns the property or has legal authority from the property owner to use the site; (62-701.320(7)(g), FAC) S \square _____ N/A \square N/C ot Z11. For facilities owned or operated by a county, provide a description of how, if any, the facilities covered in this application will contribute to the county's achievement of the waste reduction and recycling goals contained in Section 403.706, FS; (62-701.320(7)(h), FAC) S \square Eng Rep. D.12 N/A \square N/C \square 12. Provide a history and description of any enforcement actions taken by the Department against the applicant for violations of applicable statutes, rules. orders, or permit conditions relating to the operation of any solid waste management facility in the state; (62-701.320(7)(i), FAC) S \square N/A \square N/C $\not \square$ 13. Proof of publication in a newspaper of general circulation of notice of application for a permit to construct or substantially modify a solid waste management facility; (62-701.320(8), FAC) S \square N/A \square N/C \square 14. Provide a description of how the requirements for airport safety will be achieved, including proof of required notices if applicable. If exempt, explain how the exemption applies; (62-701.320(13), FAC) 15. Explain how the operator and spotter training requirements and special criteria will be satisfied for the facility; (62-701.320(15), FAC) LANDFILL PERMIT REQUIREMENTS (62-701.330, FAC) PART E. **LOCATION** S □ _____ N/A □ N/C ☑ 1. Regional map or aerial photograph no more than five years old showing all airports that are located within five miles of the proposed landfill; (62-701.330(3)(a), FAC) S \square N/A \square N/C \overline{Z} 2. Plot plan with a scale not greater than 200 feet to the inch showing: (62-701.330(3)(b), FAC) S \square N/A \square N/C ot Za. Dimensions; b. Locations of proposed and existing water quality monitoring wells; S \square N/A \square N/C ot Zc. Locations of soil borings; S \square _____ N/A \square N/C ot

otd. Proposed plan of trenching or disposal areas; e. Cross sections showing original elevations and proposed final contours which shall be included either on the plot plan or on separate sheets;

LOCATION PART E CONTINUED S \square N/A \square N/C $\not Z$ f. Any previously filled waste disposal areas; g. Fencing or other measures to restrict access; S \square _____ N/A \square N/C ot Z3. Topographic maps with a scale not greater than 200 feet to the inch with five foot contour intervals showing: (62-701.330(3)(c), FAC) S \square N/A \square N/C \overline{Z} a. Proposed fill areas; S \square _____ N/A \square N/C $ot \square$ b. Borrow areas; c. Access roads; S \square _____ N/A \square N/C $ot \square$ d. Grades required for proper drainage; S \square _____ N/A \square N/C $ot \square$ e. Cross sections of lifts; S \square N/A \square N/C \square f. Special drainage devices if necessary; S \square _____ N/A \square N/C $ot \square$ g. Fencing; S \square ______ N/A \square N/C \square h. Equipment facilities; S \square _____ N/A \square N/C $ot \square$ 4. A report on the landfill describing the following: (62-701.330(3)(d), FAC) S \square _____ N/A \square N/C $ot \square$ a. The current and projected population and area to be served by the proposed site; S \square _____ N/A \square N/C ot Zb. The anticipated type, annual quantity, and source of solid waste expressed in tons: S \square N/A \square N/C \square c. Planned active life of the facility, the final design height of the facility, and the maximum height of the facility during its operation; d. The source and type of cover material used for the landfill; S \square _____ N/A \square N/C $ot \square$ 5. Provide evidence that an approved laboratory shall conduct water quality monitoring for the facility in accordance with Chapter 62-160, FAC; (62-701.330(3)(g), FAC

701.330(3)(h), FAC)

6. Provide a statement of how the applicant will demonstrate financial responsibility for the closing and long-term care of the landfill; (62-

S \square N/A \square N/C ot Z

PART F. GENERAL CRITERIA FOR LANDFILLS (62-701.340, FAC)

	LOCATION				
s □ _		N/A 🗆	N/C ☑	available) how the 100 year reduce the te	and show on a Federal Insurance Administration flood map, if we the landfill or solid waste disposal unit shall not be located in floodplain where it will restrict the flow of the 100 year flood, mporary water storage capacity of the floodplain unless g storage is provided, or result in a washout of solid waste; (62-), FAC)
s □ _		N/A □	N/C ☑	in the landfill	ow the minimum horizontal separation between waste deposits and the landfill property boundary shall be 100 feet, measured of the proposed final cover slope; (62-701.340(3)(c), FAC)
PART (G. LAND	FILL CO	NSTRUCTIO	N REQUIREM	MENTS (62-701.400, FAC)
	LOCATION				
s□ _		N/A □	N/C ☑	units will be of design period factor of safe	ow the landfill shall be designed so the solid waste disposal constructed and closed at planned intervals throughout the lof the landfill, and shall be designed to achieve a minimum ty of 1.5 using peak strength values to prevent failures of side eep-seated failures; (62-701.400(2), FAC)
s 🗆 _		N/A □	N/C ☑	2. Landfill line	er requirements; (62-701.400(3), FAC)
s 🗆 _		N/A □	N/C ☑	a. Ge	eneral construction requirements; (62-701.400(3)(a), FAC)
s□ _		N/A □	N/C ☑	(1)	Provide test information and documentation to ensure the liner will be constructed of materials that have appropriate physical, chemical, and mechanical properties to prevent failure;
s 🗆 _		N/A □	N/C ☑	(2)	Document foundation is adequate to prevent liner failure;
s □ _		N/A □	N/C ☑	(3)	Constructed so bottom liner will not be adversely impacted by fluctuations of the ground water;
s □ _		N/A □	N/C ☑	(4)	Designed to resist hydrostatic uplift if bottom liner located below seasonal high ground water table;
s 🗆 _		N/A □	N/C ☑	(5)	Installed to cover all surrounding earth which could come into contact with the waste or leachate:

LOCATION PART G CONTINUED

s 🗆	N/A □ N/C 🗹	b. Co	mposite liners; (62-701.400(3)(b), FAC)
s 🗆	N/A □ N/C ☑	(1)	Upper geomembrane thickness and properties;
s 🗆	N/A □ N/C 🗹	(2)	Design leachate head for primary leachate collection and removal system (LCRS) including leachate recirculation if appropriate;
s 🗆	N/A 🗆 N/C 🗹	(3)	Design thickness in accordance with Table A and number of lifts planned for lower soil component;
s 🗆	N/A 🗆 N/C 🗹	c. Do	uble liners; (62-701.400(3)(c), FAC)
s 🗆	N/A □ N/C ☑	(1)	Upper and lower geomembrane thickness and properties;
s 🗆	N/A □ N/C ☑	(2)	Design leachate head for primary LCRS to limit the head to one foot above the liner;
s 🗆	N/A □ N/C 🗹	(3)	Lower geomembrane sub-base design;
s 🗆	N/A □ N/C ☑	(4)	Leak detection and secondary leachate collection system minimum design criteria (k ≥ 10 cm/sec, head on lower liner ≤ 1 inch, head not to exceed thickness of drainage layer);
s 🗆	N/A □ N/C 🗹	d. Sta	andards for geosynthetic components; (62-701.400(3)(d), FAC)
s 🗆	N/A □ N/C ☑	(1)	Factory and field seam test methods to ensure all geomembrane seams achieve the minimum specifications;
s 🗆	N/A □ N/C 🗹	(2)	Geomembranes to be used shall pass a continuous spark test by the manufacturer;
s 🗆	N/A 🗆 N/C 🗹	(3)	Design of 24-inch-thick protective layer above upper geomembrane liner;
s 🗆	N/A 🗆 N/C 🗹	(4)	Describe operational plans to protect the liner and leachate collection system when placing the first layer of waste above a 24-inch-thick protective layer;
s 🗆	N/A □ N/C 🗹	(5)	HDPE geomembranes, if used, meet the specifications in GRI GM13, and LLDPE geomembranes, if used, meet the specifications in GRI GM17;
s 🗆	N/A ☑ N/C □	(6)	PVC geomembranes, if used, meet the specifications in PGI 1104;

LOCATION **PART G CONTINUED** S \square N/A \square N/C $\not Z$ (7) Interface shear strength testing results of the actual components which will be used in the liner system; S \square _____ N/A \square N/C \square (8) Transmissivity testing results of geonets if they are used in the liner system; (9)Hydraulic conductivity testing results of geosynthetic clay liners if they are used in the liner system; S \square _____ N/A \square N/C $ot \square$ e. Geosynthetic specification requirements; (62-701.400(3)(e), FAC) Definition and qualifications of the designer, manufacturer, (1) installer, QA consultant and laboratory, and QA program; (2) Material specifications for geomembranes, geocomposites, geotextiles, geogrids, and geonets; S \square _____ N/A \square N/C $ot \square$ (3)Manufacturing and fabrication specifications including geomembrane raw material and roll QA, fabrication personnel qualifications, seaming equipment and procedures, overlaps, trial seams, destructive and nondestructive seam testing, seam testing location, frequency, procedure, sample size, and geomembrane repairs; (4) Geomembrane installation specifications including earthwork, conformance testing, geomembrane placement, installation personnel qualifications, field seaming and testing, overlapping and repairs, materials in contact with geomembranes, and procedures for lining system acceptance; (5)Geotextile and geogrids specifications including handling and placement, conformance testing, seams and overlaps, repair, and placement of soil materials and any overlying materials: S \square _____ N/A \square N/C ot otGeonet and geocomposites specifications including handling (6) and placement, conformance testing, stacking and joining, repair, and placement of soil materials and any overlying materials; S \square N/A \square N/C \square (7) Geosynthetic clay liner specifications including handling and

materials:

placement, conformance testing, seams and overlaps, repair, and placement of soil materials and any overlying

PART G CONTINUED LOCATION S \square N/A \square N/C ot Zf. Standards for soil liner components; (62-701.400(3)(f), FAC) Description of construction procedures including over-(1) excavation and backfilling to preclude structural inconsistencies and procedures for placing and compacting soil components in layers; S \square _____ N/A \square N/C $ot \square$ Demonstration of compatibility of the soil component with (2) actual or simulated leachate in accordance with EPA Test Method 9100, or an equivalent test method; S \square N/A \square N/C \overline{Z} (3)Procedures for testing in situ soils to demonstrate they meet the specifications for soil liners; S \square _____ N/A \square N/C ot Z(4) Specifications for soil component of liner including at a minimum: S \square N/A \square N/C \overline{Z} (a) Allowable particle size distribution, and Atterberg limits including shrinkage limit; S \square _____ N/A \square N/C ot Z(b) Placement moisture and dry density criteria; Maximum laboratory-determined saturated hydraulic (c) conductivity using simulated leachate; S \square _____ N/A \square N/C $ot \square$ (d) Minimum thickness of soil liner; Lift thickness; (e) S \square _____ N/A \square N/C $ot \square$ (f) Surface preparation (scarification); S \square _____ N/A \square N/C ot ZType and percentage of clay mineral within the soil (g) component; S □ N/A □ N/C ☑ (5)Procedures for constructing and using a field test section to document the desired saturated hydraulic conductivity and thickness can be achieved in the field; g. If a Class III landfill is to be constructed with a bottom liner system, provide a description of how the minimum requirements for the liner

will be achieved:

PART G CONTINUED LOCATION S \square N/A \square N/C \square 3. Leachate collection and removal system (LCRS); (62-701.400(4), FAC) a. The primary and secondary LCRS requirements; (62-701.400(4)(a), FAC) S \square _____ N/A \square N/C $ot
\square$ (1) Constructed of materials chemically resistant to the waste and leachate: S \square N/A \square N/C \overline{Z} (2) Have sufficient mechanical properties to prevent collapse under pressure; S \square N/A \square N/C \overline{Z} (3)Have granular material or synthetic geotextile to prevent clogging; S \square N/A \square N/C \overline{Z} (4) Have a method for testing and cleaning clogged pipes or contingent designs for reducing leachate around failed areas: b. Other LCRS requirements; (62-701.400(4)(b), (c) and (d), FAC (1) Bottom 12 inches having hydraulic conductivity ≥ 1 x 10³ cm/sec: S \square _____ N/A \square N/C ot ZTotal thickness of 24 inches of material chemically resistant (2) to the waste and leachate: S \square N/A \square N/C \overline{Z} (3)Bottom slope design to accommodate for predicted settlement and still meet minimum slope requirements; S \square N/A \square N/C \overline{Z} (4) Demonstration that synthetic drainage material, if used, is equivalent or better than granular material in chemical compatibility, flow under load, and protection of geomembranes liner; S \square _____ N/A \square N/C ot Z(5)Schedule provided for routine maintenance of LCRS. 4. Leachate recirculation; (62-701.400(5), FAC) S \square _____ N/A \square N/C ot Za. Describe general procedures for recirculating leachate; S □ _____ N/A □ N/C 🗹 b. Describe procedures for controlling leachate runoff and minimizing mixing of leachate runoff with storm water; S \square _____ N/A \square N/C $ot
\square$ c. Describe procedures for preventing perched water conditions and

gas buildup;

LOCATION PART G CONTINUED S \square N/A \square N/C \not Z d. Describe alternate methods for leachate management when it cannot be recirculated due to weather or runoff conditions, surface seeps, wind-blown spray, or elevated levels of leachate head on the e. Describe methods of gas management in accordance with Rule 62-701.530, FAC; S \square N/A \square N/C \square f. If leachate irrigation is proposed, describe treatment methods and standards for leachate treatment prior to irrigation over final cover, and provide documentation that irrigation does not contribute significantly to leachate generation; S \square _____ N/A \square N/C $ot \square$ 5. Leachate storage tanks and leachate surface impoundments; (62-701.400(6), FAC) a. Surface impoundment requirements; (62-701.400(6)(b), FAC) S \square N/A \square N/C $\not Z$ (1) Documentation that the design of the bottom liner will not be adversely impacted by fluctuations of the ground water; (2) Designed in segments to allow for inspection and repair, as needed, without interruption of service; (3)General design requirements; (a) Double liner system consisting of an upper and lower 60-mil minimum thickness geomembrane; (b) Leak detection and collection system with hydraulic conductivity ≥ 1 cm/sec; (c) Lower geomembrane place on subbase ≥ 6 inches thick with $k \le 1 \times 10^{-5}$ cm/sec or on an approved geosynthetic clay liner with $k \le 1 \times 10^{-7}$ cm/sec; (d) Design calculation to predict potential leakage through the upper liner; S \square _____ N/A \square N/C $ot \square$ (e) Daily inspection requirements, and notification and corrective action requirements if leakage rates exceed that predicted by design calculations; S \square N/A \square N/C \square (4) Description of procedures to prevent uplift, if applicable;

PART G CONTINUED LOCATION S \square N/A \square N/C ot Z(5) Design calculations to demonstrate minimum two feet of freeboard will be maintained; (6)Procedures for controlling vectors and off-site odors; S \square N/A \square N/C $\not \square$ b. Above-ground leachate storage tanks; (62-701.400(6)(c), FAC) S \square N/A \square N/C \square (1) Describe tank materials of construction and ensure foundation is sufficient to support tank; (2)Describe procedures for cathodic protection for the tank, if needed; (3) Describe exterior painting and interior lining of the tank to protect it from the weather and the leachate stored; S \square N/A \square N/C \square (4) Describe secondary containment design to ensure adequate capacity will be provided and compatibility of materials of construction; S \square _____ N/A \square N/C ot Z(5)Describe design to remove and dispose of stormwater from the secondary containment system; S \square N/A \square N/C $\not \square$ (6) Describe an overfill prevention system, such as level sensors, gauges, alarms, and shutoff controls to prevent overfilling; S \square N/A \square N/C ot Z(7) Inspections, corrective action, and reporting requirements; (a) Weekly inspection of overfill prevention system; S \square _____ N/A \square N/C ot Z(b) Weekly inspection of exposed tank exteriors; (c) Inspection of tank interiors when tank is drained, or at least every three years; S \square N/A \square N/C \square Procedures for immediate corrective action if failures (d) detected; Inspection reports available for Department review; (e)

S \square N/A \square N/C \square

c. Underground leachate storage tanks; (62-701.400(6)(d), FAC)

PART G CONTINUED LOCATION (1) Describe materials of construction: A double-walled tank design system to be used with the (2)following requirements: S □ N/A ☑ N/C □ Interstitial space monitoring at least weekly; (a) S \square _____ N/A \overline{Z} N/C \square (b) Corrosion protection provided for primary tank interior and external surface of outer shell; (c) Interior tank coatings compatible with stored leachate; S □ _____ N/A ☑ N/C □ Cathodic protection inspected weekly and repaired (d) as needed; S □ N/A ☑ N/C □ (3)Describe an overfill prevention system, such as level sensors, gauges, alarms, and shutoff controls to prevent overfilling, and provide for weekly inspections; (4) Inspection reports available for Department review; S □ _____ N/A □ N/C ☑ 6. Liner systems construction quality assurance (CQA); (62-701.400(7), FAC) a. Provide CQA Plan including: S \square _____ N/A \square N/C ot ZSpecifications and construction requirements for liner (1) system; S \square N/A \square N/C \square (2) Detailed description of quality control testing procedures and frequencies: S \square N/A \square N/C ot ZIdentification of supervising professional engineer; (3) Identify responsibility and authority of all appropriate (4) organizations and key personnel involved in the construction project; S \square _____ N/A \square N/C ot Z(5) State qualifications of CQA professional engineer and

support personnel;

LOCATION PART G CONTINUED S \square N/A \square N/C ot Z(6)Description of CQA reporting forms and documents; b. An independent laboratory experienced in the testing of geosynthetics to perform required testing; S \square N/A \square N/C $\not \square$ 7. Soil liner CQA; (62-701.400(8), FAC) S \square _____ N/A \square N/C $ot
\square$ a. Documentation that an adequate borrow source has been located with test results, or description of the field exploration and laboratory testing program to define a suitable borrow source; b. Description of field test section construction and test methods to be implemented prior to liner installation; S \square _____ N/A \square N/C $ot
\square$ c. Description of field test methods, including rejection criteria and corrective measures to insure proper liner installation: S \square N/A \square N/C \overline{Z} 8. For surface water management systems at aboveground disposal units, provide documentation showing the design of any features intended to convey stormwater to a permitted or exempted treatment system; (62-701.400(9), FAC) S \square _____ N/A \square N/C $ot
\square$ 9. Gas control systems; (62-701.400(10), FAC) S \square N/A \square N/C \square a. Provide documentation that if the landfill is receiving degradable wastes, it will have a gas control system complying with the requirements of Rule 62-701.530, FAC; S □ N/A ☑ N/C □ 10. For landfills designed in ground water, provide documentation that the landfill will provide a degree of protection equivalent to landfills designed with bottom liners not in contact with ground water; (62-701.400(11), FAC) PART H. HYDROGEOLOGICAL INVESTIGATION REQUIREMENTS (62-701.410(2), FAC) **LOCATION** S \square _____ N/A \square N/C \square 1. Submit a hydrogeological investigation and site report including at least the following information: S \square _____ N/A \square N/C ot Za. Regional and site specific geology and hydrology; b. Direction and rate of ground water and surface water flow including seasonal variations;

LOCATION PART H CONTINUED S \square N/A \square N/C ot Zc. Background quality of ground water and surface water; d. Any on-site hydraulic connections between aguifers; S \square _____ N/A \square N/C ot

ote. Site stratigraphy and aquifer characteristics for confining layers, semi-confining layers, and all aguifers below the site that may be affected by the disposal facility; S \square N/A \square N/C \overline{Z} f. Description of topography, soil types, and surface water drainage systems; g. Inventory of all public and private water wells within a one mile radius of the site including, where available, well top of casing and bottom elevations, name of owner, age and usage of each well, stratigraphic unit screened, well construction technique, and static water level: S \square N/A \square N/C \overline{Z} h. Identify and locate any existing contaminated areas on the site; S \square _____ N/A \square N/C $ot
\square$ i. Include a map showing the locations of all potable wells within 500 feet of the waste storage and disposal areas; S \square _____ N/A \square N/C \square 2. Report signed, sealed, and dated by P.E. and/or P.G. PART I. GEOTECHNICAL INVESTIGATION REQUIREMENTS (62-701.410(3) and (4), FAC) **LOCATION** S \square _____ N/A \square N/C $ot
\square$ 1. Submit a geotechnical site investigation report defining the engineering properties of the site including at least the following: S \square _____ N/A \square N/C $ot
\square$ a. Description of subsurface conditions including soil stratigraphy and ground water table conditions; S \square _____ N/A \square N/C $ot
\square$ b. Investigate for the presence of muck, previously filled areas, soft ground, and lineaments; c. Estimates of average and maximum high water table across the site: S \square _____ N/A \square N/C $ot
\square$ d. Evaluation of potential for fault areas and seismic impact zones; e. Foundation analysis including:

LOCATION PART I CONTINUED S \square N/A \square N/C ot Z(1) Foundation bearing capacity analysis; (2)Total and differential subgrade settlement analysis; S \square _____ N/A \square N/C $ot
\square$ Slope stability analysis; (3)S \square _____ N/A \square N/C ot Zf. Evaluation of potential for sinkholes and sinkhole activity at the site that is based upon the investigations required in Rule 62-701.410(3)(f), F.A.C.; S \square ______ N/A \square N/C \square g. A geotechnical report providing a description of methods used in the investigation, and includes soil boring logs, laboratory results, analytical calculations, cross sections, interpretations, conclusions, and a description of any engineering measures proposed for the site; S \square _____ N/A \square N/C $ot
\square$ 2. Report signed, sealed, and dated by P.E. and/or P.G. PART J. **VERTICAL EXPANSION OF LANDFILLS** (62-701.430, FAC) **LOCATION** S □ N/A ☑ N/C □ 1. Describe how the vertical expansion shall not cause or contribute to any violations of water quality standards or criteria, shall not cause objectionable odors, or adversely affect the closure design of the existing landfill; S \square _____ N/A \overline{Z} N/C \square 2. Describe how the vertical expansion over unlined landfills will meet the requirements of Rule 62-701.400, FAC with the exceptions of Rule 62-701.430(1)(c), FAC; 3. Provide foundation and settlement analysis for the vertical expansion; S \square _____ N/A \overline{Z} N/C \square 4. Provide total settlement calculations demonstrating that the final elevations of the lining system, gravity drainage, and no other component of the design will be adversely affected; S \square N/A \overline{Z} N/C \square 5. Minimum stability factor of safety of 1.5 for the lining system component interface stability and for deep stability; 6. Provide documentation to show the surface water management system will not be adversely affected by the vertical expansion; S \square N/A \overline{Z} N/C \square 7. Provide gas control designs to prevent accumulation of gas under the new liner for the vertical expansion;

PART K. LANDFILL OPERATION REQUIREMENTS (62-701.500, FAC)

	LOCATION		
s□_		N/A □ N/C ☑	1. Provide documentation that the landfill will have at least one trained operator during operation and at least one trained spotter at each working face; (62-701.500(1), FAC)
s 🗆 _		N/A □ N/C 🗷	2. Provide a landfill operation plan including procedures for: (62-701.500(2), FAC)
s□_		N/A □ N/C 🗹	a. Designating responsible operating and maintenance personnel;
s 🗆 _		N/A □ N/C 🗷	b. Emergency preparedness and response, as required in subsectio 62-701.320(16), FAC;
s 🗆 _		N/A □ N/C 🗹	c. Controlling types of waste received at the landfill;
s 🗆 _		N/A □ N/C 🗹	d. Weighing incoming waste;
s 🗆 _		N/A □ N/C 🗹	e. Vehicle traffic control and unloading;
s 🗆 _		N/A □ N/C 🗹	f. Method and sequence of filling waste;
s 🗆 _		N/A □ N/C 🗹	g. Waste compaction and application of cover;
s 🗆 _		N/A □ N/C 🗹	h. Operations of gas, leachate, and stormwater controls;
s 🗆 _		N/A □ N/C 🗹	i. Water quality monitoring;
s 🗆 _		N/A □ N/C 🗹	j. Maintaining and cleaning the leachate collection system;
s□ _		N/A □ N/C 🗷	3. Provide a description of the landfill operation record to be used at the landfill, details as to location of where various operational records will be kep (i.e. DEP permit, engineering drawings, water quality records, etc.); (62-701.500(3), FAC)
s 🗆 _		N/A □ N/C ☑	4. Describe the waste records that will be compiled monthly and provided to the Department annually; (62-701.500(4), FAC)
s □ _		N/A □ N/C 🗷	5. Describe methods of access control; (62-701.500(5), FAC)
s 🗆 _		N/A □ N/C 🗹	6. Describe load checking program to be implemented at the landfill to discourage disposal of unauthorized waste at the landfill; (62-701.500(6), FAC)

PART K CONTINUED **LOCATION** S \square N/A \square N/C \square 7. Describe procedures for spreading and compacting waste at the landfill that include: (62-701.500(7), FAC) S \square N/A \square N/C \square a. Waste layer thickness and compaction frequencies; S \square N/A \square N/C $\not \square$ b. Special considerations for first layer of waste placed above the liner and leachate collection system; S \square N/A \square N/C \overline{Z} c. Slopes of cell working face and side grades above land surface, and planned lift depths during operation; d. Maximum width of working face; S \square _____ N/A \square N/C $ot
\square$ e. Description of type of initial cover to be used at the facility that controls: S \square _____ N/A \square N/C $ot
\square$ (1) Vector breeding/animal attraction; S \square N/A \square N/C ot Z(2)Fires: S \square _____ N/A \square N/C ot Z(3) Odors: S \square _____ N/A \square N/C $ot
\square$ (4) Blowing litter; S \square N/A \square N/C ot ZMoisture infiltration; (5)S \square N/A \square N/C \overline{Z} f. Procedures for applying initial cover, including minimum cover frequencies; S \square _____ N/A \square N/C $ot
\square$ g. Procedures for applying intermediate cover; S \square _____ N/A \square N/C ot Zh. Time frames for applying final cover; i. Procedures for controlling scavenging and salvaging; S \square _____ N/A \square N/C $ot
\square$ j. Description of litter policing methods;

k. Erosion control procedures;

S \square _____ N/A \square N/C \square

LOCATION PART K CONTINUED Eng Rep. K.8 $_{\rm N/A}$ \square N/C \square 8. Describe operational procedures for leachate management including: (62-701.500(8), FAC) S \square N/A \square N/C \square a. Leachate level monitoring; Eng Rep. K.8 N/A N/C N b. Operation and maintenance of leachate collection and removal system, and treatment as required; S \square N/A \square N/C \overline{Z} c. Procedures for managing leachate if it becomes regulated as a hazardous waste: d. Identification of treatment or disposal facilities that may be used for off-site discharge and treatment of leachate; S \square N/A \square N/C \square e. Contingency plan for managing leachate during emergencies or equipment problems; S \square N/A \square N/C \overline{Z} f. Procedures for recording quantities of leachate generated in gal/day and including this in the operating record; S \square N/A \square N/C \square g. Procedures for comparing precipitation experienced at the landfill with leachate generation rates and including this information in the operating record; S \square _____ N/A \square N/C ot Zh. Procedures for water pressure cleaning or video inspecting leachate collection systems; S \square N/A \square N/C ot Z9. Describe how the landfill receiving degradable wastes shall implement a gas management system meeting the requirements of Rule 62-701.530, FAC; (62-701.500(9), FAC) 10. Describe procedures for operating and maintaining the landfill stormwater management system to comply with the requirements of Rule 62-701.400(9), FAC; (62-701.500(10), FAC) 11. Equipment and operation feature requirements; (62-701.500(11), FAC) S \square _____ N/A \square N/C $ot \square$ a. Sufficient equipment for excavating, spreading, compacting, and

covering waste;

b. Reserve equipment or arrangements to obtain additional

equipment within 24 hours of breakdown;

c. Communications equipment;

S \square _____ N/A \square N/C $ot
\square$

S \square N/A \square N/C \square

PART K CONTINUED LOCATION S \square N/A \square N/C ot Zd. Dust control methods; e. Fire protection capabilities and procedures for notifying local fire department authorities in emergencies; S \square N/A \square N/C $\not \square$ f. Litter control devices; S \square _____ N/A \square N/C $ot
\square$ g. Signs indicating operating authority, traffic flow, hours of operation, and disposal restrictions; S \square _____ N/A \square N/C \square 12. Provide a description of all-weather access road, inside perimeter road, and other on-site roads necessary for access at the landfill; (62-701.500(12), FAC) S \square N/A \square N/C \overline{Z} 13. Additional record keeping and reporting requirements; (62-701.500(13), FAC) S \square N/A \square N/C \overline{Z} a. Records used for developing permit applications and supplemental information maintained for the design period of the landfill; b. Monitoring information, calibration and maintenance records, and copies of reports required by permit maintained for at least 10 years; S \square N/A \square N/C \square c. Maintain annual estimates of the remaining life of constructed landfills, and of other permitted areas not yet constructed, and submit this estimate annually to the Department; S □ N/A □ N/C ☑ d. Procedures for archiving and retrieving records which are more than five years old; PART L. WATER QUALITY MONITORING REQUIREMENTS (62-701.510, FAC) LOCATION S \square N/A \square N/C \overline{Z} 1. A water quality monitoring plan shall be submitted describing the proposed ground water and surface water monitoring systems, and shall meet at least the following requirements: S \square N/A \square N/C \square a. Based on the information obtained in the hydrogeological investigation and signed, dated, and sealed by the P.G. or P.E. who prepared it; (62-701.510(2)(a), FAC)

PART L CONTINUED **LOCATION** S \square N/A \square N/C ot Zb. All sampling and analysis performed in accordance with Chapter 62-160, FAC; (62-701.510(2)(b), FAC) c. Ground water monitoring requirements; (62-701.510(3), FAC) S \square N/A \square N/C $\not \square$ Detection wells located downgradient from and within 50 feet (1) of disposal units: S \square N/A \square N/C \overline{Z} (2)Downgradient compliance wells as required; (3) Background wells screened in all aquifers below the landfill that may be affected by the landfill; S \square _____ N/A \square N/C $ot \square$ (4) Location information for each monitoring well; S \square _____ N/A \square N/C ot Z(5) Well spacing no greater than 500 feet apart for downgradient wells and no greater than 1500 feet apart for upgradient wells, unless site specific conditions justify alternate well spacings; S \square N/A \square N/C $\not \square$ (6) Properly selected well screen locations; Monitoring wells constructed to provide representative (7) ground water samples; S \square N/A \square N/C \square Procedures for properly abandoning monitoring wells; (8)(9)Detailed description of detection sensors, if proposed; S \square N/A \square N/C \overline{Z} d. Surface water monitoring requirements; (62-701.510(4), FAC) S \square _____ N/A \square N/C $ot \square$ (1) Location of and justification for all proposed surface water monitoring points; S \square _____ N/A \square N/C $ot \square$ (2)Each monitoring location to be marked and its position determined by a registered Florida land surveyor; e. Initial and routine sampling frequency and requirements; (62-701.510(5), FAC) S □ N/A □ N/C ☑ Initial background ground water and surface water sampling (1)

and analysis requirements:

PART L CONTINUED **LOCATION** S \square N/A \square N/C ot Z(2) Routine monitoring well sampling and analysis requirements; (3)Routine surface water sampling and analysis requirements; S \square _____ N/A \square N/C $ot
\square$ f. Describe procedures for implementing evaluation monitoring, prevention measures, and corrective action as required; (62-701.510(6), FAC) S \square N/A \square N/C \overline{Z} g. Water quality monitoring report requirements; (62-701.510(8), FAC) (1) Semi-annual report requirements; (see paragraphs 62-701.510(5)(c) and (d), FAC for sampling frequencies) S \square _____ N/A \square N/C ot Z(2) Documentation that the water quality data shall be provided to the Department in an electronic format consistent with requirements for importing into Department databases, unless an alternate form of submittal is specified in the (3) Two and one-half year, or annual, report requirements, or every five years if in long-term care, signed dated, and sealed by P.G. or P.E.; PART M. SPECIAL WASTE HANDLING REQUIREMENTS (62-701.520, FAC) **LOCATION** S \square _____ N/A \square N/C $ot
\square$ 1. Describe procedures for managing motor vehicles; (62-701.520(1), FAC) S \square _____ N/A \square N/C $ot
\square$ 2. Describe procedures for landfilling shredded waste; (62-701.520(2), FAC) 3. Describe procedures for asbestos waste disposal; (62-701.520(3), FAC) S \square _____ N/A \square N/C $ot
\square$ 4. Describe procedures for disposal or management of contaminated soil; (62-701.520(4), FAC) S \square N/A \square N/C \not Z 5. Describe procedures for disposal of biological wastes; (62-701.520(5), FAC)

PART N. GAS MANAGEMENT SYSTEM REQUIREMENTS (62-701.530, FAC)

	LOCATION		
s 🗆 _		N/A □ N/C ☑	1. Provide documentation for a gas management system that will: (62-701.530(1), FAC)
s 🗆 .		N/A □ N/C ☑	a. Be designed to prevent concentrations of combustible gases from exceeding 25% the LEL in structures and 100% the LEL at the property boundary;
s 🗆 _		N/A □ N/C 🗹	b. Be designed for site specific conditions;
s 🗆 .		N/A □ N/C ☑	c. Be designed to reduce gas pressure in the interior of the landfill;
s 🗆 _		N/A □ N/C ☑	d. Be designed to not interfere with the liner, leachate control system, or final cover;
s□ ₋		N/A □ N/C ☑	2. Provide documentation that will describe locations, construction details, and procedures for monitoring gas at ambient monitoring points and with soil monitoring probes; (62-701.530(2), FAC)
s 🗆 _		N/A □ N/C ☑	3. Provide documentation describing how the gas remediation plan and odor remediation plan will be implemented; (62-701.530(3), FAC)
s 🗆 _		N/A □ N/C ☑	4. Landfill gas recovery facilities; (62-701.530(5), FAC)
s 🗆 _		N/A □ N/C ☑	a. Provide information required in Rules 62-701.320(7) and 62-701.330(3), FAC;
s 🗆 _		N/A □ N/C ☑	b. Provide information required in Rule 62-701.600(4), FAC, where relevant and practical;
s 🗆 _		N/A □ N/C ☑	c. Provide estimates of current and expected gas generation rates and description of condensate disposal methods;
s 🗆 _		N/A □ N/C ☑	d. Provide description of procedures for condensate sampling, analyzing, and data reporting;
s 🗆 _		N/A □ N/C ☑	e. Provide closure plan describing methods to control gas after recovery facility ceases operation, and any other requirements contained in Rule 62-701.400(10), FAC;

PART O. LANDFILL FINAL CLOSURE REQUIREMENTS (62-701.600, FAC)

LOCATION S \square N/A \square N/C \square 1. Closure permit requirements; (62-701.600(2), FAC) S \square _____ N/A \square N/C \square a. Application submitted to the Department at least 90 days prior to final receipt of wastes; S \square _____ N/A \square N/C $ot \square$ b. Closure plan shall include the following: S \square _____ N/A \square N/C $ot \square$ Closure design plan; (1) S \square _____ N/A \square N/C $ot \square$ (2)Closure operation plan; Plan for long-term care; (3)(4) A demonstration that proof of financial assurance for longterm care will be provided; 2. Closure design plan including the following requirements: (62-701.600(3), FAC) S \square _____ N/A \square N/C $ot \square$ a. Plan sheet showing phases of site closing; S \square N/A \square N/C \square b. Drawings showing existing topography and proposed final grades; S \square _____ N/A \square N/C $ot \overline{\square}$ c. Provisions to close units when they reach approved design dimensions; S \square _____ N/A \square N/C $ot \square$ d. Final elevations before settlement; e. Side slope design including benches, terraces, down slope drainage ways, energy dissipaters, and description of expected precipitation effects; S \square _____ N/A \square N/C $ot \square$ f. Final cover installation plans including: S \square _____ N/A \square N/C \square (1) CQA plan for installing and testing final cover; S \square N/A \square N/C \overline{Z} Schedule for installing final cover after final receipt of waste; (2)S □ N/A □ N/C ☑ Description of drought resistant species to be used in the (3)vegetative cover;

PART O CONTINUED LOCATION S \square N/A \square N/C ot Z(4) Top gradient design to maximize runoff and minimize erosion: S \square _____ N/A \square N/C $ot
\square$ Provisions for cover material to be used for final cover (5)maintenance: S \square _____ N/A \square N/C $ot
\square$ g. Final cover design requirements; (1) Protective soil layer design; S \square _____ N/A \square N/C $ot
\square$ Barrier soil layer design; (2)Erosion control vegetation; (3) S \square _____ N/A \square N/C ot Z(4) Geomembrane barrier layer design; S \square _____ N/A \square N/C $ot
\square$ Geosynthetic clay liner design, if used; (5)(6) Stability analysis of the cover system and the disposed waste: S \square N/A \square N/C ot Zh. Proposed method of stormwater control; S \square _____ N/A \square N/C $ot
\square$ i. Proposed method of access control; S \square _____ N/A \square N/C $ot
\square$ j. Description of the proposed or existing gas management system which complies with Rule 62-701.530, FAC; S \square _____ N/A \square N/C $ot
\square$ 3. Closure operation plan shall include: (62-701.600(4), FAC) S \square _____ N/A \square N/C $ot
\square$ a. Detailed description of actions which will be taken to close the landfill: S \square _____ N/A \square N/C ot Zb. Time schedule for completion of closing and long-term care; c. Describe proposed method for demonstrating financial assurance for long-term care; S \square _____ N/A \square N/C $ot
\square$ d. Operation of the water quality monitoring plan required in Rule 62-701.510, FAC;

S \square N/A \square N/C ot Z

e. Development and implementation of gas management system

required in Rule 62-701.530, FAC;

PART O CONTINUED LOCATION S \square N/A \square N/C \square 4. Certification of closure construction completion and final reports including: (62-701.600(6), FAC) a. Survey monuments; (62-701.600(6)(a), FAC) b. Final survey report; (62-701.600(6)(b), FAC) c. Closure construction quality assurance report; (62-701.400(7), FAC) S \square _____ N/A \square N/C $ot
\square$ 5. Declaration to the public; (62-701.600(7), FAC) 6. Official date of closing; (62-701.600(8), FAC) 7. Justification for and detailed description of procedures to be followed for temporary closure of the landfill, if desired; (62-701.600(9), FAC) PART P. OTHER CLOSURE PROCEDURES (62-701.610, FAC) **LOCATION** 1. Describe how the requirements for use of closed solid waste disposal areas will be achieved; (62-701.610(1), FAC) S \square N/A \square N/C \square 2. Describe how the requirements for relocation of wastes will be achieved; (62-701.610(2), FAC) PART Q. **LONG-TERM CARE** (62-701.620, FAC) LOCATION S \square _____ N/A \square N/C $ot
\square$ 1. Maintaining the gas collection and monitoring system; (62-701.620(5), FAC) 2. Stabilization report requirements; (62-701.620(6), FAC) S \square _____ N/A \square N/C $ot
\square$ 3. Right of access; (62-701.620(7), FAC) S \square N/A \square N/C \square 4. Requirements for replacement of monitoring devices; (62-701.620(8), FAC) S \square _____ N/A \square N/C \square 5. Completion of long-term care signed and sealed by professional engineer; (62-701.620(9), FAC)

PART R. FINANCIAL ASSURANCE (62-701.630, FAC)

	LOCATION		
s□		N/A □ N/C ☑	1. Provide cost estimates for closing, long-term care, and corrective action costs estimated by a P.E. for a third party performing the work, on a per unit basis, with the source of estimates indicated; (62-701.630(3) & (7), FAC)
s□		N/A □ N/C ☑	2. Describe procedures for providing annual cost adjustments to the Department based on inflation and changes in the closing, long-term care, and corrective action plans; (62-701.630(4) & (8), FAC)
s□		N/A □ N/C 🗹	3. Describe funding mechanisms for providing proof of financial assurance and include appropriate financial assurance forms. (62-701.630(5), (6), & (9) FAC)

PART S. CERTIFICATION BY APPLICANT AND ENGINEER OR PUBLIC OFFICER

1.	Applican	t
1.	Applicali	Į

The undersigned applicant or authorized representat	_{ive of} Hillsborough County
Solid Waste Management Division is aware that	at statements made in this form and attached informatio
are an application for a Operation Minor Modification Protection, and certifies that the information in this application	n_ permit from the Florida Department of Environmental oplication is true, correct, and complete to the best of sed agrees to comply with the provisions of Chapter 403
transferable, and the Department will be notified prior Live Signature of Applicant of Agent	r to the sale or legal transfer of the permitted facility. 332 North Falkenburg Road Mailing Address
Kimberly A. Byer, Director, SWMD Name and Title (please type)	Tampa, FL 33619 City, State, Zip Code
byerk@hillsborough.org E-Mail Address (if available)	(813) 612-7718 Telephone Number
	_{Date:} August 3, 2018

Attach letter of authorization if agent is not a government official, owner, or corporate officer.

2. Professional Engineer registered in Florida (or Public Officer if authorized under Sections 403.707 and 403.7075, Florida Statutes):

This is to certify that the engineering features of this solid waste management facility have been designed/examined by me and found to conform to engineering principles applicable to such facilities. In my professional judgment, this facility, when properly maintained and operated, will comply with all applicable statutes of the State of Florida and rules of the Department. It is agreed that the undersigned will provide the applicant with a set of instructions of proper maintenance and operation of the facility.

Signature
Robert B. Curtis, P.E.

Name and Title (please type)

FL PE#73758 OBERT B.
Florida Registration Number (please affix soal)

ORIDA

ORIDA

ORIDA

ORIDA

3922 Coconut Palm Drive, Suite 102

Mailing Address

Tampa, FL 33619

City, State, Zip Code

bcurtis@scsengineers.com

E-Mail Address (if available)

, 813 , 621-0080

Telephone Number

Date: August 3, 2018

A. GENERAL INFORMATION

On behalf of Hillsborough County Solid Waste Management Division (SWMD), SCS Engineers (SCS) has prepared this Operations Permit Minor Modification Application for the revised Leachate Management Plan (LMP) at the Southeast County Landfill (SCLF). Information provided in this application is in accordance with and divided into Sections following the State of Florida Department of Environmental Protection (FDEP) Application for a Permit to Construct, Operate, Modify or Close a Solid Waste Management Facility Application Form 62-701.900(1), FAC.

The revised LMP incorporates changes regarding supplemental leachate removal points and temporary forcemains associated with leachate generated at the Temporary Biosolids Compost Area and the Temporary Ash-Reuse Aggregate Screening Area. Supplemental leachate removal points include Pump Station 2 (PS-2) and two dewatering well nests located in Phase I and Phase II of the SCLF. The revised LMP is included with this application as **Appendix A** with changes identified in redline and strikeout.

The Operations Plan has been updated to correctly reference the updated LMP in Section K.2.j and Section K.8. Additionally, the date of the Operations Plan has been changed to July 2018. A copy of the revised Operations Plan with changes marked in redline and strikeout is provided as **Appendix B**.

This permit minor modification will also request two changes to the Operation Permit. The Section C.12.c references Specific Condition A.7, which no longer exists. The Operation Permit should be corrected to reference Specific condition A.6 instead. Additionally, the third item in Attachment 1 of the Operation Permit, referencing Specific Condition C.12.c should list a date of November 1, 2018 instead of March 1, 2018. An Operation Permit is provided as **Appendix C** with changes identified in redline and strikeout.

A.1 LANDFILL DESCRIPTION

The Phases I-VI disposal area encompasses 162.4 acres; Section 7, 8, and 9 of the Capacity Expansion Area encompasses 34.5 acres. Phase I-VI and Sections 7, 8, and 9 are permitted by the Florida Department of Environmental Protection (FDEP) as a Class I landfill. Currently waste filling operations are conducted in Phases I-VI, Lift 16A (Phases IV and VI). The SCLF facility currently receives an average of 800 tons per day (tpd), with a maximum of 2,000 tpd. The SCLF facility receives ash residue from incinerated Municipal Solid Waste and nonprocessable and bypass MSW as well as ash and waste from unincorporated Hillsborough County, the City of Tampa, and Temple Terrace. The SCLF facility currently has the following active permits:

- Phases I-VI, Capacity Expansion Area (Sections 7, 8, and 9) Class I Landfill, and Leachate
 Treatment and Reclamation Facility (LTRF): FDEP Operation Permit #35435-022-01 –
 Revised through Interim Modification #35435-023-SO-IM and Minor Modification #35435024-MM
- SCLF Title V Air Operation Permit: FDEP Permit #0570854-009-AV
- Waste Tire Processing Facility (WTPF): FDEP Permit #126787-005-WT-02
- Stormwater Management Facilities: Southwest Florida Water Management District Permit #100330 and U.S. Environmental Protection Agency (U.S. EPA) National Pollution Discharge Elimination System Permit #FLR05B
- FDEP Environmental Resource Program: FDEP Permit #29-0270881-004

D				INFORMATION	
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See Permit Application Form (page 6 of 36) for this information.

C. PROHIBITIONS

Disposal areas at the SCLF facility, specifically the Capacity Expansion Area (Section 7, 8, and 9) and the Phase I-VI area, have been permitted by FDEP and are located within the property boundaries of the SCLF. The Capacity Expansion Area and the Phase I-VI operations will not change due to this Minor Modification Application and remain valid as permitted in the June 2013 Operations Permit Renewal. All prohibition requirements for the disposal area and operations of the Capacity Expansion Area and the Phase I-VI disposal area remain valid as verified in the June 2013 Operations Permit Renewal and do not change as part of this Operations Permit Minor Modification Application.

D. SOLID WASTE FACILITY PERMITTING REQUIREMENTS, GENERAL

D.1 APPLICATION FORM AND SUPPORTING DOCUMENTS

One hard copy and one electronic copy of the application form, supporting data and reports are included with this permit application.

D.2 ENGINEERING CERTIFICATION

This permit application has been certified, signed, and sealed by Robert B. Curtis, P.E., a Licensed Engineer in the State of Florida (License No. 73758).

D.3 TRANSMITTAL LETTER

A transmittal letter is included at the beginning of this submittal.

D.4 APPLICATION FORMS

DEP Form No. 62-701.900(1), effective February 15, 2015, is included with this submittal.

D.5 PERMIT FEE

Enclosed with this application is a check in the amount of \$250 made payable to Florida Department of Environmental Protection in accordance with the fee schedule listed in Rule 62-701.320(4)(b), F.A.C.

D.7 OPERATIONS AND CLOSURE PLAN

Please refer to **Appendix B** for updates to the currently approved Operations Plan, dated April 2017. The date of the Operations Plan has been updated to July 2018, and references to the revised Leachate Management Plan (LMP). Sections K.2.j and K.8 have been updated to refer to the current LMP. Updates to the Operations Plan due to this Minor Permit Modification are shown in redline and strikeout for convenience of review.

Additionally, the updated LMP is incorporated by reference in Section K.2.j and K.8 of the Operation Plan. The LMP has been updated to account for recently constructed header access cleanouts, new leachate pumping locations, and leachate handling processes for the Temporary Biosolids Compost Area and the Temporary Ash-Reuse Aggregate Screening Area. A more comprehensive list of LMP changes is discussed in Section K of this report. An updated LMP with text changes shown in redline and strikeout is provided as **Appendix A**.

D.12 ENFORCEMENT HISTORY

Table D-1 below summarizes enforcement history for the applicant, the SWMD. Based on a review of the SCLF files and information provided by Hillsborough County staff responsible for the SCLF, the applicant is not aware of any other enforcement actions relative to the County's other solid waste

operations. Any errors or omissions are not to be construed as a misrepresentation of the facts. Should FDEP have additional information in their files, the SWMD will concede to FDEP's data.

Table 1. Enforcement Action History Hillsborough County Solid Waste Operations

FACILITY	ACTION	STATUS
	FDEP Warning Letter Regarding Turbidity and Consent Agreement issued #WL02-2223SW29SWD 12/9/02	County responded 2/3/03. Measures implemented to reduce turbidity under evaluation for six months.
	FDEP SFCO #10-3622	Closed
Southeast County Landfill	FDEP WL #10 005-SW29SWD	Closed
(SCLF)	FDEP SFCO #09-3117	Closed
	FDEP Consent Order No. 96- 1649 for head over liner 8/5/1996	Leachate Management Plan Developed-Closed
	OGC-CO #09-3117	Closed 12/3/09
	Consent Agreement, OGC # 17-0058	Open – July 28, 2017
Hillsborough Heights/Taylor Road	EPA Consent Decree 6/15/83	Replaced with ROD and Consent Decree No. 98-239- CIV-T-25F
Landfills	EPC SFCO No. 09-3366DW	Closed
Northwest Landfill	DEP Consent Order No. 89-0108	Replaced with Water Quality Monitoring Permit No SF29- 288170
140HHWest Earlaill	#WL92-0011SW29SWD	Closed
	FDEP – CO #08-2838 Open	
Falkenburg Yard and	#WL92-0010SW29SWD	Closed
WW	#WL93-0006SW29SWD	Closed
	EPC WN#15372	Closed

FACILITY	ACTION	STATUS
Northwest Transfer	#WL93-0014SW29SWD	Closed
Station	#WL94-0012SW29SWD	Closed, replaced by general permit #126750-001-SO
South County Transfer Station	EPC Case #05-35153	Closed 8/12/09
	EPC Warning Notice #14629- Ash Residue Management - 1994	Closed
	EPC Warning Notice #14697	Closed
Resource Recovery Facility	EPC WL#16099 lead to CO #99- 0721DML0261-Retrofit for Air Emissions	Closed
raciiiy	EPC CO #03-0824AR0261 – Failure to inject carbon in MWC Unit Numbers 1 & 3	Closed
	EPC Warning Notice #2004- 0506A – Failure to calibrate the opacity CEMs for EU2	Closed
Mango Clay Pit	FDEP – WL #29-8610483 – monitoring only – 10/14/1986	Closed
Sydney Mine	FDEP – CO #87-0627 – Source removal and pump and treat system in 1987 – lead to second Consent Decree – CD 801 – CV- 2466-T-30TBM in 2004 for natural attenuation and continued monitoring	Open – Settlement Agreement
Gunn Highway Landfill	FDEP – CO#92-0622 – required to investigate LFG migration at property boundaries – SWMD currently monitors the site monthly	Open
Pleasant Grove Landfill	FDEP – CO #92-0683 – required contamination assessment and ground and surface water and LFG monitoring	Open – Ground and Surface Water Monitoring (COM_65124) Closed – LFG Monitoring 10/15/15

E. LANDFILL PERMIT REQUIREMENTS

Disposal areas at the facility, specifically the Capacity Expansion Area (Section 7,8, and 9) and the Phase I-VI area, have been permitted by FDEP and are located within the property boundaries of the SCLF. The attached revised Leachate Management Plan (LMP) for Phases I-VI will not require additional disposal areas at the SCLF in order to operate. No changes are proposed to landfill permit requirements as part of this Operations Permit Minor Modification Application.

F. GERNERAL CRITERIA FOR LANDFILL

Disposal areas at the facility, specifically the Capacity Expansion Area (Section 7,8, and 9) and the Phase I-VI area, have been permitted by FDEP and are located within the property boundaries of the SCLF. No changes are proposed to general criteria for landfills as part of this Operations Permit Minor Modification Application.

G. LANDFILL CONSTRUCTION REQUIREMENTS

O .	L'ANDIEL CONGROCHON REGOREMENTS
This section	is not applicable to this application. Landfill Construction is not proposed for the SCLF.

H. HYDROGEOLOGICAL INVESTIGATION REQUIREMENTS

Disposal areas at the facility, specifically the Capacity Expansion Area (Section 7,8, and 9) and the Phase I-VI area, have been permitted by FDEP and are located within the property boundaries of the SCLF. No changes are proposed to hydrogeological investigation requirements as part of this Operations Permit Minor Modification Application.

I. GEOTECHNICAL INVESTIGATION REQUIREMENTS

Disposal areas at the facility, specifically the Capacity Expansion Area (Section 7,8, and 9) and the Phase I-VI area, have been permitted by FDEP and are located within the property boundaries of the SCLF. No changes are proposed to geotechnical investigation requirements as part of this Operations Permit Minor Modification Application.

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J.	VERIICAL	EVLUIN	OF LANDFILL

Not Applicable. A vertical expansion is not proposed for the SCLF.

K. LANDFILL OPERATION REQUIREMENTS

Disposal areas at the facility, specifically the Capacity Expansion Area (Section 7,8, and 9) and the Phase I-VI area, have been permitted by FDEP and are located within the property boundaries of the SCLF. Revision of the Leachate Management Plan will not require additional disposal areas at the SCLF in order to operate. No changes are proposed to landfill operations as part of this Operations Permit Minor Modification Application.

For additional information refer to the Operations Permit Renewal Application, dated June 2013, and subsequent responses, prepared by HDR Engineering, Inc. Supplemental information can be found in the Operation Permit Intermediate Modification, Phases I-VI and Capacity Expansion Area (Sections 7, 8, and 9), dated September 21, 2015, and subsequent responses, prepared by HDR Engineering, Inc. and SCS Engineers as well as the Operation Permit Minor Modification, Revised Fill Sequence Phases I-VI, dated April 10, 2017, and subsequent responses, prepared by SCS Engineers.

K.8 LEACHATE MANAGEMENT

The proposed modifications to the Leachate Management Plan (LMP) incorporate the leachate management procedures for the Temporary Biosolids Compost Area, the Temporary Ash-Reuse Aggregate Screening and Storage Project, Pump Station 2 (PS-2), and updated figures that show newly installed cleanouts and leachate lines associate with the aforementioned temporary project areas. The revised LMP is included as **Appendix A**. Additionally, the as-built survey of the Biosolids Compost Area and the Ash Reuse Study Area leachate collection and conveyance system is provided as **Appendix E**.

Other Changes

- The June 2018 LMP has incorporated revisions to typographical errors, section references, and acronyms for commonly used phrases. An updated LMP with text changes shown in redline and strikeout is provided as **Appendix A**.
- Changes to the drainage and LCRS proposed as part of this Operations Permit Minor Modification Application include incorporation of the cleanouts installed within Phases I, II, and III into the cleaning schedule. All other existing drainage and LCRS features and locations, as approved in the Operating Sequence Drawings, will continue to be maintained during landfilling operations.
- Section 3.1 of the LMP has been updated to remove a statement regarding the high-density polyethylene (HDPE) content of the liner along the perimeter berm. The containment liner barrier is composed of a 36-mil chlorosulfonated polyethylene liner. An updated LMP with text changes shown in redline and strikeout is provided as **Appendix A**.
- LMP Figure 3.1 depicting the Phases I-VI Leachate Collection and Removal System (LCRS) as it is currently understood based on exploration trenching projects conducted from March 2017 through June 2018. New header access cleanouts have been installed in Phase I (CO 1-1, CO 1-2, and CO 1-3), Phase II (CO 2-1, CO 2-2, CO 2-3, and CO 2-4), and Phase III (CO 3-1). The location of four Phase II gravel trenches were also verified during construction of the Phase II Cutoff Trench. Additionally, Figure 3.1 has been updated to show the location of the Temporary Ash-Reuse Aggregate screening and Storage Area leachate conveyance pipe.

- LMP Figure 3.2 has been updated to show the Temporary Biosolids Compost Area leachate conveyance pipe.
- LMP Figure 4.1 has been updated to show the Temporary Compost Pilot Leachate and the Temporary Ash Pilot Leachate. Leachate from these areas will be conveyed via 4" diameter leachate pipe to the double-lined Leachate/Effluent Pond B where leachate will be contained before being trucked to a wastewater treatment plant (WWTP) or piped to the onsite Leachate Treatment and Reclamation Facility (LTRF). Additionally, new symbols have been added to the process diagram to show the Phase I and Phase II Dewatering Wells and PS-2.
- Section 4.1.3 previously referred to Temporary Pump Station 6 (TPS-6). However, TPS-6 was
 decommissioned in 2014 due to lack of liquid. The topic of this section has been replaced
 with a discussion of leachate transmission from PS-2. An updated LMP with text changes
 shown in redline and strikeout is provided as Appendix A.
- Section 4.1.4 has been added to incorporate leachate transmission information regarding the Phase I and Phase II Dewatering Wells. An updated LMP with text changes shown in redline and strikeout is provided as **Appendix A**.
- Section 8.2.1 was added to the 2018 to discuss the Pilot Compost Leachate conveyance and disposal. An updated LMP with text changes shown in redline and strikeout is provided as Appendix A.
- Section 8.2.2 was added to the 2018 to discuss the Pilot Ash-Reuse Leachate conveyance and disposal. An updated LMP with text changes shown in redline and strikeout is provided as **Appendix A**.
- The Section 11.2 standard operating procedures for a spill at the leachate treatment and reclamation facility have been updated to identify the red tank as a glycerin tank and not a methanol tank. An updated LMP with text changes shown in redline and strikeout is provided as Appendix A.
- Section C.12.c in the Operation Permit references Specific Condition A.7, which no longer exists. The reference should be to Specific Condition A.6. A revised Operation Permit with changes identified in redline and strikeout is provided as **Appendix C**.
- The third item in Attachment 1 of the Operations Permit, referencing Specific Permit
 Condition C.12.c, should list a date of November 1, 2018 instead of March 1, 2018. A
 revised Operation Permit with changes identified in redline and strikeout is provided as
 Appendix C.

L. WATER QUALITY MONITORING

Disposal areas at the facility have been permitted by FDEP and are located within the property boundaries of the SCLF. No changes are proposed to water quality monitoring requirements as part of this Operations Permit Minor Modification Application.

M. SPECIAL WASTE HANDLING

Disposal areas at the facility have been permitted by FDEP and are located within the property boundaries of the SCLF. No changes are proposed to special waste handling requirements as part of this Operations Permit Minor Modification Application.

N. GAS MANAGEMENT SYSTEM REQUIREMENTS

Disposal areas at the facility, specifically the Capacity Expansion Area (Section 7,8, and 9) and the Phase I-VI area, have been permitted by FDEP and are located within the property boundaries of the SCLF. No changes are proposed to gas management system requirements as part of this Operations Permit Minor Modification Application.

O. LANDFILL CLOSURE REQUIREMENTS

Disposal areas at the facility, specifically the Capacity Expansion Area (Section 7,8, and 9) and the Phase I-VI area, have been permitted by FDEP and are located within the property boundaries of the SCLF. No changes are proposed to landfill closure requirements as part of this Operations Permit Minor Modification Application.

P	OTHER	CIOSIIRE	PROCEDURES
F _	OITLE	CLUSUKL	FRUCLUURLA

This section is not applicable to this application.

Q. LONG-TERM CARE

Disposal areas at the facility, specifically the Capacity Expansion Area (Section 7,8, and 9) and the Phase I-VI area, have been permitted by FDEP and are located within the property boundaries of the SCLF. No changes are proposed to long-term care requirements as part of this Operations Permit Minor Modification Application.

R. FINANCIAL ASSURANCE

The financial assurance cost estimate submitted to FDEP as part of the Operation Permit Intermediate Modification, Phases I-VI and Capacity Expansion Area (Sections 7, 8, and 9), dated September 21, 2015, and subsequent responses, prepared by HDR Engineering, Inc., included the closure and long-term care costs for both Phases I-VI and the Capacity Expansion Area (Sections 7, 8, and 9). The approved 2018 financial assurance cost estimate, dated March 6, 2018, remains valid. No changes are proposed to financial assurance requirements as part of this Operations Permit Minor Modification Application.

APPENDIX A LEACHATE MANAGEMENT PLAN

Leachate Management Plan Phases I-VI and The Capacity Expansion Area Southeast County Landfill Hillsborough County, Florida



Hillsborough County - Public Utilities Department Solid Waste Management Group (SWMG) 332 N. Falkenburg Road Tampa, FL 33619

Florida Board of Professional Engineers Certificate No. 00004892

SCS ENGINEERS

09215600.06 | August 2018

3922 Coconut Palm Drive, Suite 102 Tampa, FL 33619 813-621-0080

LEACHATE MANAGEMENT PLAN PHASES I-VI AND THE CAPACITY EXPANSION AREA SOUTHEAST COUNTY LANDFILL HILLSBOROUGH COUNTY, FLORIDA

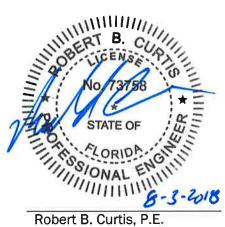
Presented To:
Hillsborough County
Public Utilities Department
Solid Waste Management Group (SWMG)
332 N. Falkenburg Road
Tampa, FL 33619

Presented From:

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Florida Board of Professional Engineers
Certificate No. 00004892

August 2018 File No. 09215600.06



Robert B. Curtis, P.E. FL Reg. No. 73758

Table of Contents

Sect	ion			Page		
1.0	Leachate Management					
2.0	Leac	hate Generation				
3.0	Leac	hate Co	ollection systems	3		
	3.1	Phase	s I-VI Leachate Collection	3		
	3.2	Capac	ity Expansion Area Leachate Collection	3		
		3.2.1	Section 7	3		
		3.2.2	Section 8	6		
		3.2.3	Section 9	7		
4.0	Leac	hate Tra	ansmission	8		
	4.1	Phase	s I-VI	8		
		4.1.1	Pump Station A (PS-A)	8		
		4.1.2	Pump Station B (PS-B)	8		
		4.1.3	Pump Station 2 (PS-2)	10		
		4.1.4	Dewatering Wells	10		
	4.2	Capac	ity Expansion Area	10		
		4.2.1	Section 7 - Pump Station 7 (PS-7)	10		
		4.2.2	Section 8 – (No Pumping Systems)	10		
		4.2.3	Section 9 - Pump Station 9 (PS-9)	10		
	4.3	Main L	Leachate Pump Station (MLPS)	11		
5.0	Leac	hate St	orage Tank (T1)	12		
	5.1	T1 Sec	condary Containment System	12		
	5.2	T1 Liq	uid Level Monitoring	12		
	5.3	T1 Ext	erior and Interior Inspections	12		
6.0	Leac	hate Tre	eatment and Reclamation Facility (LTRF)	14		
7.0	Efflu	ent/Lea	achate Storage Tank (T6)	15		
	7.1	T6 Sec	condary Containment system	15		
	7.2	T6 Liq	uid Level Monitoring	16		
	7.3	T6 Ext	erior and Interior Inspections	16		
	7.4	Acid M	lixer and Tank	16		
8.0	Leac	hate an	nd Effluent Disposal	18		
	8.1	Effluer	nt Storage Pond	18		
	8.2	Effluer	nt/Leachate Storage Pond B	18		
		8.2.1	Pilot Compost Leachate	19		

Table of Contents

Sect	ion			Page
		8.2.2	Pilot Ash-Reuse Leachate	19
	8.3	Effluer	nt Irrigation	19
		8.3.1	Effluent Irrigation Pump Station	19
		8.3.2	Effluent Spray Irrigation on Phases I-VI	19
	8.4	Leacha	ate and Effluent Evaporation Via Truck-Mounted Spraying	22
	8.5	Effluer	nt and Leachate Truck Loading Facilities	22
		8.5.1	Truck Loading Procedures	22
		8.5.2	Wastewater Treatment Facilities	23
9.0	Leac	hate Flo	ow Measurement, Data Collection, and Reporting	24
	9.1	Genera	al Leachate Flow Measurement	24
		9.1.1	Effluent Quality	24
		9.1.2	Biosolids Quantity and Disposal	24
	9.2	Phases	s I-VI Monitoring	25
		9.2.1	Flow Measurement	25
		9.2.2	PS-B Settlement Plates	25
		9.2.3	Bottom Liner Clay Evaluation	26
	9.3	Capac	ity Expansion Area Monitoring	26
		9.3.1	Flow Measurement	26
		9.3.2	Leachate Detection Action Leakage Rate	26
	9.4	Main L	eachate Pump Station	27
	9.5	Leacha	ate Treatment and Reclamation Facility	27
10.0	Main	tenance	e and Inspection	28
	10.1	Leacha	ate Collection System Schedule for Maintenance and Inspection	28
	10.2	Storag	e Tank maintenance and Inspection	28
11.0	Conti	ingency	Plans	31
	11.1	Replac	cement of Flow Meters	31
	11.2	Storag	e Tank Secondary Containment Spill Countermeasures	31
			Figures	
Figur	e 3.1	Phas	ses I-VI Leachate Collection	4
Figur	e 3.2	Capa	acity Expansion Area Leachate Collection System	5
Figur Figur			chate Management System Schematic Ition of Irrigation Sprinkler Reels	
		_000		

Table of Contents

Section		Page
	Tables	
Table 10.1	Schedule For Maintenance	28
Appendic	res	
Appendix A	Leachate Reporting and Inspection Forms	

1.0 LEACHATE MANAGEMENT

The Hillsborough County Southeast County Facility (Facility) includes the Southeast County Landfill (SCLF), which is permitted by the Florida Department of Environmental Protection (FDEP) as a Class I landfill for Phases I-VI and the Capacity Expansion Area (CEA). This Leachate Management Plan (LMP) includes Phases I-VI and Sections 7, 8, and 9 of the CEA.

This plan will give the SCLF employees a general understanding of the requirements for managing the leachate generated from the Class I landfill operations within the Phases I-VI and CEA disposal areas. As defined in Rule 62-701.200(59), Florida Administrative Code (FAC), leachate is liquid that has passed through or emerged from solid waste and may contain soluble, suspended, or miscible materials. Leachate must be contained and kept separate from any groundwater or surface waters.

2.0 LEACHATE GENERATION

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 thus minimize the potential environmental contamination risks. The methods described in this section can be used separately or simultaneously to achieve leachate reduction.

Leachate is generated as water passes through solid waste or as liquids drain from solid waste materials. Water may be from stormwater infiltration, irrigation, groundwater, or other sources added to the waste material. Liquids from the solid waste include moisture from food or waste products and fluids disposed of in the waste. Water and liquids that drain through or from the waste materials eventually drain via gravity into the collection systems at the bottom of the Class I disposal areas. Once collected, the leachate is pumped to the leachate storage tank. From the storage tank the leachate can be conveyed to the on-site Leachate Treatment and Reclamation Facility (LTRF) for treatment or hauled off site for treatment at a permitted wastewater treatment facility.

In addition, leachate is generated in the form of condensate from the collection of landfill gas (LFG) from Phases I-VI and the CEA. Condensate is managed by several methods, including drainage back to the landfill or collection in sumps at low areas. While landfill-gas_LFG condensate collection and transmission are not addressed in the leachate management plan, condensate management is addressed within the Gas Collection and Control System (GCCS) Plan for the SCLF referenced as part of the SCLF Title V operating permit. This plan should be referenced for details regarding condensate management.

3.0 LEACHATE COLLECTION SYSTEMS

The leachate collection system for Phases I-VI and the leachate collection and detection systems for the CEA are depicted in **Figure 3-1** and **Figure 3-2**, respectively. Additional descriptions of these systems are provided in the following sections.

3.1 PHASES I-VI LEACHATE COLLECTION

Phases I-VI of the Facility were constructed directly above a waste clay settling area for a former phosphate mine known as Lonesome Phosphate Mine or Boyette Mine. The Phases I-VI landfill is approximately 162.4 acres. The settling area, also known as Settling Area No. 1, was built on natural ground with a perimeter dike constructed of sand borrowed from surrounding areas. As part of the phosphate mining operations, waste phosphatic clay and other soils were washed and phosphate minerals removed from the surrounding soils.

The washed waste phosphatic clays and soils were pumped to the settling areas and allowed to settle to the bottom of the settling ponds. The low-permeability waste phosphatic clays now form the bottom containment liner for the disposal of waste in the Phase I-VI area. A single layer of 36-mil chlorosulfonated polyethylene (CSPE) or high density polyethylene (HDPE) liner depending on the phase, liner is tied into the waste phosphatic clay layer as a side containment liner barrier.

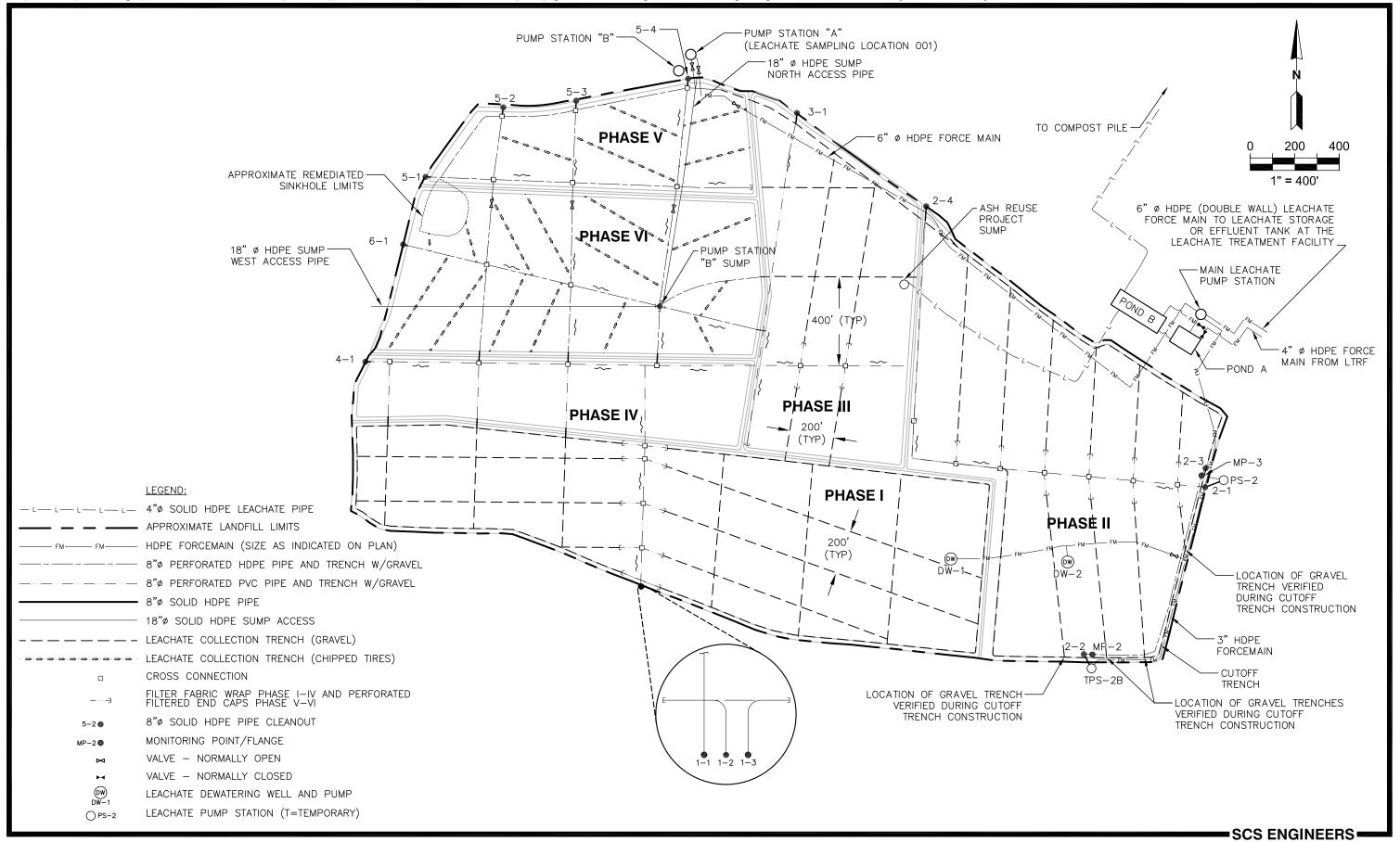
The leachate collection and removal system for Phases I-VI consists of crushed granite rock and tire-chip-filled trenches, 8-inch diameter perforated Schedule 80 polyvinyl chloride (PVC) pipes in granite rock-filled trenches, and 8-inch diameter perforated <a href="https://high.co...hi

3.2 CAPACITY EXPANSION AREA LEACHATE COLLECTION

3.2.1 Section 7

3.2.1.1 Leachate Collection System

Section 7 of the CEA landfill is approximately 12.5 acres. The dimensions of Section 7 are approximately 750 feet long (southwest to northeast) and 800 feet wide (northwest to southeast). Section 7 was designed with a double-liner system—one for leachate collection on the primary liner and the other for detection (secondary liner) of any leachate that may leak through the collection liner. A 300-mil bi-planar geocomposite was installed on the top of each of the 60-mil HDPE geomembranes to convey leachate toward collection trenches. Twelve inches of drainage sand and 12 inches of chipped tires were placed above the primary collection system to provide additional drainage collection and provide puncture protection of the underlying HDPE liners.



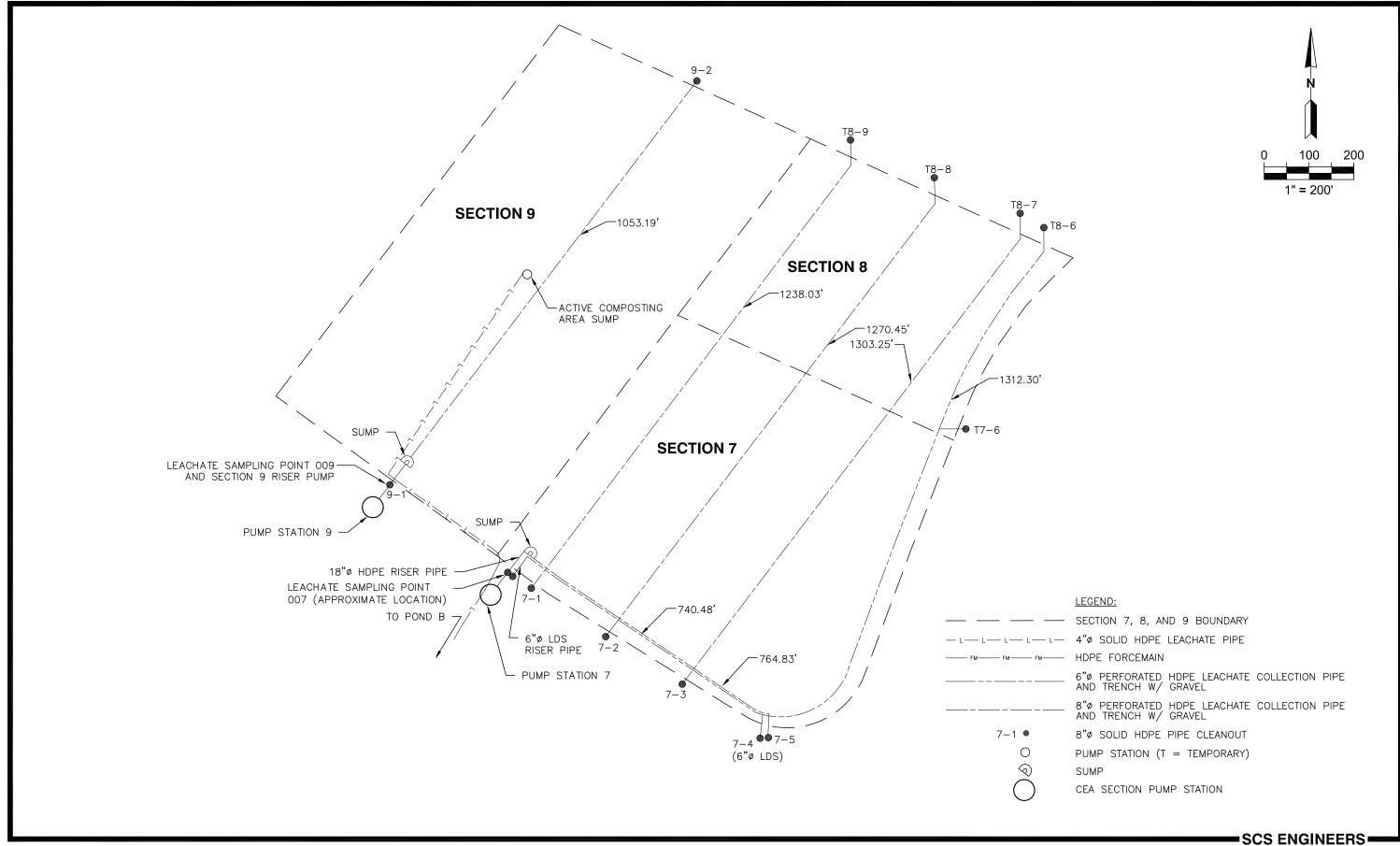


FIGURE 3.2. CAPACITY EXPANSION AREA (SECTIONS 7, 8, AND 9) — LEACHATE COLLECTION AND REMOVAL SYSTEM HILLSBOROUGH COUNTY

AUGUST 2018

Leachate travels through the primary geocomposite and sand/tire-chip drainage layer and is collected in the leachate collection trench. This trench consists of 8-inch perforated HDPE leachate collection pipes and gravel wrapped in a geotextile to minimize migration of sand into the pipes. Leachate that collects in the trench flows to a collection header and then toward a collection sump in the southwest corner of Section 7. The sump was designed as the lowest point in Section 7 and was filled with gravel. A riser pipe was installed in the gravel fill of the sump and contains a submersible pump for leachate removal.

3.2.1.2 Leachate Detection System

The leachate detection system of Section 7 consists of a bi-planar geocomposite between the primary and secondary geomembranes. The geocomposite drains leachate toward an 8-inch perforated HDPE pipe in a gravel-filled trench. The lateral pipes drain to a main header on the southwest end of Section 7. The main header drains to the low point of Section 7 containing a sump with gravel fill and a riser pipe. Leachate is removed from the Section 7 leachate detection system via the riser pipe using an above-grade pump.

During standard practices, the detection system is expected to collect a small volume of leachate. Leakage rates collected in the detection system will be used to monitor the performance of the collection system. The action leakage rate for the CEA is discussed in Section 9.3.2.3.

3.2.2 Section 8

3.2.2.1 Leachate Collection System

Section 8 of the CEA is approximately 6.8 acres. The dimensions of Section 8 are approximately 500 feet long (southwest to northeast) and 660 feet wide (northwest to southeast). Section 8 was designed with a double-liner system—one for leachate collection (primary liner) and the other (secondary liner) for detection of any leachate that may leak through the collection liner. A

300-mil tri-planar geocomposite was installed on the top of each of the 60-mil HDPE geomembranes to convey leachate toward leachate collection trenches. Twelve inches of drainage sand and 12 inches of chipped tires were placed above the primary collection system to provide additional drainage collection and provide puncture protection of the underlying HDPE liners.

The design of Section 8 included connecting the leachate collection and detection system components to Section 7. Therefore, leachate travels through the upper geocomposite and sand/tire drainage layer and is collected in the leachate collection trenches in Section 8. These trenches consist of an 8-inch perforated HDPE leachate collection pipe and several feet of gravel wrapped in woven geotextile. Leachate that collects in the Section 8 trenches continues to flow though Section 7 trenches. Once in the Section 7 collection system, leachate drains to the sump in the southwest corner of Section 7.

3.2.2.2 Leachate Detection System

The leachate detection system of Section 8 consists of a tri-planar geocomposite between the primary and secondary geomembranes. The Section 8 tri-planar geocomposite was connected to the Section 7 bi-planar geocomposite. The geocomposite drains leachate to 8-inch perforated HDPE pipes in gravel filled trenches. The trenches flow through Sections 7 and 8. The lateral pipes drain to a main header on the southwest end of Section 7. The main header drains to the leachate sumps in the southwest corner of Section 7 as described in previous sections.

During standard practices the detection system should collect a small amount of leachate. Leakage rates collected in the Section 8 detection system cannot be measured independently from Section 7; however, since each system is connected, the total leakage measured in the Section 7 sump will be used to monitor the performance of the Sections 7 and 8 leachate detection systems.

3.2.3 **Section 9**

3.2.3.1 Leachate Collection System

Section 9 of the CEA landfill is approximately 15.2 acres. Section 9 is approximately 980 feet long (southwest to northeast) and 580 feet wide (northwest to southeast). The primary leachate collection system is composed of a combination of synthetic materials and natural granular materials. A geocomposite consisting of an HDPE geonet with the top and bottom sides bonded to a geotextile is directly above the primary 60-mil HDPE geomembrane. The geocomposite is overlain by a 12-inchthick natural granular (sand) drainage layer and a 12-inch-thick chipped-tire drainage layer.

Leachate flows by gravity to a central leachate collection trench that conveys the leachate to the leachate collection sump on the south side of Section 9. The leachate collection pipe is a perforated 8-inch-diameter SDR 11 HDPE pipe surrounded by gravel and geotextile. From the sumps, leachate is pumped via a 6-inch SDR 11 HDPE forcemain to the LTRF located northeast of Sections 7 and 8.

3.2.3.2 Leachate Detection System

The leachate detection system for Section 9 includes a geocomposite consisting of a HDPE geonet with the top and bottom sides bonded to a geotextile installed between the primary and secondary geomembranes. Leachate entering the secondary Leachate Collection and Removal System (LCRS) flows by gravity through the geonet to the leak-detection trench. The trench, constructed at a slope of approximately 0.75%, conveys leachate to a leachate-detection sump on the south side of Section 9. From the sump, leachate is pumped via a 6-inch SDR 11 HDPE forcemain to the LTRF.

During standard practices, the detection system is expected to collect a small volume of leachate. Leakage rates collected in the detection system will be used to monitor the performance of the collection system. The action leakage rate for the CEA is discussed in Section 9.3.32.

4.0 LEACHATE TRANSMISSION

A schematic of the leachate management system at the SCLF is shown in **Figure 4-1**. The following sections provide additional details for the transmission components of the leachate management system at the SCLF.

4.1 PHASES I-VI

4.1.1 Pump Station A (PS-A)

PS-A consists of an 8-foot inside-diameter below-grade concrete sump with a single submersible pump. From PS-A, leachate is pumped to the Main Leachate Pump Station (MLPS) via force main. The pump operation is set with the "on" float at 42 inches from the sump bottom and the "off" float at 18 inches from the sump bottom.

If a high-level condition occurs, the PS-A sump control panel will shut down Pump Station B (PS-B). It will also transmit a signal, via a transceiver, with the sump condition to the control computer in the LTRF, the effluent/leachate storage tank (T6), and the landfill administration office located at the scalehouse at the entrance of the SCLF. If PS-A will be inoperable for more than 8 hours, leachate from PS-B will be pumped through the bypass line directly to the MLPS.

4.1.2 Pump Station B (PS-B)

PS-B sump (located in Phase VI) is the primary leachate collection point for Phases I-VI. Upon consolidation of the phosphatic clay liner, the low point for the final collection and removal of leachate within the landfill is projected to be at the PS-B sump location. The LCRS for the landfill was designed to drain to the PS-B sump.

PS-B sump consists of an 8-foot square (inside dimension) below-grade concrete vault. The vault has two 18-inch diameter HDPE horizontal access pipes, the main access pipe leading to PS-A, and an alternate access pipe leading toward the western perimeter of the landfill between cleanouts 4-1 and 6-1.

The primary pumps used to remove leachate from the PS-B sump is agre self-priming pumps each with a capacity of 150 gallons per minute (gpm). If the primary pumps fails, the operations contractor has acan obtain a secondary vacuum-assisted diesel pump that may be used as backup. PS-B sump is equipped with a level indicator located at the control panel near PS-A, and the SWMG monitors the liquid level daily to ensure that the levels noted below are maintained. Maintaining the operation of PS-B as proposed will provide reasonable assurance that Phases I-VI will maintain a leachate head over the liner of 12 inches or less during routine landfill operation.

PS-B pumps leachate to PS-A via a vacuum-assisted pump. The bubbler leveling system with an "on" sensor is set at 24 inches above the sump bottom and the "off" sensor is set at 15 inches from the bottom. The settings provide for free flow of leachate into the landfill lower sump area from the surrounding Phase I-VI disposal areas

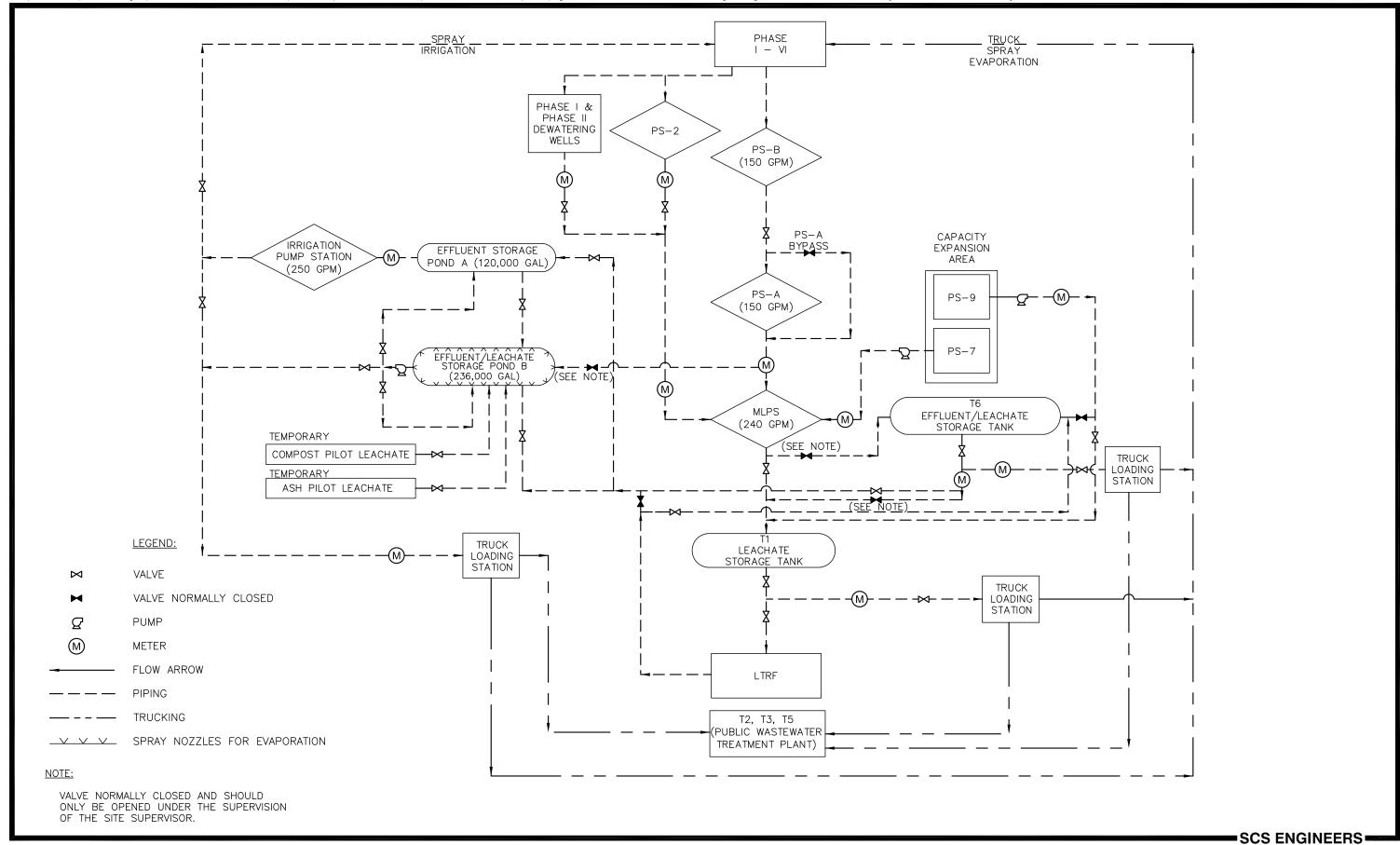


FIGURE 4.1. LEACHATE MANAGEMENT SYSTEM SCHEMATIC HILLSBOROUGH COUNTY

AUGUST 2018

4.1.3 Pump Station <u>6 (TPS-6)2 (PS-2)</u>

The Temporary Pump Station 6 (TPS-6) was removed from service in September 2014 due to low flow production. The low leachate withdrawal from this area is an indication that the landfill PS-B sump has settled such that the leachate from all Phases is flowing by gravity to PS-B. Pump Station 2 (PS-2) consists of a vacuum assisted pump with a 3-inch HDPE suction line into the Phase II clean out 2-1 (CO 2-1). The pump discharges via a 3-inch HDPE buried forcemain directly into the MLPS. The pump will be operated by SWMG staff to supplement leachate removal from Phase II of the landfill. The primary goal of this pump is to maintain the leachate level in the Monitoring Port No. 2 (MP 2-2) below 30-inches. The leachate quantities will be recorded by electronic flow meter.

4.1.4 Dewatering Wells

Dewatering wells were installed to provide supplemental leachate removal from Phases I and II. One well nest was installed in Phase I and one in Phase II. Each well nest consists of two 8-inch diameter HDPE well casings set within one 36-inch diameter borehole that spans from ground surface, through the waste, to 1-foot below the top of the clay liner. Each of the well casings contains a pneumatic pump connected to a 3-inch diameter HDPE buried forcemain conveying the leachate to the MLPS. The wells are topped with an all-weather polyethylene dual extraction well cap and 2-inch LFG wellhead. The Phase I leachate extraction wells are designated DW 1-1 and DW 1-2, and the Phase II leachate extraction wells are designated DW 2-1 and DW 2-2. The pneumatic pump counters will estimate the leachate quantities.

4.2 CAPACITY EXPANSION AREA

4.2.1 Section 7 – Pump Station 7 (PS-7)

The leachate collection and leachate detection system piping for Sections 7 and 8 drain to sumps in the southwest corner of Section 7 as shown in **Figure 3-2**. The leachate detection sump is pumped to the leachate collection sump by an above-grade pump located at PS-7. The leachate collection sump pumps leachate using a submersible pump in the sump to the MLPS via an underground force main.

There are separate pumps for the leachate collection (submersible pump) and detection (above grade pump) sideslope risers. The levels in each sump are controlled with pressure transducers at the bottom of the riser pipes. These transducers are programmed for a high-level alarm at 48 inches, pump on at 24 inches, and pump off at 12 inches. All elevations are from the bottom of the Section 7 sump. Flow measurements are taken using readings from magnetic flow meters on each discharge line. Separate sampling ball valves allow separate leachate samples to be taken from either the collection or detection sumps.

4.2.2 Section 8 – (No Pumping Systems)

Section 8 was constructed by connecting the leachate collection and detection systems to the Section 7 systems. No pumping systems are included in the Section 8 design. Section 8 uses the sumps and pumps for Section 7 to pump leachate to the MLPS.

4.2.3 Section 9 – Pump Station 9 (PS-9)

The Section 9 area includes sideslope riser pipes—two for the primary leachate collection and one for the leachate detection systems—with submersible pumps. All the pumps for the Section 9 area are

controlled by a separate control panel located on the south side of Section 9. Leachate is conveyed by a buried forcemain which connects to the existing forcemain on the south side of Section 7. The forcemain then continues to the leachate storage tank (T1) or effluent/leachate storage tank (T6) northeast of the CEA.

The Section 9 pumps are controlled by a bubbler level sensing system at the PS-9 control panel. The standard practice bubbler settings for the leachate collection pumps from the bottom of the sump are high-level alarm at 36 inches, lag pump on at 33 inches, lead pump on at 27 inches, and low level alarm at six inches. The standard practice bubbler settings for the detection pump from the bottom of the sump are high-level alarm at 36 inches, pump on at 27 inches, and pump off at 21 inches.

In addition, the Section 9 pumps are deactivated when the leachate storage tank (T1) senses a high-level alarm.

4.3 MAIN LEACHATE PUMP STATION (MLPS)

The MLPS consists of a 7-foot-square (inside dimension) below-grade concrete sump with dual submersible pumps (i.e., one operating and one stand-by). Each submersible pump is rated to pump at a maximum discharge rate of 240 gpm. The operating pump is set for a 24-hour operation cycle with the "on" float at 48 inches from the sump bottom and the "off' float at 24 inches from the sump bottom.

If a high-level condition occurs at the MLPS sump, the control panel will shut down PS-7, PS-A, and PS-B, PS-2, and all pneumatic pumps. It will also transmit a signal, via a transceiver, with the sump condition to the control computer in the LTRF effluent/leachate storage tank (T6 and the administration office). Maintenance and inspection of the MLPS pump are described in Section 10.0.

From the MLPS, leachate is pumped to the 575,000-gallon leachate storage tank (T1) or to the 575,000-gallon effluent/leachate storage tank (T6) [effluent/leachate storage tank (T6)—for emergency use only, as described in Section 7.0] at the LTRF.

5.0 LEACHATE STORAGE TANK (T1)

Leachate from Phases I-VI and the CEA is currently stored in a 575,000-gallon (maximum capacity) glass-fused-to-steel aboveground raw leachate holding tank before being treated or hauled. The leachate level in the leachate storage tank (T1) is maintained to provide for the maximum storage capacity possible. The leachate storage tank (T1) is maintained with an average low level of six feet (as measured from the top-bottom of the tank) or 173,000 gallons to ensure that enough leachate is available for the LTRF to operate 3 days without interruptions. When the level in the leachate storage tank (T1) is below six feet, leachate hauling and spray evaporation will be temporarily reduced or stopped. Similarly, an action level is established for a high level of 11 feet (from top-bottom of tank) in the leachate storage tank (T1). A level of 11 feet provides a storage capacity in the leachate storage tank (T1) of 259,000 gallons (4 days' storage) to allow continuous operation of the landfill pump stations. When levels are above 11 feet, treatment, hauling, and/or spray evaporation will be increased.

If a high-level alarm condition occurs (at <u>16-17.5</u> feet) in the leachate storage tank (T1), the LTRF will continue to operate, and the MLPS, PS-9, <u>PS-10</u>, and the LTRF filtrate pumps will be shut down. A signal indicating the leachate storage tank (T1) condition will be sent to the control computer in the LTRF-and the administration office. When a high-level alarm condition exists, additional hauling trucks will be used to transport the leachate to a (WWTP), thus lowering the leachate level in the tank.

5.1 T1 SECONDARY CONTAINMENT SYSTEM

The LTRF leachate tank system is located within a concrete containment area. The secondary containment area has two sumps for stormwater drainage with 6-inch diameter HDPE pipes. The gate valves from the HDPE pipes are normally closed, in the event of an uncontrolled release. The gate valves are occasionally opened to release stormwater from the impoundment as needed. The LTRF secondary containment area was designed to hold 110% of the volume of the largest storage tank in case of failure of the tanks. Therefore, the concrete flooring and containment walls will be inspected weekly for cracks or structural deficiencies as discussed in Section 5.3. Any cracks will be immediately sealed using flexible concrete grout. Any structural deficiencies will be identified and corrective action taken to repair the walls.

5.2 T1 LIQUID LEVEL MONITORING

The leachate storage tank (T1) contains an overflow pipe. The overflow pipe is installed outside of the storage tank, with the tank sidewall penetration within 30 inches of the top of the sidewall of the tank. The tank is equipped with liquid level indicators that are float-operated with a direct readout. The level gauge boards are mounted in a highly visible location on the exterior of the tank. A visual and audible alarm (a light and horn) is located on the gauge boards to alert staff to a potential problem before overflow. The tank level is recorded daily on the leachate reporting forms. An example form is provided in Appendix A.

5.3 T1 EXTERIOR AND INTERIOR INSPECTIONS

The following describes the inspections of the leachate storage tank (T1) and procedures to be followed after the inspections:

- Overfill Prevention System: The overfill prevention system components will be inspected weekly. These components include level sensors, gauges, high-level alarm, and automatic shutoff controls.
- Tank Exterior: The exterior of the tanks and the secondary containment system will be inspected weekly for adequacy of the impressed current cathodic protection system, leaks, corrosion, and maintenance deficiencies. The control panel for the impressed current cathodic protection system (located on the outside of the secondary containment walls next to the truck loading station) will be inspected to ensure that it is working properly. In addition, the inspection includes evaluating structural damage to the tank, damage to the coating system, loose connections, corrosion, visible leaks, and maintenance deficiencies. The inspector will also look for any structural damage to the concrete slab, peeling of the paint system, and visible leaks.
- <u>Tank Interior</u>: The interior of the tanks will be inspected whenever the tanks are drained or at least every three years. The inspector will look for any damage to the interior coating system, structural damage, cracking of the tank, visible leaks, and any accumulation of sludge.
- Procedures for Corrective Actions: If inspections reveal any deficiencies with the tank or the secondary containment system that could result in the system's failing to contain the leachate, the SWMG shall take immediate action to correct the situation by assessing the problem and coordinating the required actions. Failures or damage to the tanks will be repaired by the tank manufacturer or a designated contractor. The SWMG shall notify the manufacturer or designated contractor of the situation; the tank manufacturer or designated contractor will remediate the tanks and prepare a detailed damageassessment report. FDEP will be notified in writing of the situation and of the proposed corrective action.

Inspection Reports: Inspection reports and reports of any remedial action measures taken will be maintained at the SCLF and will be made available to FDEP upon request. The weekly inspection report form is provided in Appendix A. All reports will be maintained for the life of the tanks and the containment system.

6.0 LEACHATE TREATMENT AND RECLAMATION FACILITY (LTRF)

In December 1994, the SWMG constructed an on-site LTRF. The LTRF system and operation are described in detail in the *General Process and Operation Manual for the Powder Activated Carbon Treatment (PACT) System, Volume III*, prepared by Zimpro Environmental, Inc. dated March 1994.

Process tanks and equipment are maintained in accordance with General Process and Operation Manual for the Powder Activated Carbon Treatment (PACT) PACT System, dated March 1994.

After treatment, the leachate is pumped through a 4-inch-diameter single-walled HDPE pipe to the effluent storage pond (Pond A) or the effluent/leachate storage tank (T6) described in Section 7.0. The effluent from the LTRF must meet pre-treatment standards before being pumped to a tanker truck for transport to Hillsborough County's wastewater treatment facilities.

7.0 EFFLUENT/LEACHATE STORAGE TANK (T6)

The effluent/leachate storage tank (T6) is a welded steel aboveground tank with a maximum capacity of 575,000 gallons. The effluent/leachate storage tank (T6) receives treated leachate (effluent) from the LTRF and pumps effluent to the effluent storage pond (Pond A) or stores the effluent for transport to Hillsborough County's wastewater treatment facilities. If leachate must be stored in the effluent/leachate storage tank (T6) from the MLPS while the leachate storage tank (T1) is repaired or inspected, normal operations at the LTRF will stop. Once the leachate storage tank (T1) is repaired or inspected, the leachate stored in the effluent/leachate storage tank (T6) will be pumped back to the leachate storage tank (T1). The effluent/leachate storage tank (T6) will be cleaned of leachate before effluent storage resumes.

The following standard and special setting conditions are applicable to T6:

- 1. Pump effluent from the LTRF to the effluent/leachate storage tank (T6) (standard practice).
- 2. Pump effluent from the effluent/leachate storage tank (T6) to Pond A or the truck loading area (standard practice).
- 3. Pump leachate from the MLPS to the effluent/leachate storage tank (T6) (special condition).
- 4. Pump leachate from the effluent/leachate storage tank (T6) to the leachate storage tank (T1) (special condition).

7.1 T6 SECONDARY CONTAINMENT SYSTEM

The secondary containment system for the effluent/leachate storage tank (T6) can contain a minimum of 110% of the total volume of the tank. The effluent/leachate storage tank (T6) provides 575,000 gallons of maximum storage.

The secondary containment system consists of a 60-mil HDPE geomembrane lined basin. The tank is constructed at the bottom of the basin on a reinforced concrete pad and surrounded by a 6-inch thick reinforced concrete walkway. The lined basin is connected at the walkway slab and runs up 3H:1V sideslopes where it is anchored at a 12-foot wide berm.

The precipitation collected in the containment area is pumped into the adjacent stormwater management system via a horizontal submersible pump and sideslope riser. The sideslope riser system includes an additional camlock connection to be used for emergency effluent/leachate removal using an additional pump. Any spilled leachate and/or effluent that accumulates in the secondary sump is pumped to the leachate storage tank (T1) via a suction line originating from the horizontal centrifugal pump at the loading pad. The centrifugal pump is equipped with valves to operate in suction mode to remove any spilled effluent/leachate from the secondary sump. The submersible sump pump is manually operated to remove stormwater or used as an alternate for effluent/leachate removal.

Accumulated precipitation will be removed within 24 hours of observation. The precipitation will be pumped into the adjacent stormwater management system.

Accumulated liquid in the trench drain that is not precipitation resulting from a recent storm event will be treated as effluent and pumped into the effluent/leachate storage tank (T6).

7.2 T6 LIQUID LEVEL MONITORING

The effluent/leachate storage tank (T6) contains an 8-inch overflow pipe. The overflow pipe is installed outside of the effluent/leachate storage tank (T6) with the tank sidewall penetration within 30 inches of the top of the sidewall of the tank. The tank is equipped with liquid level indicators that are float operated with a direct readout. The gauge level boardscontrol panel is mounted in a highly visible location on the exterior of the tank. A-When the high-level alarm condition occurs (at 17.5 feet), a visual and audible alarm (a light and horn) are located on at the gauge boards control panel to alert staff of a potential problem before overflow. The effluent/leachate storage tank (T6) level is recorded daily on the leachate reporting forms provided in Appendix A.

7.3 T6 EXTERIOR AND INTERIOR INSPECTIONS

The following describes the inspections of the effluent/leachate storage tank (T6) and steps to be followed after the inspections.

- Overfill Prevention System: The overfill prevention system components will be inspected weekly. These components include level sensors, gauges, high-level alarm, and automatic shutoff controls.
- Tank Exterior: The exterior of the tank and the secondary containment system will be inspected weekly for adequacy of the cathodic protection system, leaks, corrosion, and maintenance deficiencies. In addition, the inspection includes an evaluation of any structural damage to the tank, damage to the coating system, loose connections, corrosion, visible leaks, and maintenance deficiencies. The inspector will also look for any structural damage to the concrete slab or HDPE lining of the secondary containment system, peeling of the paint system, and visible leaks.
- <u>Tank Interior</u>: The interior of the tank will be inspected whenever the tank is drained or at least every three years. The inspector will look for any damage to the interior coating system, structural damage, cracking of the tank, visible leaks, and accumulation of sludge.
- Procedures for Corrective Actions: If inspections reveal any deficiencies with the tank or the secondary containment system that could result in failure of the system to contain the leachate, the SWMG shall take immediate action to correct the situation by assessing the problem and coordinating the required actions. Failures or damage to the tanks will be repaired by the tank manufacturer or a designated contractor. The SWMG shall notify the manufacturer or designated contractor of the situation; the tank manufacturer or designated contractor will remediate the tanks and prepare a detailed damage assessment report. FDEP will be notified in writing of the situation and of the proposed corrective action.
- Inspection Reports: Inspection reports and reports of any remedial action measures taken will be maintained at the SCLF and will be made available to FDEP upon request. The weekly inspection report form is provided in Appendix A. All reports will be maintained for the life of the tanks and the containment system.

7.4 ACID MIXER AND TANK

The acid dosing pumps at the effluent/leachate storage tank (T6) pump station inject sulfuric acid into the 4-inch effluent pipe. Landfill personnel monitor the pH by pulling grab samples from the sampling port or reading from the pH meter at the control panel, thereby allowing the acid dosing to

be optimized and preventing large swings in pH. The acid dosing rate is controlled by an operator at the control panel using the pH readout to adjust the acid dose to achieve the appropriate pH range. Also, the system includes controls between the acid dosing pumps and the pH meter to allow automatic acid dosing. The acid dosing pump controls are connected to the booster pump controls so acid dosing will only occur when the booster pumps are running. In addition, when the booster pumps are signaled off, the acid dosing pumps stop and the booster pumps continue to run for approximately 30 seconds to allow the piping system to be flushed of any residual acid.

8.0 LEACHATE AND EFFLUENT DISPOSAL

Leachate is disposed of at the SCLF by various methods, including treatment at the on-site LTRF, hauling of raw leachate via tanker truck to a Hillsborough County Wastewater Treatment Facility (WWTF), and truck-mounted spray evaporation of raw leachate within the contained working surface. Effluent from the on-site LTRF is disposed of by an effluent spray irrigation system, effluent evaporation, or transporting effluent via tanker trucks to a county WWTF.

8.1 EFFLUENT STORAGE POND

The effluent storage pond (Pond A) receives treated leachate (effluent) from the LTRF or the effluent/leachate storage tank (T6). The pond is lined with 80-mil HDPE and provides for temporary effluent storage of 120,000 gallons plus one foot of freeboard. Using the existing staff gauge in the pond, Pond A is maintained at a maximum depth of 3.7 feet (elevation 136.9) and a minimum depth of six inches. The minimum depth of six inches provides head over the liner to prevent damage due to uplift from wind and other elements. Off-site hauling could increase if levels in Pond A reach the maximum level of 3.7 feet. In addition, an overflow pipe allows flow from Pond A into Pond B. Similarly, if levels are below six inches, irrigation, evaporation, and off-site hauling from Pond A will be temporarily reduced.

The following standard and special setting conditions are applicable at Effluent Storage Pond A:

- 1. Pump effluent from Pond A to spray irrigation system (standard condition).
- 2. Pump effluent from Pond A to truck loading arm (standard condition).
- 3. Recirculate effluent in Pond A to stabilize pH (special condition).

8.2 EFFLUENT/LEACHATE STORAGE POND B

The effluent/leachate storage pond (Pond B) provides an additional storage volume of 236,000 gallons and is located next to Pond A, as shown in **Figure 3-1**. Pond B was designed with one foot of storage for the 25-year/24-hour storm and one foot of freeboard. The pond was designed to store either raw leachate or effluent; however, Pond B's primary use is for additional storage of effluent from the LTRF or the effluent/leachate storage tank (T6). If the need for leachate storage arises, the SWMG will notify FDEP before using the pond for leachate storage. The notification to FDEP will include the reason(s) for leachate storage in the pond and the anticipated duration.

Pond B was designed with an upper and lower 60-mil HDPE geomembrane. An HDPE geonet was installed between the two liners. The subbase for the lower geomembrane consists of six inches of soil with a saturated hydraulic conductivity of 1×10^{-5} centimeters per second or less, installed over the on-site soil which was cleared of vegetation and graded. Supplemental effluent evaporation in Pond B is provided using a spray evaporation system. The spray evaporation nozzle system was designed around the perimeter of the pond and consists of 30 nozzles, with an estimated flow capacity of 17 gpm per nozzle and a 510-gpm pump.

In general, the SWMG operates the spray evaporation system manually and only during the hours the landfill is open. The spray evaporation system is not operated during windy conditions (i.e., over 10 miles per hour) to prevent overspray outside the limits of the pond liner system.

The following standard and special setting conditions are applicable at Effluent/Leachate Storage Pond B:

1. Effluent storage and spray evaporation operation in Pond B (standard practice).

- 2. Leachate storage in Pond B (special condition).
- 3. Resuming effluent storage in Pond B following leachate storage (special condition).

8.2.1 Pilot Compost Leachate

The SWMG operates a temporary compost project on top of Section 7-9 of the CEA. The project is managed in accordance with the "Composting Operation & Maintenance Plan" dated September 2015. Excess runoff from the active compost windrows area will be treated as leachate and drains into a sump built within the compost bermed area. The sump is connected to a diesel vacuum assisted pump. The pump discharge is routed within an aboveground HDPE pipe to the double-lined Pond B. All liquids in Pond B are either pumped into trucks to be hauled to a WWTP or pumped (via MLPS) to the LTRF for on-site treatment. At the completion of this project, the diesel pump and HDPE pipe will be removed.

8.2.2 Pilot Ash-Reuse Leachate

The SWMG operates a temporary ash-reuse project on top of Phase III. The project is managed in accordance with the "Temporary Ash Aggregate Screening and Storage Project Operation & Maintenance Plan" dated August 2017. The runoff within the project bermed area is treated as leachate and drains into a sump. The sump is connected to a diesel vacuum assisted pump. The pump discharge is routed within an aboveground HDPE pipe to the double-lined Pond B. All liquids in Pond B are either pumped into trucks to be hauled to a WWTP or pumped (via MLPS) to the LTRF for on-site treatment. At the completion of this project, the diesel pump and HDPE pipe will be removed.

8.3 EFFLUENT IRRIGATION

8.3.1 Effluent Irrigation Pump Station

The effluent irrigation pump station consists of a 5-foot square (inside dimension) below-grade concrete sump with dual vertical turbine pumps (one operating and one stand-by). From the effluent irrigation pump station, effluent is pumped to the spray irrigation system on the landfill. The pump in operation is set manually depending on weather conditions.

The effluent irrigation pump station is hydraulically connected to Effluent Pond A, and Effluent Pond A is hydraulically connected via pipe to Effluent/Leachate Pond B; therefore, if the effluent irrigation pump station reaches high level, it will drain to Ponds A and B and not overflow. Ponds A and B are visually monitored by landfill operations personnel and if high level conditions occur, steps are initiated as described in Sections 8.1 and 8.2 for Ponds A and B, respectively.

8.3.2 Effluent Spray Irrigation on Phases I-VI

The SWMG operates a mobile irrigation system consisting of two irrigation reels. The mobile irrigation reels in **Figure 8-1** are shown positioned on the west side of Phase I and on the east side of Phase II. These locations are shown for information purposes only since the position will change due to operational constraints with waste filling in Phase I-VI. Only effluent will be disposed of through the spray irrigation system.

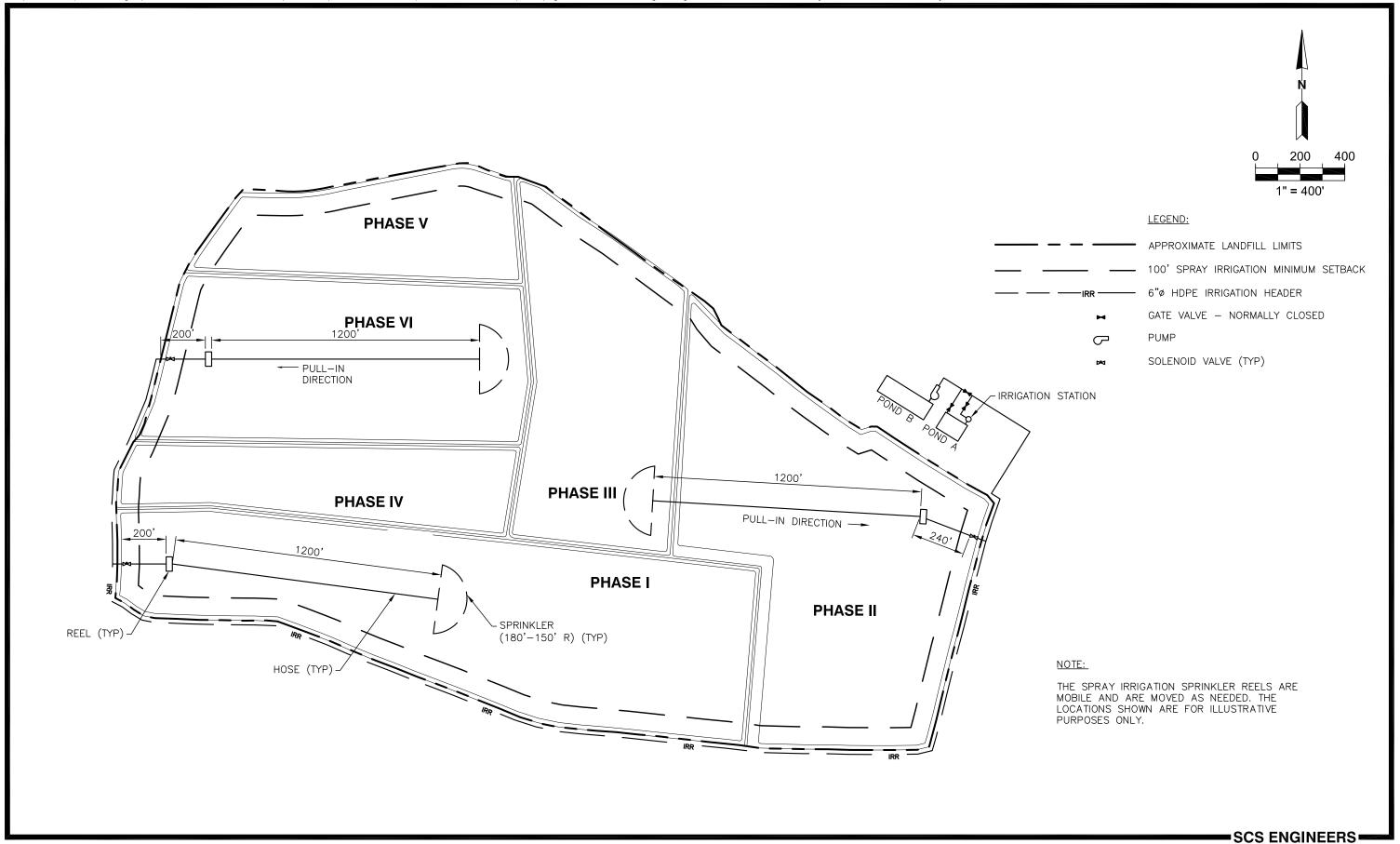


FIGURE 8.1. LOCATION OF IRRIGATION SPRINKLER REELS
HILLSBOROUGH COUNTY
AUGUST 2018

The operational sequence of the mobile reel irrigators is as follows:

- Before each irrigation event, the medium-density polyethylene (PE) hose is stretched out
 with a vehicle (approximately 1,200 linear feet). At the end of the PE hose is a spray
 nozzle that applies the effluent across a large area to maximize evaporation and prevent
 runoff from draining into the stormwater system.
- Once both PE hoses have been stretched out across the top of the landfill, personnel manually turn on the irrigation pump. The pumps maintain an operating pressure in the irrigation reel. The reel is equipped with a drive system that automatically reels in the PE hose and spray irrigation nozzle at a preset rate (i.e., 200 feet per hour).
- At the end of the irrigation cycle, personnel manually turn off the irrigation pump.

Spray irrigation occurs under the following conditions:

- Spray irrigation is applied at a rate of one pass per day with a maximum application rate
 of 0.30 inch per day of effluent. Under no circumstances is effluent allowed to discharge
 as runoff to adjacent stormwater systems. Effluent is not sprayed during severe weather
 conditions or in quantities that may cause runoff, surface seeps, wind-blown spray
 outside of the landfill footprint, or ponding on the cover.
- Spraying takes place only when rainfall runoff into the on-site retention areas down gradient from the spray areas has terminated for two hours based on daily inspections of the influent point to each related retention area.
- Spray irrigation of effluent is not conducted within 100 feet of the landfill liner <u>perimeter</u> trench, on slopes steeper than 10%, nor on areas with permanent final cover.
- Spray irrigation may be used on areas with bare ground (little or no grass) or on areas which have been seeded to help with grass growth. These areas will not allow runoff to the stormwater system, as described in this Section.
- Spray irrigation of treated effluent will only be conducted only between 8:00 A.M. and 4:00 P.M.

The leachate reporting forms provided in Appendix A are completed monthly and submitted at least quarterly to FDEP and the Environmental Protection Commission (EPC) by the 15th of January, April, July, and October of each year. At a minimum, the following data are recorded daily.

- Effluent sprayed in gal/day.
- Rainfall on site in inches/day and time of day.
- Observed runoff influent to retention areas (yes and/or no).
- Time of day of inspection.

8.4 LEACHATE AND EFFLUENT EVAPORATION VIA TRUCK-MOUNTED SPRAYING

Evaporation is employed as a supplemental method of disposing of leachate. The supplemental evaporation of leachate involves spraying small quantities of leachate—an average of 9,700 gallons per day—from a spray bar mounted on the rear of a tank truck onto active-fill areas of the landfill. This approach has been used successfully at the SCLF since 1984. The advantages of this method are the reduction of leachate by evaporation, the promotion of the decomposition of organic matter in the landfilled refuse, and dust control.

The SWMG monitors the rate of application, soil moisture conditions, and the specific landfill areas used so that this leachate disposal method does not generate runoff. Leachate spray evaporation is applied under the following conditions.

- Leachate is only sprayed on active-fill areas, including the working face, and areas with the required six inches of initial cover.
- Leachate is not sprayed on areas with intermediate or final cover, seeded or unseeded.
- The maximum grade leachate may be sprayed on is 10H:1V slope. Areas within 150 feet of a 4H:1V or steeper sideslope may not be sprayed on. At all times, areas receiving leachate are controlled to prevent leachate runoff from entering the stormwater system.
- Leachate is not sprayed when it is raining.
- The tank truck spray bar method maximizes evaporation. The application rate of leachate
 will be such that leachate does not accumulate on the landfill surface nor infiltrate
 quickly into the covered refuse. Evaporation is the main goal of this leachate disposal
 method.
- Leachate is not sprayed at the end of the day on the initial cover of the working face or other areas. Spraying is done early in the morning after any dew evaporates and continues until early afternoon or until all available areas have been sprayed.

The SWMG evaporates leachate and effluent in full conformance with Chapter 62-701, FAC. The SWMG notifies FDEP of all evaporated quantities in the monthly water balance reports.

8.5 EFFLUENT AND LEACHATE TRUCK LOADING FACILITIES

8.5.1 Truck Loading Procedures

Truck loading facilities are located at the LTRF, Effluent Pond A, and the effluent/leachate storage tank (T6).

The truck loading stations include a loading arm for discharging stored leachate or effluent from the leachate storage tank (T1), effluent/leachate storage tank (T6) and Ponds A/B to a transfer tanker for disposal. Tanker trucks remove the liquid from the LTRF, effluent/leachate storage tank (T6), or Ponds A/B and transport the liquid to a County WWTF.

The truck loading facilities are equipped with flow meters that provide readout of the gallons of liquid that have been pumped into the tanker trucks. The capacity of each tanker truck is approximately 6,000 to 8,000 gallons, and the leachate tankers are normally filled. If the flow meter gauges are inoperable or not accurate, the quantity of leachate removed can be determined by converting the weight for the truck scale weight tickets to gallons (tons x 2,000 lb/ton/8.34 lb/gal = gallons).

Appendix A includes a Leachate Hauling/Disposal Reporting Form for use when loading leachate or effluent for off-site disposal. The daily field data entry form provided in Appendix A includes recording leachate storage tank (T1) levels. The external level indicators provide a measured indication of the depth of the leachate or effluent in the storage tanks. Information required includes the time of day and the level indicated on the side of the storage tank. Each reading of the storage tanks should be conducted at approximately the same time each day. This will provide the landfill operations personnel with a relative basis for comparing the amount of leachate stored daily and generated daily.

The SWMG has its own tanker trucks as well as a contract with haulers and WWTFs to haul and treat leachate stored in the tanks for disposal. The private tanker vehicles are required to have onboard pump systems or provide portable pumps if the storage system pumps fail.

8.5.2 Wastewater Treatment Facilities

Leachate can be disposed of offsite at a county-owned WWTF. Agreements exist with the Hillsborough County Public Utilities Department (PUD) allowing the discharge of leachate or effluent to three (3) of Hillsborough County's WWTFs (Valrico, Falkenburg, and South County WWTF). Hillsborough County and private contract fleets are used to haul the leachate to a lift station designated by PUD which discharges to one of the approved WWTFs. Leachate will be measured by a flow meter as the tanker trucks are loaded at the LTRF truck loading stations.

9.0 LEACHATE FLOW MEASUREMENT, DATA COLLECTION, AND REPORTING

9.1 GENERAL LEACHATE FLOW MEASUREMENT

Once collected, the leachate is pumped to the leachate storage tank (T1). From the storage tank (T1), the leachate can be conveyed to the on-site LTRF for treatment or hauled off-site to a permitted wastewater treatment facility. Leachate quantities from each landfill area are measured via flow meters at each pump station that can provide readout of gallons of liquid removed.

If leachate is classified as a hazardous waste, it will be managed in accordance with Chapter 62-730, FAC, "Hazardous Waste."

9.1.1 Effluent Quality

To provide reasonable assurance of adequate leachate treatment, the SWMG samples and analyzes the treated leachate (effluent) semi-annually for primary and secondary drinking water parameters and EPA priority pollutants. Samples will be taken after the LTRF has achieved steady-state conditions with regard to its treatment capability or within 30 days after downtime due to maintenance or repairs, whichever is less.

In addition, effluent grab samples before disposal are taken for the following parameters at the frequency indicated:

<u>Parameter</u>	Frequency	<u>Units</u>
рН	weekly	Std. Units
BOD ₅	monthly	mg/L
COD	monthly	mg/L
TSS	monthly	mg/L
NO ₃ -N	monthly	mg/L
TDS	monthly	mg/L

9.1.2 Biosolids Quantity and Disposal

The biosolids from the LTRF are disposed of at the SCLF if they are found to be non-hazardous and pass the paint filter test. The biosolids are sampled and analyzed annually for EPA priority pollutants, the toxicity characteristic leaching procedure (TCLP), and for the following parameters:

<u>Parameters</u> <u>Units</u>

Total nitrogen percent (dry weight) Total phosphorus percent (dry weight) Total potassium percent (dry weight) Arsenic mg/kg (dry weight) Cadmium mg/kg (dry weight) Copper mg/kg (dry weight) Lead mg/kg (dry weight Mercury mg/kg (dry weight) Molybdenum mg/kg (thy weight) Nickel mg/kg (dry weight) Selenium mg/kg (dry weight) Zinc mg/kg (dry weight)

pH std. units
Solids percent

If the biosolids are found to be hazardous, the material will be managed in accordance with Chapter 62-730, FAC, "Hazardous Waste."

9.2 PHASES I-VI MONITORING

9.2.1 Flow Measurement

For Phases I-VI, the leachate quantity is recorded by flow meters at PS-A. SWMG personnel record flow meter readings each day the SCLF is open and the quantities are reported to FDEP. Sample leachate reporting forms are included in Appendix A.

9.2.2 PS-B Settlement Plates

Four settlement plates were installed at the bottom of each corner of the vault for PS-B in Phase VI. The rods for these plates have been extended during operation of the landfill. The elevation of these plates will be measured annually prior to commencement of operations in the Phase VI disposal area. The historical measurements are provided in Appendix Cmaintained at the Administration Building. The rods for the settlement plates will be less accurate as operations continue due to deformation from settlement of the waste between the top of waste and PS-B. If, after two consecutive annual measurements from any of the four settlement plates there is no change in elevation, that settlement plate is assumed to be malfunctioning and will not be measured in future events. The settlement at malfunctioning settlement plates is assumed to be the same as the settlement measured at adjacent functioning plates.

9.2.3 Bottom Liner Clay Evaluation

Approximately one year before a particular phase of Phases I-VI is entered, an in-situ, undisturbed, clay sample will be collected from beneath the phase proposed to be filled. The collected clay sample will be tested and the shear strengths computed.

The in-situ, undisturbed, clay sample will be tested either using a direct shear test (ASTM D-3080) or tri-axial test (ASTM D-2850/4767) method to determine the clay strength. Three individual testing points—covering the existing, proposed filling, and proposed final build-out pressures—will be conducted. A representative phi and cohesion value will be determined to cover proposed filling and final build-out strengths.

Slope stability models, using both sliding block and circular failure methods, will be conducted on the proposed filling and the final-build out conditions. If a factor of safety (FS) of 1.5 or greater is achieved for a particular filling scenario, that particular phase is deemed complete and no further testing for that phase is necessary. If a particular filling scenario does not achieve a FS of 1.5 or greater, recommendations for filling the phase will be provided.

Results of the slope stability models, along with a report and recommendations signed and sealed by a professional engineer, will be submitted to FDEP for approval at least six months before filling begins in that phase.

9.3 CAPACITY EXPANSION AREA MONITORING

9.3.1 Flow Measurement

Under standard practice, leachate from Sections 7 and 8 is collected from the sump risers in the southwest corner of Section 7 at PS-7 and leachate from Section 9 is collected from the south slide slope riser at PS-9. The leachate from Sections 7 and 8 is pumped to the MLPS and then via force main to the leachate storage tank (T1). The leachate force main from PS-9 is tied into the MLPS force main to the leachate storage tank (T1); therefore, leachate is pumped directly from Section 9 to the leachate storage tank (T1). The leachate quantities from Section 9 and the MLPS are recorded by separate flow meters before the flow combines in the force main to the leachate storage tank (T1). SWMG personnel record flow meter readings each day the SCLF is open, and report the quantities to FDEP. Sample leachate reporting forms are included in Appendix A.

9.3.2 Leachate Detection Action Leakage Rate

The action leakage rate (ALR) is defined in 40 CFR 265.302 as the maximum design flow rate that the leak detection system (LDS) can remove without the leachate head on the bottom of the liner exceeding one foot. In accordance with Rule 62-701.400(3)(c)2., FAC, the LDS should be designed to limit the head in the LDS to less than one inch of head or the thickness of the geocomposite.

The ALR for Sections 7 and 8 is 100 gal/acre/day. The total estimated footprint area of Sections 7 and 8 is approximately 19.3 acres. An initial response ALR of 1,930 gpd (19.3 acres x 100 gal/acre/day) will be used for the flow rate measured from Sections 7 and 8. The leachate flow from the Section 7 and 8 LDS system is measured by the flow meter from the LDS pump in the southeast corner sump of Section 7.

The ALR for Section 9 is 306 gal/acre/day. The total estimated footprint of Section 9 is 15.2 acres. An initial response ALR of 4,651 gpd will be used for the flow rate measured from Section 9. The

leachate flow from the Section 9 LDS system is measured by the flow meter from the LDS submersible pump in the south end sump of Section 9.

Initial ALR actions will include the following.

- Check the pump and flow meter at the LDS sideslope riser for proper operation.
- Increase the pumping rate from the LDS to lower the stored levels of leachate. A pocket or slug of leachate may have been conveyed to the LDS riser. Upon further pumping, the levels or flow rates may be lowered below the ALR.
- Check the cover or capping systems over Sections 7 and 8 or Section 9 to reduce infiltration into the LDS.
- Continue monitoring the flow rates out of the LDS, based on the recommendations above to determine further action, if needed.

If the ALR for Sections 7, 8, or 9 is exceeded, FDEP and EPC will be notified and a written assessment provided within seven days. The written assessment shall demonstrate continued compliance with the double-liner requirements specified in Rule 62-701.400(3)(c)2, FAC, or a corrective action plan and schedule for implementation shall be submitted for FDEP approval.

9.4 MAIN LEACHATE PUMP STATION

Operation of the MLPS is described in Section 4.3.

9.5 LEACHATE TREATMENT AND RECLAMATION FACILITY

Sampling of the LTRF effluent and biosolids is described in Sections 9.1.1 and 9.1.2.

10.0 MAINTENANCE AND INSPECTION

10.1 LEACHATE COLLECTION SYSTEM SCHEDULE FOR MAINTENANCE AND INSPECTION

The leachate facilities are inspected daily. The leachate collection and removal systems will be water pressure cleaned or video inspected as needed during the duration of the permit. The leachate system components will also be maintained as needed. Routine maintenance for these components at the SCLF is performed following the schedule in **Table 10.1**.

10.2 STORAGE TANK MAINTENANCE AND INSPECTION

Storage tank maintenance and inspection procedures are discussed in Sections 5.0 and 7.0.

Table 10.1 Schedule For Maintenance

Component	Frequency	Performance Criteria	Corrective Action
Pump Station A (PS-A)	Pump: semi- annual. Sump: annual.	Pump is unable to maintain the required levels in the sump. Inspect for sediment in sump and adequacy of level controls by testing the automatic on/off float settings (see LMP Section 4.1.1 for PS-A float settings).	Pump inspected for damage or other problems and repaired or replaced as needed. Replacement pump will be installed within 24 hours. If PS-A cannot be repaired before pumping is required, the bypass line will be used to pump leachate from PS-B directly to the MLPS. For level controls (i.e., floats and control panel), if testing fails, remedial measures will be initiated immediately by contacting an electrician and the condition will be corrected within 48 hours. Excessive sediment in the sump will be removed within two weeks after inspection.
Pump Station B (PS-B)	Pump: semi- annual. 18-inch access pipes; at time of permit renewal.	Pump is unable to maintain the required levels in the sump. Inspect for adequacy of level controls. Manually pump sump until air enters the pump; at that time bubbler should read between 0 to 4 inches (see LMP Section 4.1.2 for PS-B sensor settings). If blockage of the 4-inch suction line or the bubbler pressure tube is	Pump inspected for damage or other problems and repaired or replaced as needed. Replacement pump will be installed within 24 hours. For level controls failure, remedial measures will be initiated immediately by contacting DCC and the condition will be corrected within 48 hours. If needed, water

Component	Frequency	Performance Criteria	Corrective Action
		suspected, remove the suction line for inspection.	pressure clean the interior of the 4-inch suction line. The 18-inch access pipes will be water pressure cleaned and video inspected as needed at time of permit renewal. If the 18-inch access pipes are not performing adequately, the SWMG will submit to FDEP and EPC an evaluation report with proposed remedy.
Main Leachate Pump Station (MLPS)	Pump: semi- annual. Sump: annual.	Pump is unable to maintain the required levels in the sump. Inspect for sediment in sump and adequacy of level controls by testing the automatic on/off float settings (see LMP Section 4.3 for MLPS float settings).	Pump inspected for damage or other problems and repaired or replaced as needed. Replacement pump will be installed within 24 hours. For level controls (i.e., floats and control panel), if testing fails remedial measures will be initiated immediately by contacting an electrician and the condition will be corrected within 48 hours. Excessive sediment in the sump will be removed within two weeks after inspection.
Storage Pond A	Surface: annual.	Empty, water pressure clean, and remove sediment. Visually inspect geomembrane for punctures, seam continuity, and defects around concrete sump.	Defects found will be repaired before reusing the pond.
Storage Pond B	Surface: annual Leak detection: weekly.	Empty, water pressure clean, and remove sediment. Visually inspect geomembrane for punctures, seam continuity, and defects around concrete sump. If leak detection rate is higher than 1,500 gpd, empty pond and inspect geomembrane for defects.	Defects found will be repaired before reusing the pond.
Storage Tanks	Exterior: weekly. Interior: whenever the tank is drained or every three years.	Inspect for adequacy of the cathodic protection system, leaks, corrosion, level controls, and maintenance deficiencies	Deficiencies that could result in failure of the tank or leaks will be corrected before reusing the tank. For level controls failure, remedial measures will be initiated immediately by contacting an electrician and the condition will be corrected within 48 hours.
Section 7 Pump	Semi-annual.	Pump is unable to maintain the required levels in the sump.	Pump inspected for damage or other problems and repaired or replaced as needed.

Component	Frequency	Performance Criteria	Corrective Action
			Replacement pump will be installed within
			24 hours.
Section 9 Pump	Semi-annual.	Pump is unable to maintain the required levels	Pump inspected for damage or other problems
		in the sump.	and repaired or replaced as needed.
Leachate	Twice during	Water pressure clean or video inspect as	If any component is not performing adequately or
collection and	permit period	needed at the existing cleanout locations.	if a problem is shown by the video inspection, the
removal system			SWMG will submit to FDEP and EPC an evaluation
			report with proposed remedy.

11.0 CONTINGENCY PLANS

FDEP and EPC will be notified of any equipment failure or event that disrupts the routine operation of the leachate management system. If the need for storing leachate in Pond B and/or the effluent/leachate storage tank (T6) arises as described in Sections 8.2 and 7.0, respectively, the SWMG will notify the FDEP and EPC. The person responsible for operation of the SCLF is the Landfill Operations Manager (currently Mr. Larry E. Ruiz). The Landfill Operations Manager reports to the Solid Waste Management Group Director (currently Ms. Kimberly A. Byer). The SWMG will continue to evaluate the accuracy and applicability of this leachate management plan and will propose modifications as necessary to accomplish the objectives of the leachate management plan and continue the proper management of leachate at the SCLF. The following sections provide information regarding contingency operations for specific events which may occur at the SCLF.

11.1 REPLACEMENT OF FLOW METERS

If a flow meter ceases to operate, maintenance personnel will remove the instrument and insert a spare flow meter. If the spare flow meter is not available or not working, a pipe spool piece will be inserted in its place to allow the leachate to flow from the transfer pump. The instrument will be shipped to the service representative or manufacturer for repair or replacement. It is anticipated that the instrument could be removed from service for up to three months. This schedule includes the issue of a Hillsborough County purchase order, shipping, and maintenance time or new part delivery. During this time, leachate production will be determined by recording the run-time meter on the transfer pumps. Leachate production of a specific pump can be estimated by taking the difference in the run-time readings and the rated pump test flow rate.

11.2 STORAGE TANK SECONDARY CONTAINMENT SPILL COUNTERMEASURES

As discussed in previous sections, the LTRF leachate tank system is contained within a concrete containment area. The containment area has two sumps for stormwater drainage with 6-inch diameter HDPE pipes and gate valves that are normally closed. The effluent/leachate storage tank (T6) is contained within a HDPE liner. The containment area has one secondary sump for stormwater, effluent/leachate drainage. Before draining stormwater from the containment areas, the SWMG will visually inspect the stormwater and the tanks to ensure that no leaks have occurred. If no spills have occurred, the sump valves will be opened to drain the stormwater accumulated in the containment area. Under supervision by the Landfill General Manager (or qualified designee), the sump valves will be closed immediately after the stormwater is drained.

If a liquid spills from the LTRF tankage system, the following will be done.

- 1. Assess the cause of the spill and correct the condition promptly.
- 2. If the spill condition is at the leachate storage tank (T1) (575,000 gallons):
 - Shut down the MLPS and PS-9.
 - b. Shut down the LTRF filtrate pumps. The LTRF may continue to operate.
 - c. With a sump pump, transfer the spilled liquid directly into tanker trucks for disposal at an off-site Hillsborough County WWTF.
- 3. If the spill condition is at the LTRF process tank (T2) or the secondary stage clarifier tank (T3):
 - a. Shut down the LTRF.

- b. The MLPS continues to operate.
- c. With a sump pump, transfer the spilled liquid directly into tanker trucks for disposal at an off-site Hillsborough County WWTF or into the leachate storage tank (T1).
- 4. If the spill condition is at the effluent storage tank (T5):
 - a. Shut down the LTRF.
 - b. The MLPS continues to operate.
 - c. With a sump pump, transfer the spilled liquid directly into tanker trucks for disposal at an off-site Hillsborough County WWTF or into the leachate storage tank (T1).
- 5. If the spill condition is at the effluent/leachate storage tank (T6):
 - a. Shut down the LTRF effluent pumps. The LTRF may continue to operate.
 - b. With a sump pump, transfer the spilled liquid directly into tanker trucks for disposal at an off-site Hillsborough County WWTF or into the leachate storage tank (T1).
- 6. If the spill condition is at the glycerin methanol-tank (red tank at LTRF):
 - a. Shut down the LTRF.
 - b. Turn the LTRF electrical power off at the circuit breaker located outside the LTRF office on the south wall and evacuate staff.
 - c. Shut down the MLPS and PS-9.
 - d. Contact the current hazardous waste contractor. The contractor will manage the removal, off-site disposal, and containment area cleanup for methanolglycerin.
- 7. For spill conditions No. 2, 3, and 4 above, after the spilled liquid is removed, SWMG personnel will water pressure wash the containment area and the rinse water will be pumped directly into a tanker truck for disposal at an off-site county WWTF.
- 8. If the leachate storage tank (T1) will remain out of service for more than 48 hours, the SWMG will resume leachate removal from the SCLF to either the effluent/leachate storage tank (T6) or Storage Pond B. Leachate hauling off site can resume from the effluent/leachate storage tank (T6) or Pond B. If the effluent/leachate storage tank (T6) is unavailable for leachate or effluent storage, Pond B can also be used for back-up storage capacity. Leachate can be diverted back to the leachate storage tank (T1) via the MLPS or to the truck loading facility from Pond B. Leachate can also be diverted back to the leachate storage tank (T1) from the effluent/leachate storage tank (T6).
- Within 24 hours of the spill occurrence, the SWMG will verbally notify FDEP and EPC.
 A written report with remedial measures taken will be submitted to FDEP and EPC within seven days after the leachate spill incident.

Appendix A Leachate Reporting And Inspection Forms

HILLSBOROUGH COUNTY SOUTHEAST COUNTY FACILITY LEACHATE MANAGEMENT DAILY FIELD DATA ENTRY FORM

Disposal Area (check one)	Phases I-VI	Sections 7-8	Section 9	
Technician:			Start Time:	

Location	Date (prior day)	Date (today)	Total
Pump Station A, gal			
Pump Station B, inches			
Condensate Pumps Phases I - VI			
Section 9 Pump #1, gal			
Section 9 Pump #2, gal			
Section 9 LDS, gal ⁽¹⁾			
Compost			
Sections 7-8 Pump, gal			
Sections 7-8 LDS, gal ⁽²⁾			
Depth in Pond B, feet(3)			
Pond B LDS, gal ⁽⁴⁾			
Pond B Spray, gal			
Depth in Pond A, feet ⁽⁵⁾			
Spray Irrigation Pump, gal ⁽⁶⁾			
Main LTP Leachate Bypass, gal			
Depth in Leachate Tank, feet ⁽⁷⁾			
Depth in Effluent Tank, feet ⁽⁷⁾			

Notes:

- $(1) \ If \ rate \ is \ greater \ than \ 4,651 \ gallons \ per \ day, \ contact \ Supervisor \ immediately.$
- (2) If rate is greater than 1,930 gallons per day, contact Supervisor immediately.
- (3) If greater than 4.4 feet, contact Supervisor immediately.
- (4) If rate is greater than 1,500 gallons per day, contact Supervisor immediately.
- (5) If greater than 3.7 feet, contact Supervisor immediately.
- $(6) \ If \ runoff \ observed, STOP \ irrigation \ and \ contact \ Supervisor \ immediately.$
- (7) If level is greater than 15 feet, contact Supervisor immediately.

Comments:			

TABLE 1. LEACHATE WATER BALANCE REPORT FORM MONTH/YEAR SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA

I	П	III	IV	V	VI	VII	VIII	IX	x	XI	XII	XIII	XIV	XV	XVI	XVII	XVIII	XIX	XX	XXI	XXII	XXIII	XXIV	XXV
		Depth	Depth	Estimated		Leachate	Leachate	Leachate	Leachate	Leachate	Leachate		Leachate	Effluent	Leachate					Effluent				
		in	in	Depth	Phases I - VI	Pumped	Pumped from	Pumped	Pumped	Pumped	Pumped from		in	in	Treated	Total	Leachate	Pond	Pond	Sprayed	Effluent	Effluent	Total	
		Pond	Pond	at	Condensate	to MLPS	Sections 7-8	to MLPS from	to LTRF from	to LTRF from	Section 9	Compost	575K	575K	at	Leachate	Dust Control	A	В	Pond	Irrigation	Dust Control	Effluent	Total
	Rainfall	A	В	PS-B	Meter	from Phases I-VI	LDS	Sections 7-8	MPLS	Section 9	LDS	Leachate	Tank	Tank	LTRF	Hauled	(Sprayed)	Storage	Storage	В		(Sprayed)	Hauled	Evaporation
Day	(in.)	(ft.)	(ft.)	(in.)	(gal.)	(gal.)	(gal.)	(gal.)	(gal.)	(gal.)	(gal.)	(gal.)	(gal.)	(gal.)	(gal.)	(gal.)	(gal.)	(gal.)	(gal)	(gal)	(gal.)	(gal.)	(gal.)	(gal.)
1																								
2																								
3																								
4																								
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30																								
31																							-	
Total																								
Daily Averag																								
Mo. Average		1	1 -													1								

- Notes:

 1. NR = No Records, NA = Not Available.

 2. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values.

 3. Daily average is calculated by dividing the total by the actual days measured in the month.

 4. Monthly average calculated by dividing the total by the number of days of the month.

 5. Column II, Trace is less than Oli inches and is not included in total.

 6. Columns III and IV, field measured at staff gauges.

- 7. Columns IX & X, Section 7-8 leak detection pumped into Section 7 leachate sump riser.

 8. Column XV and XVI. calculated from depth in 575,000 gal. tanks.

 9. Columns VI-XIV, XVII-XIX, and XXIII-XXV, quantities from flow meters.

 10. Column XVI includes 80% of the daily values from Columns XIX, XXIII, and XXIV plus 5% of the daily values from column XXII.

TABLE 2. FIELD DATA ENTRY FORM MONTH/YEAR

SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA

A	В	C	D	E	F	G	Н	I	J	K	L	M	N	О	P	Q	R	S	T	U	V	W	X
		Phases I - VI										Pond B		Effluent	Depth in	Depth in	Leachate			Leachate			Effluent
		Condensate	Flow Meter	Reading	Section 9	Section 9	Section 9	Compost				Effluent	Pond A	Spray	575K Tank	575K Tank	Treated	Leachate	e Hauled	Dust Control		t Hauled	Dust Control
	Rainfall	Meter	Pump Sta. A	PS-B	Pump 1	Pump 2	LDS	Leachate	Pump	LDS	Depth	Sprayed	Depth	Irrigation	Leachate	Effluent	at LTRF	Contractor	County	(Sprayed)	Contractor	County	(Sprayed)
Day	(in.)	(gal.)	(gal.)	(in.)	(gal.)	(gal.)	(gal.)	(gal.)	(gal.)	(gal.)	(ft.)	(gal)	(ft.)	(gal.)	(ft.)	(ft.)	(gal.)	(gal.)	(gal.)	(gal.)	(gal.)	(gal.)	(gal)
1																							
2																						<u> </u>	
3																						<u> </u>	
4																						<u> </u>	
5																						<u> </u>	
6																						<u> </u>	
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26 27															-							⊢	
28																							
29																							+
30	1				-										1					1	ļ	⊢—	+
31														0			0	0	0				
Totals	1				l							0		0	1	l	0	0	0	0	0	0	0

Notes:

- NR = No Records, NA = Not Available.
- 2. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values
- 3. Columns I and L include quantities from leak detection system.

Type of Cover	Phases I-VI acres	Section 9 acres
Open		
Intermediate		
Final		
Not Opened		

- 4. Column B, trace is less than 0.01 inches.
- 5. Columns C, D, E, G, H, I, J, K, L, N, P, S-X and Y are quantities from flow meters.
- 6. Columns M and O measured from staff gages in each pond.

Leachate Balance Data

Revised August 2017

TABLE 3. LEACHATE BALANCE SUMMARY SOUTHEAST COUNTY LANDFILL HILLSBOROUGH COUNTY, FLORIDA MONTH/YEAR

			Le	achate Arriving at L	TRF		Leac	hate Leaving LT	RF		Effluent Disposa	1	Inflo	w / Outflow For 1	LTRF
		Condensate	Leachate	Leachate	Leachate		Total Leachate	Leachate	Leachate	Total	Effluent	Effluent	Total Inflow	Total Outflow	Change
	Rainfall	from LFG	from Section 9	from Section 7-8	from Phases I-VI	Compost	Hauled	Dust Control	Treated at	Effluent	Dust Control	Irrigation	to	from	in
		CS-1	Pumped to LTRF	Pumped to LTRF	Pumped to LTRF	Leachate	from LTRF	(Sprayed)	LTRF	Hauled	(Sprayed)		LTRF	LTRF	Storage ³
Month	(in.)	(gal.)	(gal.)	(gal.)	(gal.)	(gal.)	(gal.)	(gal.)	(gal.)	(gal.)	(gal.)	(gal.)	(gal.)	(gal.)	(gal.)
January															
February															
March															
April															
May															
June															
July															
August															
September															
October															
November						·					-				
December															
						·					-				
YTD Total															

I. If the bypass at the effluent pond is ever used to pump effluent back to the LTRF, this table must be modified.
 Change in storage represents total inflow to LTRF minus total outflow from LTRF.

Balance Summary Revised August 2017

Leachate Treatment Facility Flows

Day	Influent	Total	Effluent	Total
Last				
1		0		0
2		0		0
3		0		0
4		0		0
5		0		0
6		0		0
7		0		0
8		0		0
9		0		0
10		0		0
11		0		0
12		0		0
13		0		0
14		0		0
15		0		0
16		0		0
17		0		0
18		0		0
19		0		0
20		0		0
21		0		0
22		0		0
23		0		0
24		0		0
25		0		0
26		0		0
27		0		0
28		0		0
29		0		0
30		0		0
31		0		0

Southeast County Landfill Storage Tanks Inspection

			L E A C H A	P R O C	2 C N L D A R S I T F A I	M E T H A	E F F L U	E F F L U
Date:		Time:	T E	S S	G E E R	O L	N # T 1	N # T 2
TANKS	1	Amorialita Ingles (AVAI)	T1	T2	Т3	T4	T5	T6
IANKS	2	Any visible leaks? (Y/N) Any dents or scratches evident?						
	3	Any exterior corrosion?						
	4	Level controls in good condition?						
	5	Current Cathodic Protection		N/A	N/A	N/A	N/A	
	6	Volume of Tank (gals)	575,000	220,000	19,000	1,700	3,700	575,000
	7	Material of Construction:	STEEL	STEEL	STEEL	STEEL		STEEL
	Comments:							
PIPES	8	Any pipes bent or deformed?						
	9	Any joints or connections leak?						
	10	Are the pipes free of corrosion?						
	Comments:							
CONTAINMENT	11	Is containment area in good condition?						
	12	Is there non-stormwater in the secondary containment area	?					
	13	If no, was the stormwater released?						
	Comments:							
Inspector's Signature:	:		•					

SOLID WASTE MANAGEMENT DIVISION SOUTHEAST COUNTY LANDFILL

LEACHATE HAULING / DISPOSAL REPORTING FORM

DATE:							
DISPOSA	I LOCATION	l:					
2101 007							
Time loaded	PRODUCT E/L	LOAD NO.	GALLONS	METER READING START	METER READING END	рН	Time unloaded
		TOTAL:					
		Signatu	ıre:				
		2.9		Driver			
		Cianatu	uro.				
		Signatu	ire:	Plant Operator			
Comment	S						
Was sam	ple taken: Y	N if yes, s	ample was ta	aken by:Dat	e:Time:		
E = Efflue	nt (Treated ate (Raw Lea	Leachate)		midio			

Note: Gallons are to be recorded and totaled daily.

APPENDIX B REVISED OPERATIONS PLAN

Operations Plan
Phases I-VI and the
Capacity Expansion Area
(Sections 7, 8, and 9)
Southeast County Landfill
Hillsborough County, Florida



Hillsborough County - Public Utilities Department Solid Waste Management Group (SWMG) 332 N. Falkenburg Road Tampa, FL 33619

Florida Board of Professional Engineers Certificate No. 00004892

SCS ENGINEERS

09215600.06 | August 2018

3922 Coconut Palm Drive, Suite 102 Tampa, FL 33619 813-621-0080

OPERATIONS PLAN PHASES I-VI AND THE CAPACITY EXPANSION AREA (SECTION 7, 8, AND 9) SOUTHEAST COUNTY LANDFILL HILLSBOROUGH COUNTY, FLORIDA

Presented To:
Hillsborough County
Public Utilities Department
Solid Waste Management Group (SWMG)
332 N. Falkenburg Road
Tampa, FL 33619

Presented From:

SCS ENGINEERS 3922 Coconut Palm Drive, Suite 102 Tampa, FL 33619

Florida Board of Professional Engineers Certificate No. 00004892

> August 2018 File No. 09215600.06



Robert B. Curtis, P.E. FL Reg. No. 73758

Table of Contents

Sec	tion			Page
K.	Intro	duction	1	1
	K.1	Trainir	ng	1
	K.2	Landfi	ill Operation Plan	2
		K.2.a	SWMG Organization and Responsibilities	2
		K.2.b	Contingency Plan	2
		K.2.c	Waste Type Control	3
		K.2.d	Weighing Incoming Waste	5
		K.2.e	Traffic Control	6
		K.2.f	Method and Sequence of Filling Waste	6
		K.2.g	Waste Compaction and Application of Cover	8
		K.2.h	Operation of Leachate, Gas and Stormwater Controls	8
		K.2.i	Water Quality Monitoring	8
		K.2.j	Leachate Collection and Removal System Maintenance	8
	K.3	Opera	ting Record	9
	K.4	Waste	Records	9
		K.4.a	Amount and Origin of Waste	9
		K.4.b	Waste Types	9
		K.4.c	Construction and Demolition Debris	9
	K.5	Access	s Controls	10
	K.6	Load-0	Checking Program	10
	K.7	Spread	ding and Compacting Waste	11
		K.7.a	Waste Layer Thickness and Compaction Frequencies	11
		K.7.b	First Layer Thickness	12
		K.7.c	Slopes and Lift Depth	12
		K.7.d	Working Face	12
		K.7.e	Initial Cover Controls	12
		K.7.f	Initial Cover Frequency	13
		K.7.g	Intermediate Cover	13
		K.7.h	Final Cover	14
		K.7.i	Scavenging and Salvaging	14
		K.7.j	Litter Policing	14
		K.7.k	Erosion-Control Procedures	15
	K.8	Leach	ate management	15

Table of Contents

Section		Pa	ıge
K.9	Gas Mo	onitoring and Management Program	15
	K.9.a	Gas Monitoring	15
	K.9.b	Landfill Gas Collection System	16
K.10	Stormy	vater-Managemnet System	17
	K.10.a	Leachate Reduction	17
K.11	Equipm	nent and Operation	19
	K.11.a	Operating Equipment	19
	K.11.b	Reserve Equipment	20
	K.11.c	Communications Equipment and Personnel Facilities	20
	K.11.d	Dust Control	20
	K.11.e	Fire Protection and Chemical Fires	21
	K.11.f	Litter Control Devices	22
	K.11.g	Signs	22
K.12	All-Wea	ther Access Road	22
K.13	Additio	nal Recordkeeping	22
	K.13.a	Permit Application Development	23
	K.13.b	Monitoring Information Records	23
	K.13.c	Remaining Site Life Estimates	23
	K.13.d	Archiving and Retrieving Records	23
		Tables	
Table K.9.a	a.1 La	andfill Gas Monitoring Points	16
		Appendices	
Appendix A			
		e Equipment Agreement m Inspection and Violation Report	
Appendix C		·	
• •		s I-VI and Capacity Expansion Area Fill Sequencing Plans	
Appendix F Appendix G		Gas Monitoring Points ed	
		vater Management System (SWMS) Plan	

K. INTRODUCTION

The Southeast County Facility (Facility) includes the Southeast County Landfill (SCLF), which is permitted by the Florida Department of Environmental Protection (FDEP) as a Class I landfill for Phases I-VI and the Capacity Expansion Area. This Operation Plan includes Phases I-VI and Sections 7, 8, and 9 of the Capacity Expansion Area.

The Facility is the final depository for municipal solid waste (MSW) ash residues, non-processables, and bypass wastes from the Solid Waste Management System of Unincorporated Hillsborough County. The Facility also receives solid waste from the cities of Temple Terrace and Tampa, as well as MSW ash residues and bypass wastes from the Waste-to-Energy Incinerator Facilities of the City of Tampa and Hillsborough County. Hazardous waste will not be accepted at the Facility.

This operation plan was prepared in conjunction with an operation permit application; as such, the format follows the requirements of Part K of the Permit Application Form.

K.1 TRAINING

In accordance with Rule 62-701.320(15), Florida Administrative Code (FAC), key supervisory personnel at the Facility have received Landfill Operator Certification training. Operator training includes a 24-hour initial course and 16 hours of continuing education every three years. Spotter training includes an 8-hour initial course and four hours of continuing education every three years. Operator and Spotter training courses are offered by the University of Florida Center for Training, Research and Education for Environmental Occupations (TREEO) and through other FDEP-approved sources. Landfill personnel are encouraged to attend these courses after discussions with the Landfill Manager. The currently available TREEO training courses and schedule are listed in Appendix A. The listing is also available at www.treeo.ufl.edu. Documentation demonstrating that the facility operators and spotters have received the required continuing education is presented in Attachment D.15 of the Phases I-VI and Capacity Expansion Area (Sections 7, 8, and 9) Permit Renewal Application dated June 2013.

As required by Rule 62-701.500(1), FAC, a certified Landfill Operator will be on site when waste is received for disposal at the landfill, and a trained spotter will be on site during all times when waste is deposited at the landfill working face to detect any unauthorized wastes. In addition, the equipment operators have sufficient training and knowledge to move waste and soil and to develop the site in accordance with the design and operational standards described in the operation permit application.

K.2 LANDFILL OPERATION PLAN

K.2.a SWMG Organization and Responsibilities

Hillsborough County (County) owns the Facility and is the applicant for the operation permit. A Landfill Contractor (Contractor), currently Waste Management, Inc. of Florida (WMIF), will operate and maintain the Facility in accordance with the permit conditions under the contract that exists between the County and the Contractor.

The following Hillsborough County Public Utilities Department, Solid Waste Management Group (SWMG) and Contractor personnel are currently responsible for the operations at this Facility:

- Larry E. Ruiz, Landfill Operations Manager (SWMG)
- Ernest Ely, District Landfill Manager (Contractor)

In addition, the following positions are maintained at the Facility: scale-house clerks (SWMG), waste monitors (SWMG), equipment operators (Contractor), spotters (Contractor), laborers (Contractor), security personnel (Contractor), and mechanic (Contractor). At least one trained operator familiar with the landfill operations will be on site at all times while the Facility is open in accordance with Rules 62-701.320(15) and 62-701.500(1), FAC.

K.2.b Contingency Plan

The contingency plan for the Facility is based upon addressing two potential emergencies:

- Equipment failure.
- Large influx of material resulting from a natural disaster such as a hurricane, fire, or from a breakdown at local waste-to-energy facilities.

Sufficient backup equipment will be provided on site for equipment breakdowns and downtime for normal routine equipment maintenance. If primary and backup major equipment (i.e., landfill compactor or bulldozer) fail, one or both of the following contingency measures will be implemented:

- Use existing contracts with contractors and rental equipment dealers to furnish rental equipment on short notice (Appendix B).
- Establish arrangements with other County agencies to furnish equipment.

The Contractor will be responsible for providing equipment and a working force of adequate size and skill to maintain the landfill operation in compliance with all applicable federal, state, and local regulations. If sufficient local personnel are not available, the Contractor will relocate from other facilities sufficient personnel with the proper skills to maintain operations.

Given that a large volume of wastes requiring disposal from a natural disaster is non-putrescible, it can be stored on site temporarily (adjacent to the working face) and landfilled after the state of emergency has ended.

In the case of a large fire, bomb threat, or other unforeseen situation requiring specialized emergency response personnel, 911 will be called for the local Fire Department or Sheriff's Department. Waste handling will be suspended and the affected area will be evacuated, if necessary. The landfill will be temporarily closed until the responding Department determines that the landfill is safe for re-entry. If the Facility will remain closed for more than 48 hours, the incoming waste will be diverted to an alternate facility in an adjacent county.

In case of an accidental spill of oil, fuel, leachate, or chemicals, the spill will be minimized by controlling the source immediately (e.g., by closing the valve, turning-off switch, or taking any other necessary action). The affected area will be protected by diverting vehicular traffic. Building a berm, plugging a drain or ditch, or adding absorbent material will control runoff from the affected area. The affected area will be cleaned, and the effectiveness of the cleanup confirmed by sampling, as needed, depending on the nature of the spilled material. For spill countermeasures of secondary containment at the Leachate Treatment and Reclamation Facility (LTRF) and the effluent/leachate storage tank, refer to Section 11.0 of the Leachate Management Plan (LMP).

K.2.c Waste Type Control

The automated accounting system, clerks at the scalehouse, and the site security fence help discourage unauthorized entry and uncontrolled disposal of unauthorized waste. A sign at the entrance states the general regulations including the types of prohibited solid waste.

A minimum of three random load inspections of solid waste per week will be conducted at the active landfill (See Part K.6 and Appendix C). As an additional control, the SWMG has one waste monitor and the Contractor has at least one trained spotter at the working face to visually inspect each load of waste as it is unloaded and deposited. If any unauthorized special waste (i.e., lead-acid batteries, used oil, yard trash, white goods, and whole tires) is found at the working face during the random inspection or as part of routine operations, the waste will be segregated and removed from the site for recycling or other processing in accordance with FDEP regulations. Items that may contain liquids or gases will be stored upright, undamaged, and in a container as appropriate. The maximum on-site storage will be as follows:

- 50 batteries in a secondary containment covered tray.
- 20 gallons of used oil placed upright in an undamaged container.
- 40 cubic yards (cy) yard trash in one 40-cy roll-off container.
- 75 white goods and lawnmowers placed upright (on the ground) until all liquids, chlorofluorocarbons (CFCs), and Freon are removed. After the metal recycling contractor removes all liquids, CFCs, and Freon, the white goods are marked with spray paint to indicate that they are ready to be placed in the scrap metal containers.
- Scrap metal in two 40-cy roll-off containers (including processed white goods).

These special wastes will be stored next to the working face and removed from the site within 30 days.

Whole tires will be stored and managed at the on-site Waste Tire Processing Facility (WTPF). Leadacid batteries will be collected by the SWMG's contracted battery recycler. Scrap metal, including white goods and lawnmowers, will be collected and processed by the SWMG's metals recycling contractor. Propane tanks will be collected by the recycling contractor. Until the SWMG develops a beneficial use for landfill gas, yard trash will be rejected, required to be reloaded, and directed to be taken to the yard trash processing facility at the South County Transfer Station.

If unauthorized waste (i.e., hazardous, polychlorinated biphenyl's (PCBs), untreated biomedical, or free liquid) is found at the working face, the waste will be isolated and the Landfill Manager will be immediately notified. The Landfill Manager is trained in the proper procedure to follow, including notifying the FDEP. Similarly, if suspect waste is found, the waste will be isolated and the Landfill Manager notified. The Landfill Manager will prepare a suspect waste report and ensure that the waste is properly managed (Appendix C). If hazardous wastes are found, the FDEP will be notified immediately and the waste will be isolated and restricted from access until it is removed from the landfill by a qualified hazardous waste contractor. Hazardous wastes will be removed from the Facility within 24 hours.

K.2.c.1 Waste Profile Program

The Waste Profile Program, administered by the SWMG, establishes policies, procedures, and guidelines for managing waste to comply with federal, state, and local regulations for minimizing risks to the environment, public health, and employees posed by non-hazardous and unregulated waste. The Waste Profile Program includes an internal structured reporting format, guidelines, and procedures to assist customers to comply with waste disposal requirements. The SWMG does not accept unauthorized waste for disposal at the landfill. The following are the objectives of the waste profile program:

- Preclude the entry and disposal of hazardous waste into the Facility.
- Preclude leachate developing hazardous waste characteristics.
- Protect the landfill liner.
- Prevent objectionable odors from becoming a problem.
- Ensure that delivered materials can be handled safely.

K.2.c.2 Motor Vehicles

Motor vehicles will not be accepted at the facility; however, mobile homes will be accepted for disposal in the landfill at the active working face if they cannot be recycled. Appliances (white goods) and waste tires from mobile homes must be removed before being accepted at the facility and processed as stated in Section K.2.c.

K.2.c.3 Shredded Waste

The Facility will accept shredded tires. As provided by Chapter 62-711 FAC, the SWMG will use shredded tires for initial cover since shredded tires are an effective initial cover for controlling disease, vectors, odors, litter, and scavenging.

K.2.c.4 Asbestos Waste

Asbestos waste will be accepted at the Facility. The entire footprint of Phases I-VI and the Capacity Expansion Area will be designated as an asbestos disposal area. Before landfilling, the material must be wetted and placed in a leak-tight wrapping. The bags will be placed in a prepared trench at the working face. Materials such as transite paneling and pipe insulation must be wrapped sufficiently to maintain their integrity during disposal. After placement, the bags will be immediately covered with 6 inches of asbestos-free material (i.e., soil or select waste without large or sharp objects that may damage the asbestos packaging). The location, quantity and source of asbestos containing material will be documented. Copies of the asbestos waste shipment records complying with 40 CFR 61-Subpart M will be maintained on site.

K.2.c.5 Wastewater Treatment Biosolids

Biosolids (industrial and domestic sludge) from wastewater treatment systems are accepted for disposal in the landfill. Biosolids will be applied to the working face of the landfill and daily cover applied in accordance with Section K.2.g to control odors. Disposal operations of biosolids will not occur within 50 feet of exterior side slopes

Biosolids from the wastewater treatment facility (WWTF) will be required to pass the paint filter test which will be based on the percent solids of the biosolids produced by the WWTF.

A paint filter test will be initially performed on the biosolids to demonstrate the minimum percent solids content that will pass the paint filter test. Thereafter, the WWTF will be required to provide a report of the percent solids content of the biosolids delivered each day to the Facility. Biosolids from the WWTFs with percent solids content at or above the minimum solids content passing the paint filter test will be accepted at the Facility. In the event the percent solids content from a WWTF is below the minimum solids content, the WWTF must, before disposal at the SCLF, perform and provide documentation that the lower percent solids content passes the paint filter test.

In addition to landfilling, the County manages a solid waste composting operation at the SCLF. The operation co-composts together, a mix of dewatered biosolids received from local, Hillsborough County municipal wastewater treatment plants and yard waste received directly at the landfill from commercial and residential customers. The compost operation covers approximately 7 acres of an inactive area on top of the Capacity Expansion Area (CEA).

Yard waste is ground-up and mixed with biosolids at the facility and formed into windrows on an asphalt pad where it cures over a period of weeks. The material is periodically turned with a mechanical turner and after initial curing, is transferred to a final curing pile on the asphalt pad. Following a few more months of curing the material is put through a mechanical screen for size control and moved to another area on the pad for temporary storage until it is taken away by the customer. The finished compost product is distributed to local farmers and the general public. A more complete description of the compost operation is included in the Composting Operation and Maintenance Plan.

K.2.d Weighing Incoming Waste

All incoming waste will be weighed before disposal in the landfill. The existing scales are fully automated and computerized, with the capability for data storage and retrieval for daily record keeping and reporting. All customers are issued receipts upon exiting the Facility.

K.2.e Traffic Control

The working face area is the most equipment-intensive area of operation for the Facility. In this area, solid waste transportation vehicles arrive, turn around, back up to the working face, and unload the solid waste. Landfill operation equipment will continually spread and compact the solid waste as it is received. During normal operating conditions, only one working face will be active at any given time, with the solid waste at all other areas within the landfill secured by a minimum of 6 inches of initial cover. The working face may alternate as needed between Phases I-VI to the CEA. It is intended that only one working face will be active at a time at either Phases I-VI or the CEA.

The approach to the working face will be maintained in an accessible condition so that two or more vehicles may safely unload simultaneously side by side. When unloading is complete, the vehicles will immediately leave the working face area. Entrance and exit haul roads will be provided (both temporary and permanent) and maintained to facilitate future unloading operations. Contractor personnel will direct traffic as necessary to expedite safe movement of vehicles and to ensure that all waste transport vehicles unload within the designated area.

K.2.f Method and Sequence of Filling Waste

Each phase will be landfilled as shown in the Operating Sequence Plans provided in Appendix E. The lifts in each of the several phases are shown on one sheet to minimize the number of sheets, but each lift is independent of the others.

K.2.f.1 Phases I-VI

One working face will be maintained for the anticipated traffic maneuvering during waste fill operations. Typical lifts consist of two lifts 8 to 10 feet high, to reach the maximum elevation shown on the operating sequence drawings including daily and intermediate cover. Because of the phosphatic clay liner stability in Phases I-VI, at no time shall a lift exceed the maximum height shown on the operating sequence drawings. The initial filling in Phases I-VI was completed in 2010. Waste filling will continue over the existing area as shown on the operating sequence plans. Existing intermediate cover placed over the Phase I-VI area will be removed as landfilling progresses. The remaining air space in Phases I-VI is divided into eleven lifts (13-15, 16A, 17A, 18 - 23) as shown on the drawings.

The Contractor will prepare filling plans in accordance with the sequence drawings 45 days before the development of a new lift. Subsequently, grades for the new lift will be set on grade by a registered engineer, land-surveyor, or by an authorized agent.

Landfilling in Lifts 13 (Sheet 4A) began on the west side of Phase I and proceeded east over Phase I.

Landfilling in Lift 16A (Sheet 4B) begins on the east side of Phase IV and proceeds west over Phases IV and VI.

Landfilling in Lifts 17A (Sheet 4C) begins on the south side of Phase IV and proceeds clockwise over Phases IV, VI, and V until elevation 240 feet has been reached.

Landfilling in Lifts 14 and 15, (Sheet 5A) begins on the west side of Phase II and proceeds counterclockwise over Phases II and III.

Landfilling in Lifts 18-21 (Sheet 6) begins on the south side of Phase I and proceeds counter clockwise over Phases I, II, III and IV.

Landfilling in Lift 22 (Sheet 7) begins on the south side of Phase IV and proceeds from east to west over Phases IV, V and VI.

Landfilling in Lift 23 (Sheet 8) begins in the center of Phases I-VI, near Phase II and proceeds from east to west over Phases I through VI, to the permitted final grades (Elev 255) of the landfill. Upon completion of filling operations in Lift 23, final cover will be placed over the entire Phase I-VI area as described in Section K.7.h.

K.2.f.2 Section 7 of the Capacity Expansion Area

The initial filling in Section 7 was complete as of May 2005. The outer sideslopes have not reached their final design 3H:1V slope. The temporary sideslopes of Section 7 will be filled to reach their maximum design slope of 3H:1V during waste filling operations in Section 9.

The east and south sideslopes as well as most of the top of Section 7 have received intermediate cover. Stormwater runoff from the top of Section 7 sheet flows to a downchute on the southeast corner that discharges to a culvert leading to sedimentation basin C (Sed C). Stormwater runoff from the sideslopes of Section 7 drains to the perimeter ditches, eventually flowing to the culvert to Sed C. Any stormwater that does not infiltrate into the ground at Sed C discharges to Pond C for additional attenuation prior to flowing through the on-site stormwater management system described in Section K.10.

K.2.f.3 Section 8 of the Capacity Expansion Area

The initial filling in Section 8 was completed as of May 2007. Similar to Section 7, the outer sideslopes have not reached their final design slope of 3H:1V. The temporary sideslopes of Section 8 will be filled to reach their design slope during waste filling operations in Section 9.

The east and north sideslopes, as well as most of the top of Section 8 have received intermediate cover. Stormwater runoff from the top of Section 8 discharges to Sed C. Stormwater runoff on the east sideslope drains to perimeter ditches, eventually flowing to the culvert to Sed C. Stormwater runoff on the north sideslope of Section 8 flows easterly along perimeter ditches around the CEA eventually discharging through the culvert to Sed C. Any stormwater that does not infiltrate into the ground in Sed C discharges to Pond C for additional attenuation prior to flowing through the on-site stormwater management system described in Section K.10.

K.2.f.4 Section 9 of the Capacity Expansion Area

One working face will be maintained for the anticipated traffic maneuvering during waste fill operations. Typical lifts consist of two lifts 8 to 10 feet high, to reach the maximum elevation shown on the operating sequence drawings including daily and intermediate cover.

The proposed filling sequence for Section 9 is presented in the drawings provided in Appendix E. The initial filling in Section 9 was completed as of July 2009.

Waste placement in Section 9 has proceeded against the west sideslopes of Sections 7 and 8 and landfilling of fill sequence 9-15 has been completed (CEA Sheet 6). Waste filling will continue incorporating areas of both Sections 7 and 8. As the Operations Fill Sequence Drawings show, filling will proceed to bring the sideslopes of Sections 7, 8, and 9 to their design slope of 3H:1V slopes as

shown on fill sequence 16-18 (CEA Sheets 6 and 7). The filling of Section 7, 8, and 9 areas will bring the combined areas to an approximate elevation of 285 feet as shown on Sheet 8.

K.2.g Waste Compaction and Application of Cover

Waste will be placed at the top or bottom of the working face and spread toward the bottom or top, respectively. Waste will be spread in approximately 2-foot-thick layers and compacted with a minimum of three to five passes of the landfill compactor. The spreading and compacting is intended to be a continuous operation. A minimum in-place waste density of 1,000 pounds/cubic yard (lb/cy) will be achieved.

A minimum of 6 inches of compacted initial cover or tarp will be placed over the waste at the end of each operation day in accordance with 62-701.500(7)(f)1. Auto shredder residue, alone or mixed with soil, recovered screen material street sweepings, screened ditch cleaning soil, and solid waste combustor ash residue may be used as initial cover as allowed by 62-701.500 (7)(e). Before the working face between landfills is moved, the area that will remain inactive will be covered with compacted initial cover, soil, or a mixture of 50 percent unscreened wood mulch and 50 percent soil (no ash), with sufficient thickness (minimum 6 inches) to prevent erosion and the mixing of leachate with stormwater. A minimum of 1 foot of intermediate cover, in addition to the 6-inch initial cover, will be applied and maintained within 7 days of cell completion if additional solid waste will not be deposited within 180 days of cell completion.

When landfilling operations begin again in areas with intermediate cover, the intermediate cover (free of waste) will be stripped from the surface (upper 12 inches) and reused over other areas needing intermediate cover. The stripped intermediate cover will be pushed ahead and used as perimeter berms around the active working face area. The intermediate areas are graded to promote drainage (minimum 2 percent slope) and seeded to prevent erosion.

K.2.h Operation of Leachate, Gas and Stormwater Controls

See Sections K.8, K.9, and K.10 for leachate, gas, and stormwater controls, respectively.

K.2.i Water Quality Monitoring

K.2.i.1 Phases I-VI

Water quality monitoring for Phase I-VI is included in Section L of the Operation Permit Intermediate Modification Application, dated April 2015.

K.2.i.2 Capacity Expansion Area

Water quality monitoring for Sections 7, 8, and 9 is included in Section L of the Operation Permit Intermediate Modification Application, dated April 2015.

K.2.j Leachate Collection and Removal System Maintenance

Refer to the <u>current</u> LMP Report in <u>Appendix C of the April 2015</u> incorporated as part of the <u>current</u> Operation Permit Intermediate Modification <u>Application</u>.

K.3 OPERATING RECORD

The operating record will be maintained on site in the Administration Building or at the SWMG office. The operating record will be accessible to the Facility operation personnel and will be available for inspection by FDEP. The records include the following:

- Waste reports
- Operation permits
- Construction and closure permits including any modifications
- Monitoring results, such as water quality testing
- Notifications to FDEP
- Engineering drawings
- Training certifications as required by Chapter 62-701.320(15), FAC

K.4 WASTE RECORDS

K.4.a Amount and Origin of Waste

The amount of solid waste received at the landfill will be weighed and recorded in tons per day in accordance with Rule 62-701.500(4), FAC. Waste reports, including the amount received and county of origin, for the waste types listed in Section K4(b) will be compiled monthly and provided annually to the FDEP.

K.4.b Waste Types

All reports will contain a minimum of the following waste types:

- Class I waste
- Class III waste
- Ash residue
- Other waste

K.4.c Construction and Demolition Debris

If dedicated loads of construction and demolition debris (C&D) are received, an annual report will be submitted to the FDEP as required in subsection 62-701.730(12), FAC and form 62-701.900(7). This report will include tonnage of material types received and recovered based on county of origin.

K.5 ACCESS CONTROLS

The perimeter fence and berms around the Facility prevent the entry of livestock, protect the public from exposure to potential health and safety hazards, and discourage unauthorized entry or uncontrolled disposal of unauthorized materials. 'No trespassing' signs are also posted along the perimeter fence. The SWMG and Contractor personnel will inspect the premises daily. The gate at the Facility entrance and all other gates will be kept locked at all times the landfill is closed, and the Contractor will provide security personnel to guard the Facility during non-operating hours.

K.6 LOAD-CHECKING PROGRAM

The SWMG has established a random-load-checking program as referenced in Part K.2.c to detect and prevent disposal of unauthorized wastes into the landfill. In addition, site access control discourages the disposal of unauthorized and hazardous wastes. A sign at the entrance of the Facility explains the types of waste prohibited at the landfill.

In accordance with Rule 62-701.500(6)(a), FAC, a minimum of three random loads will be checked at the active working face(s) each week. The selected drivers will be directed to discharge their loads at a designated location next to the working face. If any unauthorized special waste (i.e., lead-acid batteries, used oil, yard trash, white goods, and whole tires) is found during the random inspection or as part of routine operations, the waste will be segregated and removed from the site for recycling as described in Part K.2.c. These special wastes will be stored next to the working face and removed from the site within 30 days.

If an unauthorized waste (i.e., hazardous, PCBs, untreated biomedical, or free liquid) is found, the generator of the waste, if known by the driver, will be contacted to determine the waste source. Either the hauling company or the generator of the waste will be directed to remove the unauthorized waste. The random load inspections will be documented on a report from which includes the date and time, name of the hauling company and the driver of the vehicle, the vehicle license number, the source of the waste or generator, and any observations or notes made by the inspector (Appendix C).

The inspector will identify and note all unauthorized waste found during the random load inspection, estimated quantity, and the action taken. The inspector will sign the inspection form that will be retained at the Facility.

If the waste owner cannot be identified, the waste will be evaluated by Contractor personnel in charge. The waste will be isolated and contained and will not be moved until the waste is determined to be acceptable. If it is determined that the waste is not suitable for disposal, the SWMG will be notified for additional assessment and testing of the waste. Subsequently, a record of the decision will be placed into the daily operations file for the Facility.

If any regulated hazardous waste is discovered in a random load check or is identified by an operator or spotter, the Landfill Manager and the FDEP will be notified immediately as well as the generator or hauler, if known. The Landfill Manager is trained in the proper procedure to follow including notifications. If the generator or hauler is not known, the SWMG will be responsible for disposing of the hazardous waste at a properly permitted Facility. The hazardous waste will be isolated and restricted from access until it is removed from the landfill by a qualified hazardous waste contractor. Hazardous wastes will be removed from the site within 24 hours.

As required in Rule 62-701.320(15), FAC and discussed in Part K.1, inspectors, scale-house attendants, equipment operators, and landfill spotters will be trained to identify unacceptable wastes and hazardous wastes.

K.7 SPREADING AND COMPACTING WASTE

All loads coming into the Facility, including small-volume containers, will be delivered to the working face daily. To preserve the prepared base area and to protect the leachate collection system, traffic will be prohibited to operate directly on the chipped tires overlying the drainage layer. Traffic will only be allowed to maneuver on top of the compacted and covered waste. Therefore, the initial lift of all new disposal areas will be accessed by vehicles from the top of the working face. The waste will be spread and compacted from the top, keeping all heavy equipment off the prepared base.

For all subsequent lifts, the waste placement will vary depending on field conditions. Some lifts will be built from the bottom of the active working face. At the discretion of the operator, waste will also be placed from the top of the active working face and spread toward the bottom. Waste will be placed against the covered working face of the previous day's waste. The first cell will act as a means of access and as a berm to guide the placement of waste for the remaining cells. See Part K.2.g for additional information on waste compaction.

The following guidelines will provide an efficient and environmentally sound method of operation for the Facility:

- Portable litter fencing will be placed at the working face where needed to reduce windblown litter.
- Cracks or eroded sections in the surface of any filled and covered area will be repaired and a regular maintenance program will be followed to eliminate pockets or depressions that may develop as waste settles.
- If 12 inches of intermediate cover (free of waste) has been placed over a partially filled area, it will be removed, reused, and stockpiled for later use before the placement of a new lift.
- Tire chips, ash residue from incinerated MSW, tarps, soil, or a 50/50 soil/mulch mix may be used for initial cover. Stormwater runoff will not be allowed from waste-filled areas covered with tire chips or ash. Runoff from outside the bermed working face area will be considered stormwater only if the flow passes over areas that have no exposed waste and have been adequately covered with a tarp or at least 6 inches of compacted soil (or a mixture of soil/mulch) which is free of waste and has been stabilized to control erosion.
- Sufficient cover material will be stockpiled near the working face to provide an adequate supply for initial cover operations. In some areas, daily stockpiling may not be necessary because of the proximity of the borrow area.

K.7.a Waste Layer Thickness and Compaction Frequencies

Landfill personnel will direct all incoming waste to be unloaded at the toe or top of the working face. Waste will be spread in approximately 2-foot-thick layers and compacted with a minimum of three to five passes of the landfill compactors. The spreading and compacting is intended to be a continuous operation, and waste will not be placed in a layer until the previous layer is compacted.

K.7.b First Layer Thickness

For Phases I-VI and Sections 7, 8, and 9, the initial waste layer has been placed. To protect the integrity of the leachate collection system of the landfill, traffic and heavy equipment were not allowed directly on the sand drainage layer.

The procedure for filling and compacting the first layer of waste for future permitted sections at the Capacity Expansion Area will protect the integrity of the liner and leachate collection system. Traffic directly on the protective layer will be prohibited, and the first lift will be accessed by vehicles from the top of the working face. An initial 4-feet-thick lift of selected waste will be placed over the protective layer. The selected waste will be MSW and ash not containing large rigid objects and will be spread and compacted from the top of the working face.

K.7.c Slopes and Lift Depth

The working face slope will be maintained at a slope no steeper than 3H:1V. Each cell will be constructed in a horizontal lift to an approximate height of 8 to 12 feet, with the maximum height as shown on the Drawings provided separately with the Phases I-VI and the Capacity Expansion Area (Sections 7, 8, and 9) Operation Permit Renewal Application as shown in Appendix E.

K.7.d Working Face

Cells will be constructed with slopes no steeper than 3H:1V, and a working face will be maintained to provide unhindered vehicle access to the working face while minimizing exposed areas and unnecessary use of cover material. The working face may alternate as needed between Phases I-VI to the CEA. The working face will be bermed with soil or a 50/50 soil/mulch mix (no ash). The berm will be constructed to prevent the mixing of leachate with stormwater.

K.7.e Initial Cover Controls

At the end of each working day, the waste will be covered with a 6-inch lift of compacted cover material such as soil, a mixture of 50 percent wood mulch and 50 percent soil (or ash), ash, chipped tires, tarps or other materials as approved in 62-701.500(7)(e) FAC, in accordance with 62-701.500(7)(f)1. These cover materials will provide vector control, mitigate windblown litter, reduce the potential for fire, and reduce odors and moisture infiltration into the waste. The initial cover material will be spread over the exposed waste and, with the exception of tarps, compacted by the equipment used to spread the cover (i.e., bulldozer or scraper). The initial cover material will not be removed before placement of successive lifts of waste, with the exception of tarps, which will be removed before placement of successive lifts. Any remaining litter and cleanings from equipment will be placed at the bottom of the completed cell and covered.

Before the working face between landfills is moved, the area that will remain inactive will be covered with compacted cover (free of waste), soil, or a mixture of 50 percent unscreened wood mulch and 50 percent soil (no ash), with sufficient thickness (minimum 6 inches) to prevent erosion and the mixing of leachate with stormwater.

K.7.f Initial Cover Frequency

At the end of each day's operation, the active landfill working face will be thoroughly compacted, and cover material will be spread and compacted to a depth of 6 inches over the day's entire working face and sideslopes in accordance with 62-701.500(7)(f)1. Initial cover material is discussed in Part K.7.e. If needed, the portable barriers that define the working face will be moved to the positions required to define the next day's operation.

The Facility is equipped to excavate and haul cover materials from on-site borrow areas to the working face. Additionally, an elevating scraper is used to excavate and haul cover material from the borrow area to the working face where it can be spread by a scraper or bulldozer.

When using a 50/50 mixture of soil and mulch the following process will be used:

- 1. The area to be excavated will be identified in advance. The area used for mulch mixing will not be larger than 15 acres.
- 2. A 4-foot layer of mulch will be placed over the designated excavation area.
- 3. As the area is excavated, the excavator will take bucket loads of the mulch layer plus 4 feet of soil, mixing the load as it is placed in the dump trucks.
- 4. The trucks will deliver the load to the working face. As the loads are deposited, additional mixing will occur.
- 5. The soil/mulch mixture will be spread over the working face using a bull dozer, causing additional mixing.

K.7.g Intermediate Cover

Intermediate cover will be placed and maintained over cells which will not receive additional solid waste or final cover within 180 days as required in Rule 62-701.500(7)(g), FAC. Recovered screen material or a mixture of soil and ground or chipped yard trash provided that soil makes up at least 50 percent by volume of the mixture may be utilized as intermediate cover. The working face will be bermed to reduce stormwater impacts. Sideslopes will be well maintained to minimize erosion. Intermediate cover material will be placed over the landfill surface within 7 days of cell completion if additional waste will not be placed within 180 days. Intermediate cover will be placed to a minimum compacted thickness of 12 inches on top of the 6 inches of compacted initial cover. On-site material will be used for intermediate cover. Specifically, phosphatic waste clays available on site will be mixed with sand and used for intermediate cover.

To conserve the soil/clay mix, a portion of the intermediate cover will be removed immediately before placement of additional solid waste on top of the lift or before placement of additional waste. The soil/clay mix (free of waste) will be stripped and reused as initial or intermediate cover material. The stripped intermediate cover will be pushed ahead as needed for the perimeter interceptor berms constructed around the active working face area. The intermediate cover areas will be graded to promote drainage (minimum 2-percent slope) and seeded to prevent erosion.

K.7.h Final Cover

K.7.h.1 Temporary Final Cover

A temporary final cover consisting of a soil layer will be installed over cells in Phases I-VI and/or the CEA which will not receive additional solid waste. The temporary final cover will consist of a 12-inch layer of soil with a hydraulic conductivity of 1.0 x 10-5 cm/sec. Vegetative cover will be placed on areas which have reached interim final grade in Phases I-VI. These areas will not receive additional waste until the end of the consolidation period before waste can be filled on top of the area. In CEA Sections 7, 8, and 9, the temporary final cover will be installed on the south and east side slopes as shown on the drawings. As required, temporary drainage berms and downchutes will be placed at the working face to control and direct stormwater runoff away from disposal areas.

K.7.h.2 Final Cover

When portions of the Facility are brought to design grades, final cover will be placed over the areas that have attained final elevation within 180 days in accordance with Rule 62-701.500(7)(h), FAC. Vegetative cover will be established. The final cover system and sequence for final cover placement will be submitted with the application for closure at least 90 days before the partial closure of the sideslopes.

K.7.i Scavenging and Salvaging

Except for such operations that are conducted as part of a recycling program, scavenging and salvaging are not permitted at the Facility. If the volume of recyclable goods is sufficient, as determined by the Landfill Manager, those items may be separated from the waste which is to be disposed.

During waste placement on the landfill, recyclable items such as wood, concrete, metals, cardboard, and other recyclables may be manually pulled from the active face, segregated, and placed in the staging area/roll-off containers adjacent to the working face area. With the exception of clean concrete, the remaining materials will be transferred off-site for recycling. The clean concrete will be stored on site until sufficient quantity is stockpiled and used for on-site road base or other on-site uses.

After the recyclable materials have been removed, the remaining materials will be disposed in the active Class I waste disposal area of the landfill.

Any recycling method, other than manual extraction, will only be implemented following review and concurrence by the FDEP.

K.7.j Litter Policing

If necessary, portable litter fences will be placed downwind of the immediate working area to confine most of the windblown material. Litter around the site and the entrance roadways will be collected regularly and picked up within 24 hours, in accordance with Rule 62-701.500(7)(j), FAC.

K.7.k Erosion-Control Procedures

The Facility fill sequence and the drainage facilities have been designed to minimize erosion of landfill sideslopes and washout of adjacent areas. The landfill surface will be inspected daily for cracks, eroded areas, and depressions in the landfill surface. Corrective action will be implemented within 7 days of detection. In areas where standing water develops, the area will be filled, compacted, and graded to provide positive drainage. Where the standing water problem cannot be corrected by proper grading, temporary drainage ditches will be constructed to drain off the standing water. Intermediately covered areas or other areas that discharge to the stormwater management system and which exhibit significant erosion will be repaired as follows:

- If greater than 50 percent of the soil cover material has eroded, the area will be repaired within 7 days.
- If waste or liner is exposed, the area will be repaired by the end of the next working day.

K.8 LEACHATE MANAGEMENT

Please see the <u>current LMP</u>. (Appendix B of the Operation Permit Intermediate Modification dated September 2015).

K.9 GAS MONITORING AND MANAGEMENT PROGRAM

K.9.a Gas Monitoring

SWMG personnel shall monitor and record landfill gas (LFG) readings quarterly at the perimeter LFG monitoring wells and in the Administration, LTRF, and Maintenance buildings. The locations of the existing LFG monitoring points are included in Appendix F<u>and are summarized in Table K.9.a.1</u>. The ambient air and areas with slab penetration (areas with plumbing for water and drains) will be monitored inside these structures. The monitoring will be conducted for the Lower Explosive Limit (LEL) of methane using a GEM-500 Infrared Landfill Gas Analyzer (or equivalent). The probes will not be purged. Once the GEM is connected to the sampling port, the valve will be opened and the GEM pump will be started. The GEM reading will be observed and the value will be recorded.

When personnel must enter confined spaces or areas where dangerous gases may be present, the SWMG will follow the requirements in the "Code of Federal Regulations Title 29, Part 1910.146 OSHA" and the safety guidelines outlined in "A Compilation of Landfill Gas and Field Practices and Procedures" prepared by the SWANA Landfill Gas Division Health and Safety Task Force.

If methane is detected in concentrations greater than the regulatory limit (100 percent of the lower explosive limit at the property boundary or 25 percent of the lower explosive limit within structures), the SWMG will evaluate potential measures to correct the exceedances. If an unacceptable concentration of methane is detected in a monitoring location (i.e., a well or an on-site structure), the SWMG will immediately take appropriate actions to protect human health. The SWMG will notify FDEP and will re-monitor the location during each of the next 3 days. During this time the SWMG will evaluate potential causes of the exceedance and will implement procedures to remedy the situation if exceedances persist after the third day. Within 7 days of the initial exceedance, the SWMG will submit a remediation plan to FDEP in accordance with Rule 62-701.530(3)(a) FAC.

Table K.9.a.1 Landfill Gas Monitoring Points

Landfill Gas I	Monitoring Points
I.D.	Probe/Building Location
LFG-1	Property boundary probe: South property boundary
LFG-2	Property boundary probe: Southwest property boundary
LFG-3	Property boundary probe: Northwest property boundary
LFG-4	Property boundary probe: North property boundary
SP-1	Scalehouse/Administration Building
SP-2	Scalehouse/Administration Building
SP-3	Scalehouse/Administration Building
SP-4	Scalehouse/Administration Building
SP-5	Scalehouse/Administration Building
SP-6	Scalehouse/Administration Building
SP-7	Scalehouse/Administration Building
SP-8	Scalehouse/Administration Building
SP-9	Maintenance Building
SP-10	Maintenance Building
SP-11	Maintenance Building
SP-12	Maintenance Building
SP-13	Leachate Treatment Facility Building
SP-14	Leachate Treatment Facility Building
SP-15	Leachate Treatment Facility Building

As described in Part K.7, the SWMG has a program for the placement of cover, which is effective for controlling disease, vectors, objectionable odors, and litter. No objectionable odors have been detected or reported by adjacent property owners. At least quarterly, or more frequently if necessary, qualified personnel from the SWMG will assess the presence of ambient objectionable odors at the perimeter monitoring points shown in Appendix F. If objectionable odors are detected at the property line, the SWMG will implement an odor-monitoring program as required by Rule 62-701.530(3)(b) FAC.

K.9.b Landfill Gas Collection System

The design of the Landfill Gas (LFG) collection system and the subsequent operation is in accordance with the federal New Source Performance Standards (NSPS) for municipal solid waste landfills (Subpart WWW) and Subpart AAAA of the National Emission Standards for Hazardous Air Pollutants (NESHAP), which dictates the operational procedures for the gas collection and control (GCCS).

Landfill gas that is generated in the landfill is currently collected by the system GCCS in Phases I-VI and Sections 7, 8, and 9. Permit No. 35435-016-SC/08 details the requirements of the GCCS. The SCLF continues to remain in compliance with the GCCS operation and Title V permit requirements. The repairs and upgrades to the GCCS in the area of the former sinkhole have been completed and were designed to provide landfill gas collection and extraction per the pre-sinkhole conditions and in accordance with the previously permitted GCCS design intent.

The facility maintains all operational and manufacturer procedural documentation for the blower, flare, control devices, and LFG system components on site in the "LFG Specialties User Manual for Utility Flare System Unit 2162", dated September 2009.

For additional information on the GCCS operating and maintenance procedures and safety protocols, refer to the GCCS Design Plan, the Startup, Shutdown and Malfunction Report (SSM), and current Title V Air Operation Permit.

K.10 STORMWATER-MANAGEMNET SYSTEM

K.10.a Leachate Reduction

K.10.a.1 Stormwater Diversion

K.10.a.1.1 Site Stormwater System

The stormwater system was designed to transport the maximum expected flows from a 24-hour, 25-year rainfall event and minimize the collection of standing water within the disposal areas. To efficiently collect and transport the stormwater runoff away from the disposal areas, the stormwater system will be maintained in good condition, with the proper slopes and free from obstructions. Erosion control measures and corrective action are described in Part K.7.k of the Operation Plan. In addition, the design maintains conformance with the site's Southwest Florida Water Management District (SWFWMD) Stormwater Permit (a copy was submitted in Volume 3 of the Construction Permit Application for the Capacity Expansion Area, Section 7, September 2002). The major stormwater component designs and operations are as follows:

- Interior Stormwater Separation berms are generally designed to be 3 feet high and 3 feet wide across the top with sideslopes of 3H:1V. The separation berms divide the contributing runoff areas to facilitate the collection and handling of stormwater as well as providing separation from leachate.
- Sideslope swales were designed to convey stormwater flow from the sideslopes to the downchutes as shown on the drawings. Sideslope swales will be constructed where needed and as shown on the sequence drawings provided separately with the Phases I-VI and Capacity Expansion Area (Sections 7, 8, and 9).
- Downchutes constructed on the side slopes of the landfill will transport stormwater flow to the perimeter stormwater ditches.
- The perimeter stormwater ditches collect surface water runoff around the site, prevent offsite drainage from entering the landfill area, and drain runoff to the appropriate stormwater ponds and sedimentation basins located around the site.

K.10.a.1.2 **Phases I-VI**

The Phases I-VI stormwater collection system directs stormwater runoff from the landfill and surrounding sub-shed areas and into stormwater sedimentation basins and detention ponds. The sedimentation basins are designated A-2, A-3, B, C, 2, 3, 4, and 8. The ponds are designated as Ponds A-1, B, C, D, and E, and an evaporation area. As the Phase I-VI areas are filled with waste,

daily and intermediate cover (clean fill) is applied over the waste which promotes drainage away from the waste material. This minimizes the amount of water that is allowed to infiltrate into the waste. Stormwater that comes in contact with the waste in the active working area is considered leachate and will not be allowed to run off into the stormwater management system. The size of the working area will be kept to a minimum to minimize leachate and berms around the working area will separate stormwater from leachate. The runoff will be directed toward downchutes that will be conveyed to one of the basins.

K.10.a.1.3 Capacity Expansion Area

The CEA stormwater collection system directs stormwater runoff from the landfill and surrounding sub-shed areas and into the existing stormwater sedimentation basins and detention ponds. The receiving basins are designated as Sed C and Seds 2, 3, 4, and 8, which flow into Ponds C and D, respectively. As the CEA, currently Sections 7, 8 and 9, is filled with waste, it will then be covered with daily and intermediate cover (clean fill) to allow drainage away from the waste. This minimizes the amount of water that is allowed to infiltrate into the waste. Stormwater that comes in contact with the waste (now considered leachate) in the active working area will not be allowed to run off into the stormwater management system. The size of the working area will be kept to a minimum to minimize leachate. Berms around the working area will separate stormwater from leachate. The runoff will be directed toward downchutes and transported via stormwater ditches to Sed C and Pond C. The undeveloped areas of the CEA will collect and drain stormwater runoff to sedimentation basin D (Sed D) and Pond D.

K.10.a.1.4 Stormwater Management System Improvements

Improvements to the Stormwater management System (SWMS) at the SCLF were completed in March 2012, see figure in Appendix H. Improvements to the existing SWMS as part of the Stormwater Improvements Project consisted of the following:

- 1. Conversion of dry retention Basins A, B and C from underdrain systems to wet detention systems (Basin C was converted from dry retention with underdrain system to wet detention system as part of Section 9 construction in April 2008).
- 2. Restructuring of evaporation areas located north of the scale house and WMIF's maintenance building to increase attenuation with a wet pool design. New Ponds A-1, A-2 and A-3, and existing Basins F and G are interconnected and function as one system that ultimately discharges through modified control structures in Pond B. New Ponds A-2 and A-3 increase retention times of runoff from Phases I-VI with treatment provided in Pond B.
- 3. Sedimentation ponds between Phases I-VI and the CEA, SED-2, SED-3, SED-4 and SED-8, were constructed provide additional settling areas and reduce sediment transport into Basin D. These sedimentation swales and ponds provide some treatment, but most of the treatment will continue to be provided by the existing Basin D.

K.10.a.1.5 Other Site Stormwater Basins

Several other basins located around the site collect stormwater runoff; however, they do not collect runoff from disposal areas. The other basins are mentioned in this plan for informational purposes. Basins E, F and G collect runoff from the scalehouse. Stormwater Detention Basin H collects runoff from the LTRF.

K.10.a.2 Rain Tarps

Rain tarps will be used to cover open areas (areas that have not received waste material yet but are connected to the leachate collection system) to keep stormwater out of the leachate collection system. Water that has collected on top of the rain tarp is considered stormwater and can be pumped to the appropriate stormwater basin that was designed for that area. Before placement of waste, all rain tarps will be removed.

K.10.a.3 Stabilized Slopes

As filling progresses, the top and side slopes that will not receive additional solid waste for 2 or more months will be stabilized. First, compacted fill will be placed over the waste material to keep stormwater from infiltrating into the waste and to promote runoff. The slopes can then be stabilized with vegetative cover, seed, and mulch, or rain tarp covers. Exterior side slopes that are constructed to design grade and interior side slopes that will not receive waste for longer than 180 days will be covered with intermediate cover and either vegetative cover or hydroseed.

K.10.a.4 Closure

As disposal areas reach final elevations as discussed in Part K.7.h, areas may have a final or temporary final cover placed over the waste material that will provide a low permeability cover over the waste and thus minimize long-term infiltration of stormwater into the waste materials as described in Section K.7.h.(1). As stormwater infiltration is cut off, water within the waste will drain to the leachate collection system within the lined area of the landfill. Since infiltration of stormwater will be minimal, the amount of leachate resulting from stormwater infiltration will reduce over time.

The methods described above represent the current plan; however, as operations continue, they may be modified if alternate methods prove more efficient or allow a higher percentage of stormwater runoff, thus resulting in greater leachate minimization.

K.11 EQUIPMENT AND OPERATION

Landfill operation was discussed in Part K.2.

K.11.a Operating Equipment

The landfill is typically operated with the following on-site equipment:

- Steel-wheeled compactors.
- Bulldozers.
- Articulated dump truck.
- Water tank truck.
- · Motor grader.
- Excavator.

- Several pickup trucks.
- Other miscellaneous construction and maintenance equipment.

Where appropriate, equipment is fitted with safety cabs and fire extinguishers. The Contractor is required to have back-up equipment available within 24 hours.

K.11.a.1 Equipment Care

Routine preventive maintenance minimizes equipment downtime and increases equipment service life. Therefore, the appropriate operation and maintenance (owner's) manual should be consulted. However, applicable maintenance activities implemented at the site include:

- A routine inspection program;
- · Routine lubrication; and,
- Maintenance records up-keep.

Minimal equipment washing using low-volume, high-pressure technique may be performed on lined areas of the landfill that do not have intermediate or final cover. The activity is exempt from industrial wastewater permitting since the wash water is collected by the leachate collection system. Washing will occur within, or adjacent to, the active working face. Runoff will be contained within the limits of the lined landfill and not allowed to comingle with stormwater runoff.

K.11.b Reserve Equipment

Sufficient backup equipment will be provided on site for equipment breakdowns and downtime for normal routine equipment maintenance. Pre-arrangements with contractors and rental equipment dealers will be made to furnish equipment on short notice in the case of a major equipment failure. The Reserve Equipment Agreement is presented in Appendix B.

K.11.c Communications Equipment and Personnel Facilities

Telephones are located at the Administrative and Maintenance Buildings for use in emergencies. Cellular telephones and two-way radios are also used. The Administration Building is equipped with water supply, toilet facilities, emergency first-aid supplies, and electricity. The building also provides shelter for employees in case of inclement weather. The Maintenance Building is equipped with spare parts, tools, equipment, and electrical services for operations and repair.

K.11.d Dust Control

K.11.d.1 Phases I-VI

Dust control outside of the landfill will be provided by applying water sprayed from a water tank truck and will be applied to the unpaved access roads as required to control dust generation. Dust control inside of the landfill will be provided by applying small quantities of leachate as described in Section 8.4 of the LMP.

K.11.d.2 Capacity Expansion Area

Dust control outside of the landfill will be provided by applying water sprayed from a water tank truck and will be applied to the unpaved access roads as required to control dust.

Dust control inside the active waste disposal areas will be provided by applying small quantities of leachate from a spray bar mounted on the rear of a tank truck. Leachate will be sprayed onto the active fill areas of the CEA, including the working face, which includes a berm to prevent runoff, and areas with the required 6 inches of initial cover as required to control dust.

Leachate used as dust control reduces the amount of fresh pond water that would otherwise be sprayed from tanker trucks to control dust on the active fill areas and provides for leachate evaporation. Leachate quantities used for dust control will continue to be reported in the leachate balance report submitted to the FDEP.

The SWMG will monitor the rate of application, soil moisture conditions, and the specific landfill areas used so that this leachate disposal method does not generate runoff. Spray bar leachate spraying will be applied under the following conditions:

- Leachate will only be sprayed on active-fill areas, including the working face that includes a berm to prevent runoff and areas with the required 6 inches of compacted initial cover.
- Leachate will not be sprayed on areas with intermediate or final cover, seeded or unseeded, or on areas that do not have a berm to prevent runoff.
- The maximum grade leachate will be sprayed on is 10H:1V slope. Areas within 150 feet of a 4H:1V or steeper sideslope will not be sprayed. Areas receiving leachate will be controlled at all times to prevent leachate runoff from entering the stormwater system.
- Leachate will not be sprayed during a rainfall event.
- The tank truck spray bar method maximizes evaporation. The application rate of leachate will be such that leachate does not accumulate on the landfill surface nor infiltrate quickly into the covered refuse. The main goal of this leachate disposal method is evaporation rather than recirculation of leachate.
- Leachate will not be sprayed at the end of the day on the initial cover of the working face or other areas. Spraying should be done early in the morning after any dew evaporates and continue until early afternoon or until all available areas have been used.

K.11.e Fire Protection and Chemical Fires

A charged fire extinguisher is kept at the scalehouse, Administration Building, Maintenance Building, and with all landfill equipment all times. Excavated soil will be used for fire control at the working face.

If a load of waste delivered to the site is smoking or on fire, landfill personnel direct the load to the "hot spot" area (an area within the landfill footprint with at least 12 inches of soil cover) where appropriate fire fighting procedures are followed.

Water for fire protection will be supplied from the fire hydrant and intake structure located east of Phase II. A second fire hydrant and intake structure is located south of the LTRF. If there is a small

fire at the working face, waste handling will continue on an alternate working face until the fire is suppressed. If a fire cannot be controlled using materials and personnel already on site, the Fire Department will be immediately contacted and the emergency response plan described in Part K.2.b will be followed. See Part K.2.b for spills and containment of contaminated water such as from fire fighting.

No chemicals will be accepted at the landfill. All waste coming through the scale house will be observed to eliminate unwanted chemicals capable of starting a fire. If a chemical accident does occur, the following steps will be taken:

- Call the local Fire Department (911).
- Contain the fire in a small area until Fire Department arrives. To eliminate inhalation of potentially toxic fumes, fight fire from the upwind side.

K.11.f Litter Control Devices

See Part K.7.j of this Operation Plan.

K.11.g Signs

A sign indicating the hours of operation is located at the Facility entrance. Signs indicating the name of the operating authority, charges for disposal, and identifying the asbestos disposal site are located near the scalehouse area. Traffic flow and speed limit signs are located at various points along the landfill access road.

K.12 ALL-WEATHER ACCESS ROAD

The access roadway enters the site from CR 672. An asphalt paved road travels north from CR 672 and turns east into the Facility. The access road location was selected to minimize impacts to residential and agricultural areas along CR 672. There is a gate on the access roadway at CR 672 and fencing to prevent unauthorized access.

The main access road is a 40-foot-wide roadway with a 24-foot-wide asphalt paved section and 8-foot-wide shoulders constructed within the 100-foot-wide right-of-way. The main access road is paved and extends into the Facility through the property entrance, runs along the south side of the site, and turns north along the east side of the Facility area.

Other on-site roadways will be required on a temporary and permanent basis to serve the borrow area and for maintenance and services of on-site facilities. A stockpile of materials to construct and maintain all-weather roads to the active working face is available on site.

K.13 ADDITIONAL RECORDKEEPING

Operation records, such as permits, plans, inspections and others, are maintained at the Facility and at the SWMG office. The active area of Phases I-VI will be surveyed monthly and the active area of the CEA will be surveyed twice each year to calculate the volume used and to estimate the in-place density.

K.13.a Permit Application Development

The SWMG keeps all information including site investigations, construction records, operation records, inspections, and permits.

K.13.b Monitoring Information Records

The SWMG also keeps all monitoring records on groundwater, surface water, weather, and landfill gas. Copies are regularly submitted to the FDEP and the Environmental Protection Commission of Hillsborough County.

K.13.c Remaining Site Life Estimates

An estimate of the remaining site life for the permitted area will be prepared annually for submission to the FDEP.

K.13.d Archiving and Retrieving Records

Records of the landfill that are more than 3 years old will be available at the Facility.

Appendix A

Training Courses

	CEUS Currently Approved by the I	Florida SWMTC for 1/ ttp://landfill.treeo.ufl.ed			d Waste C	perators/S		Jpdated 4/3/201
Course #	Course Title	Course Provider	Landfill	Construction n & Demolition Debris	Transfer Station	Materials Recovery Facility	Spotter	
203		Kohl Consulting, Inc.	8	8	8	8	8	
	Class I,II,III Facilities, Waste Processing	<u>.</u>						
	Facilities, and C&D Sites							Initial
214	Spotter Training Plan for Land Clearing Debris	Wetland Solutions	8	8	8	8	8	1.00-1
210	Site 8 Hour Initial Training for Spotter	Canadidated Dassuurs	0		8	8	8	Initial
219	8 Hour Initial Training for Spotter	Consolidated Resource Recovery, Inc.	8	8	8	8	8	Initial Restricted
248	Spotter Training for Solid Waste Facilities	University of Florida TREEO Center	8	8	8	8	8	Initial
442	24-Hour Initial Training Course for Landfill	UF TREEO	16	16	8	8	4	
	Operators of Class I, Class II, Class III, and							
442	C&D Sites	LIE TREES	42	42	0			Initial
443	16-Hour Initial Training Course for Operators	UF TREEO	12	12	8	8	4	
	of Transfer Stations and Material Recovery Facilities							Initial
444	SWANA-Transfer Station Design & Operations	SWANA	8	8	8	0	8	maar
			_					Initial
462	8-hour Training Course for Spotters at	UF TREEO	8	8	8	8	8	
	Landfills, C&D Sites and Transfer Stations							Initial
488	8-Hour Spotter Training Class I II III Landfill	Safety Consulting and	8	8	8	8	8	Lastet - I
For	C&D Sites and Transfer Facilities	Training	10	10	8	8	4	Initial
582	16-Hour Initial Traiing Course for Transfer Station and MRF Operators	Kohl Consulting Inc	10	10	8	8	4	Initial
608	24-Hour Initial Training Course for Landfill	Kohl Consulting, Inc.	16	16	8	8	4	IIIIIIai
000	Operators (Class I III and C&D Sites)	ntorn consuming, men	10	10	J			Initial
598	SWANA - Manager of Landfill Operations	SWANA	16	16	8	8	4	
	[MOLO] & Exam							Initial
706	The SWM Combo Class: 24-Hour Initial	Kohl Consulting Inc.	24	24	16	16	8	
	Trainig Coruse for Landfill Opertors (Class I, II,							
	III and C&D Sites) with 16-Hour Initial MRF/TS							
	Opertor Class and 8-Hour Spotter Class							Initial
700	Initial Onlyl Construction and Demolition Debris	FDEP & SWIX	4	4	4	4	4	IIIIIIai
700	Recycling and Management Workshop	I DEI G SWIX	_	7	7		_	
701	SWANA-FL 2012 Summer Conference	SWANA-FL	8	8	4	4	4	
702	2012 NAHMMA Florida Chapter HHW/SQG	NAHMMA-Florida	4	4	4	4	2	
	Workshop and General Session	Chapter						
703	16-hour Landfill Operator Refresher Course	Kohl Consulting Inc	16	16				
=0.4		0						
704	SWANA - WasteCon 2013 The Nitty Gritty of Native Byegetation on	SWANA	8	8	7	5	2	
705	Landfills - eCourse	SWANA	1	1				
706	The SWM Combo Class: 24-Hour Initial	Kohl Consulting Inc.	24	24	16	16	8	
	Trainig Coruse for Landfill Opertors (Class I, II,							
	III and C&D Sites) with 16-Hour Initial MRF/TS							
	Opertor Class and 8-Hour Spotter Class							
707	[Initial Only]	Don't Male			-	1 .	-	
707	OSHA 1910.120 HazWoper Refresher	Burt McKee	7	7	7	7	2	
708	Train-the-Trainer: How to Design & Deliver Effective Training	University of Florida TREEO Center	_ ′		/	/		
709	Fundamentals of Slope Stability and	University of Florida	16	16				
		TREEO Center						
710	Basic Water and Wastewater Pump	University of Florida	4	4				
, 10	Maintenance	TREEO Center	7	1				
711	Pumping Systems Operation and	University of Florida	4	4				
	Maintenance	TREEO Center					<u>l</u>	
712	Basic Electricity for the Non Electrician	American Trainco	2	2	2	2		
713	24-hour HAZWOPER OSHA Training course -	University of South	6	6	6	6	3	
	online	Florida - OSHA Training						
714	8-hour HAZWOPER Refresher Training course	Institute	4	4	4	4	4	
	IA-IIIIII HAZWI IPEK KUTTOCHOT ITZINING COLITCO	PAINTY LIMITAITED INC		. /1	. /1			

				Constructio n & Demolition		Materials Recovery		
Course #	Course Title	Course Provider	Landfill	Debris	Station	Facility	Spotter	
715	8-hour HazWoper Refresher - Operations Level	American Compliance Technologies	4	4	4	4	4	
716	8-hr Hazwoper OSHA Refresher	FDEP	4	4	4	4	4	
717	4-hour OSHA Hazardous Materials Awareness Level Course	Planning Council - District 5 and Citrus	4	4	4	4	4	
718	4-Hour Refresher Course for Spotters at	County Solid Waste Dept University of Florida	4	4	4	4	4	
	Landfills, C&D Sites and Transfer Stations	TREEO Center						
719	Waste Screening Refresher	University of Florida TREEO Center	4	4	4	4	4	
720	Hazardous Waste Regulations in Solid Waste Operations and Recycling	University of Florida TREEO Center	8	8	8	8	4	
721	Hazardous Waste Regulations in Solid Waste Operations	University of Florida TREEO Center	4	4	4	4	4	
722	Health and Safety for Solid Waste Workers [am]	University of Florida TREEO Center	4	4	4	4	4	
723	Health and Safety for Solid Waste Workers [pm]	University of Florida TREEO Center	4	4	4	4	4	
724	Health and Safety for Solid Waste Workers [am+pm]	University of Florida TREEO Center	4	4	4	4	4	
725	am+pm Solid Waste Workplace Health and Safety Trianing - 4 hours	University of Florida TREEO Center	4	4	4	4	4	
726	IS-00340 Hazardous Materials Management	FEMA Emergency Management Institute	4	4	4	4	4	
727	Is-271.a Anticipating Hazardous Weather & Community Risk, 2nd Edition	FEMA Emergency Management Institute	2	2				
728	Managing Composting Operations	Solid Waste Association of North America [SWANA]	16	16				
729	Personal Protection Equipment (PPE) and Safety Procedures	University of Florida TREEO Center	4	4	4	4	4	
730	Heavy Equipment Safety	University of Florida TREEO Center	4	4	4	4	4	
731	Supervisor Safety Training for Solid Waste Operations Staff	University of Florida TREEO Center	4	4	4	4	4	
732	Permit Required Confined Space Awareness	University of Florida TREEO Center	4	4	4	4	4	
733	8-hour OSHA HazWoper Annual Refresher	University of Florida TREEO Center	4	4	4	4	4	
734	40-Hour OSHA HAZWOPER Training Course	University of Florida TREEO Center	8	8	8	8	4	
735	Hazardous Waste Regulations for Generators	University of Florida TREEO Center	4	4	4	4	4	
736	Exposure to Blooborne and Airborne Pathogens	University of Florida TREEO Center	6	6	6	6	4	
737	Bird and Wildlife Management for Ultiliites	University of Florida TREEO Center	4	4	4	4	2	
738	Beyond 40% - Florida's Pathway to Sustainability"	Solid Waste Association of North America [SWANA] + Recycle Florida Today [RFT]	6	6	6	6	2	
739	Getting Back to Basics with Landfill Gas	University of Florida TREEO Center	8	8			4	
740	Is-632.s Introduction to Debris Operation	Emergency Management Institute	2	2	2	2	2	
741	SI:300 Introduction to Air Pollution Toxicology (1994)	US EPA Air Pollution Training Institute (APTI)	4	4	4	4		
742	4-Hour Spotter Refresher Course for Spotters at Solid Waste Management Facilities in Florida	Kohl Consulting Inc	4	4	4	4	4	
743	Health & Safety Issues for Solid Waste Management Facilities	Kohl Consulting Inc.	8	8	8	8	4	

			Constructio						
				n & Demolition		Materials Recovery			
Course #	Course Title	Course Provider	Landfill	Debris	Station	Facility	Spotter		
744	The Sense of Smell, Odor, Theory and Odor Control	Kohl Consulting Inc.	4	4	4	4	2		
745	Spotters at Landfills and Transfer Stations: Safety Awareness Review	Kohl Consulting Inc.	4	4	4	4	4		
746	Landfill and Transfer Station Operators: Waste Acceptability and Safety Issues Review	Kohl Consulting Inc.	4	4	4	4	4		
747	Improving Landfill Operations	Kohl Consulting Inc.	4	4					
748	Fires at Landfills and Other Solid Waste Management Facilities	Kohl Consulting Inc.	4	4	4	4	4		
749	Improving Transfer Station Efficiency	Kohl Consulting Inc.			4	4			
750	Landfill Gas Collection and Re-Use	Kohl Consulting Inc.	4	4					
751	Landfills: Past, Present and Future	Kohl Consulting Inc.	4	4			4		
752	Landfills and Transfer Stations: Past, Present and Future	Kohl Consulting Inc.	4	4	4		4		
753	Wet Weather Operations	Kohl Consulting Inc.	4	4	2	2	4		
754	Topics in Solid Waste Management for Landfill Operators, MRF Operators and Transfer Station Operators	Kohl Consulting Inc.	4	4	2	2	2		
755	Wildlife and Plants at Florida Solid Waste Management Facilities	Kohl Consulting Inc.	4	4	4	4	2		
756	Measurement and Improvement of Performance at Solid Waste Management Facilities ("If you Can't Measure it, You Can't Manage It")	Kohl Consulting Inc.	4	4	4	4			
757	CPR / AED	American Safety & Health Institute - American Health Association - American Red Cross	2	2	2	2	2		
758	First Aid	American Safety & Health Institute - American Health Association - American Red Cross	2	2	2	2	2		
759	Refresher Training Course for Experienced Solid Waste Operators - 16hrs	University of Florida TREEO Center	16	16					
760	Refresher Training Course for Experienced Solid Waste Operators - 8hrs	University of Florida TREEO Center	8	8	8	8			
761	Refresher Training Course for Experienced Solid Waste Operators - 4hrs	University of Florida TREEO Center	4	4	4	4	4		
762	U.S. DOT Hazardous Materials/Waste Transportation	University of Florida TREEO Center	6	6	6	6	4		
763	OSHA 10-hour General Industry Safety Outreach Training	Training Consultants Inc.	4	4	4	4	4		
764	NAHMMA 2013 Florida Chapter Annual Conference – General Sessions	North American Hazardous Materials Management Association	10	10	8	8	4		
765	Road-e-o: Heavy Equipment Safety Training	SWANA-FL	4	4	4	4	2		
766	North American Waste-To-Energy Conference NAWTEC 21st Annual	SWANA	4	4		4			
767	Food Waste Recycling Workshop	SWIX & FDEP	5		3		2		
768	Florida Stormwater, Erosion, and Sedimentation Control Inspector Training and Certification Program	FDEP	3	3	,		2		

Appendix B
Reserve Equipment Agreement

Ring Power Corporation 10421 Fern Hill Drive Riverview, FL 33578

Waste Management Inc. /Southeast Landfill

P.O. Box 627 Balm, FL 33503

Location: Hillsborough County Landfill

2/21/2013

Rental Rates effective through 12/31/13
Waste Management is responsible for maintenance and all damages to rental equipment.
Equipment rental is subject to availability.
Transportation cost quoted upon request.

Make	Model	Description	Day Rate	Week Rate	Month Rate	Cleaning Fee
CAT	D8T	Dozer(w/o waste handling arrangement)	\$1,900.00	\$5,800.00	\$16,400.00	\$ 2,400.00
CAT	D6T	Dozer(w/o waste handling arrangement)	\$1,100.00	\$3,300.00	\$ 9,100.00	
CAT	D6N	Dozer(w/o waste handling arrangement)	\$ 900.00	\$2,700.00	\$ 7,400.00	
CAT	D5K	Dozer(w/o waste handling arrangement)	\$ 620.00	\$1,760.00	\$ 5,040.00	
CAT	725	Articulated dump truck 18.8 cyd capacity	\$1,100.00	\$3,200.00	\$ 8,700.00	
CAT	329EL	Hydraulic Excavator 2.5 cyd bucket capacity	\$ 900.00	\$2,600.00	\$ 6,900.00	
CAT	613	Scraper 11 cyd bowl capacity	\$1,100.00	\$3,200.00	\$ 8,700.00	
CAT	12M	Motor Grader 14' mold board	\$ 800.00	\$2,300.00	\$ 6,000.00	
CAT	938K	Wheel Loader 3.05 cyd bucket capacity	\$ 700.00	\$2,000.00	\$ 5,000.00	
CAT	416E	Loader Backhoe	\$ 200.00	\$ 500.00	\$ 1,500.00	
CAT	CS56	Single Drum Roller 84" wide drum	\$ 500.00	\$1,400.00	\$ 3,400.00	

^{*}Plus tax & Insurance

Ring Power guarantees Waste Management a suitable rental machine delivered to Hillsborough County Landfill within 24 hours of their request.

Appendix C Random Inspection and Violation Report

SOLID WASTE FACILITY INSPECTION / VIOLATION REPORT

REPORT TYPE: INSPECTION VIOLATION LF RANDOM INSPECTION
LOCATION: DATE:TIME:
DELIVERING COMPANY: FRANCHISE COLLECTOR: WMI EB KR OTHER:
DRIVER NAME: VEHICLE #:
VEHICLE TYPE FEL RO RL SL SEMI DUMP OTHER:
CUSTOMER / GENERATOR: TRANSACTION #:
TYPE OF WASTE:
YARD WASTE INDUSTRIAL AUTO PARTS BY PASS WASTE ANIMAL WASTE FURNITURE AG WASTE ROOFING SPECIAL WASTE CARDBOARD FIELD PLASTIC METALS COMMERCIAL WASTE HOUSEHOLD GARBAGE OTHER:
TYPE OF VIOLATION: FACILITY LOAD SAFETY CONTAINER
DETAILS:
DRIVER COMMENTS:
· · · · · · · · · · · · · · · · · · ·
RESULTS:ACCEPTEDREJECTEDRELOADALREADY IN PIT INSPECTOR'S SIGNATURE:
ADDITIONAL COMMENTS:

Appendix D

Not Used

Appendix E	
Phases I-VI and Capacity Expansion Area Fill Sequencing Plans	

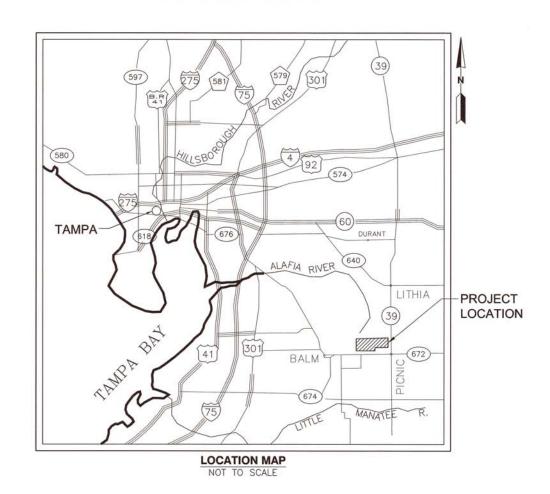
PHASES I-VI OPERATING SEQUENCE SOUTHEAST COUNTY LANDFILL HILLSBOROUGH COUNTY

TAMPA, FLORIDA APRIL 2017



BOARD OF COUNTY COMMISSIONERS

SANDRA L. MURMAN
VICTOR D. CRIST
LESLEY MILLER, JR.
STACY R. WHITE
KEN HAGAN
PAT KEMP
AL HIGGINBOTHAM
- DISTRICT 7



INDEX OF DRAWINGS

CHEET

	SHEET	SHEET TITLE
	1	COVER SHEET
	2	INDEX, LEGENDS AND GENERAL NOTES
	3	FACILITY SITE PLAN AND EXISTING TOPOGRAPHY
	~~~~	PHASES I TO IV LIFTS 13 TO 16
•	4A	PHASES I - LIFT 13
•	4B	PHASES VI, IV, I - LIFT 16A
,	4C	PHASES IV, VI, V - LIFT 17A
_	5	PHASES V AND VI LIFT 17
(	5A	PHASES I, III - LIFTS 14, 15
	$\mathcal{I}_{6}$	PHASES I TO IV - LIFTS 18 TO 21
	7	PHASES V AND VI - LIFT 22
	8	PHASES V AND VI - LIFT 23 (FINAL LIFT)
	9	SINKHOLE REMEDIATION PLAN
	10	LANDFILL CROSS SECTIONS
	11	SINKHOLE REMEDIATION CROSS SECTION
	12	DETAILS 1
	13	DETAILS 2
	14	DETAILS 3
	15	DETAILS 4

### NOTE:

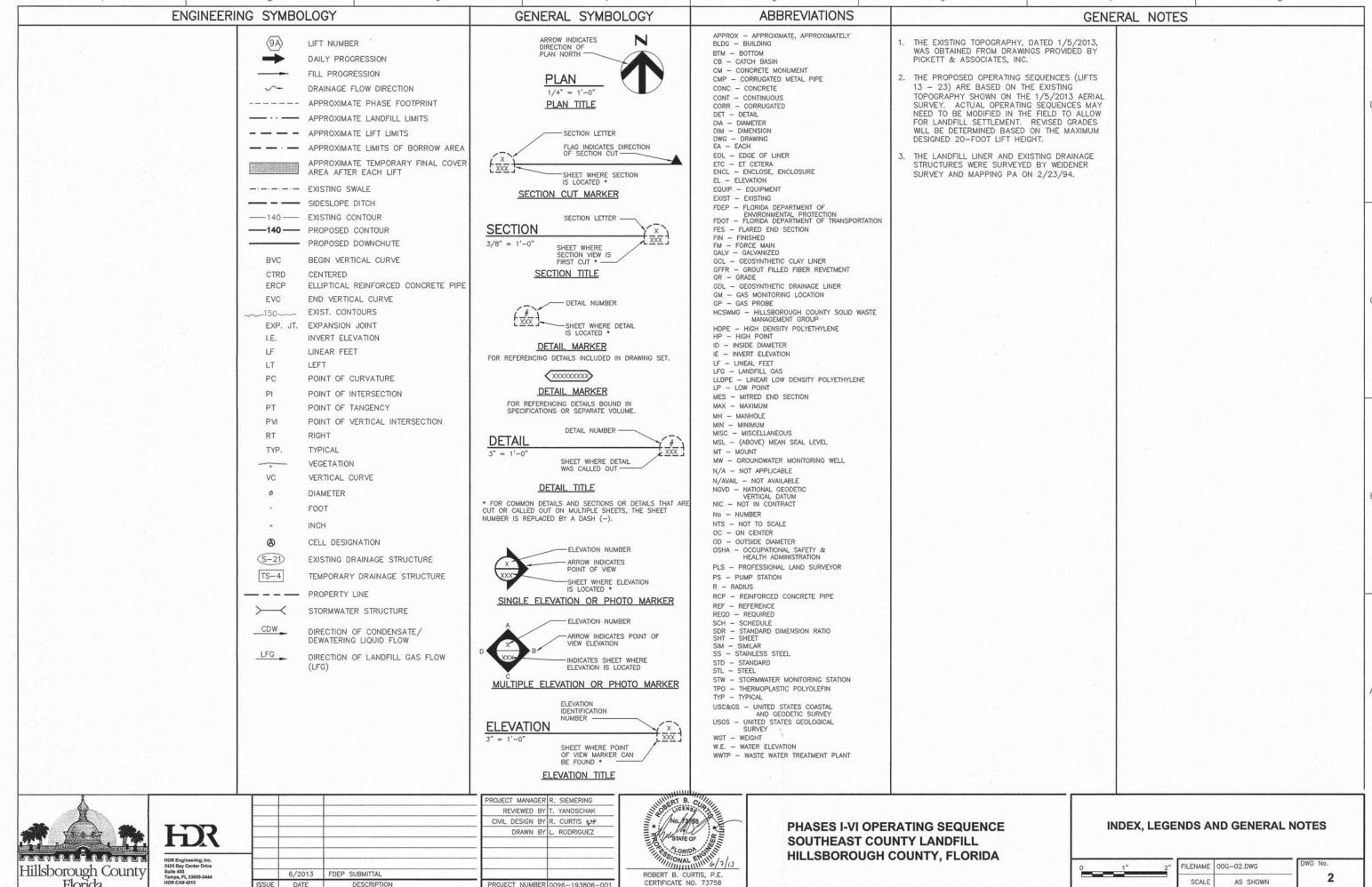
THIS UPDATE TO PHASE I-VI OPERATING SEQUENCE DRAWINGS INCLUDE MODIFICATIONS TO LIFT SEQUENCES 13 THROUGH 17; AS SUCH, SCS ENGINEERS IS ONLY SIGNING AND SEALING SHEETS 4A, 4B, 4C, AND 5A. THE REMAINING LIFT SEQUENCES 18 THROUGH 23 (FINAL LIFT) WILL CONTINUE IN ACCORDANCE WITH THE CURRENTLY FDEP APPROVED OPERATING SEQUENCE DRAWINGS, DATED JUNE 2013, PREPARED, SIGNED AND SEALED BY HDR ENGINEERING, INC.



STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS, INC. 4041 PARK OAKS BLVD., SUITE 100 TAMPA, FLORIDA 33610 PH. (813) 621-0080 FAX. (813) 623-6757 FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892 WWW.SCSENGINEERS.COM

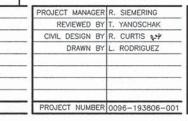
SCS PROJECT NO. 09215600.03

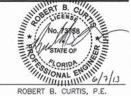




Florida

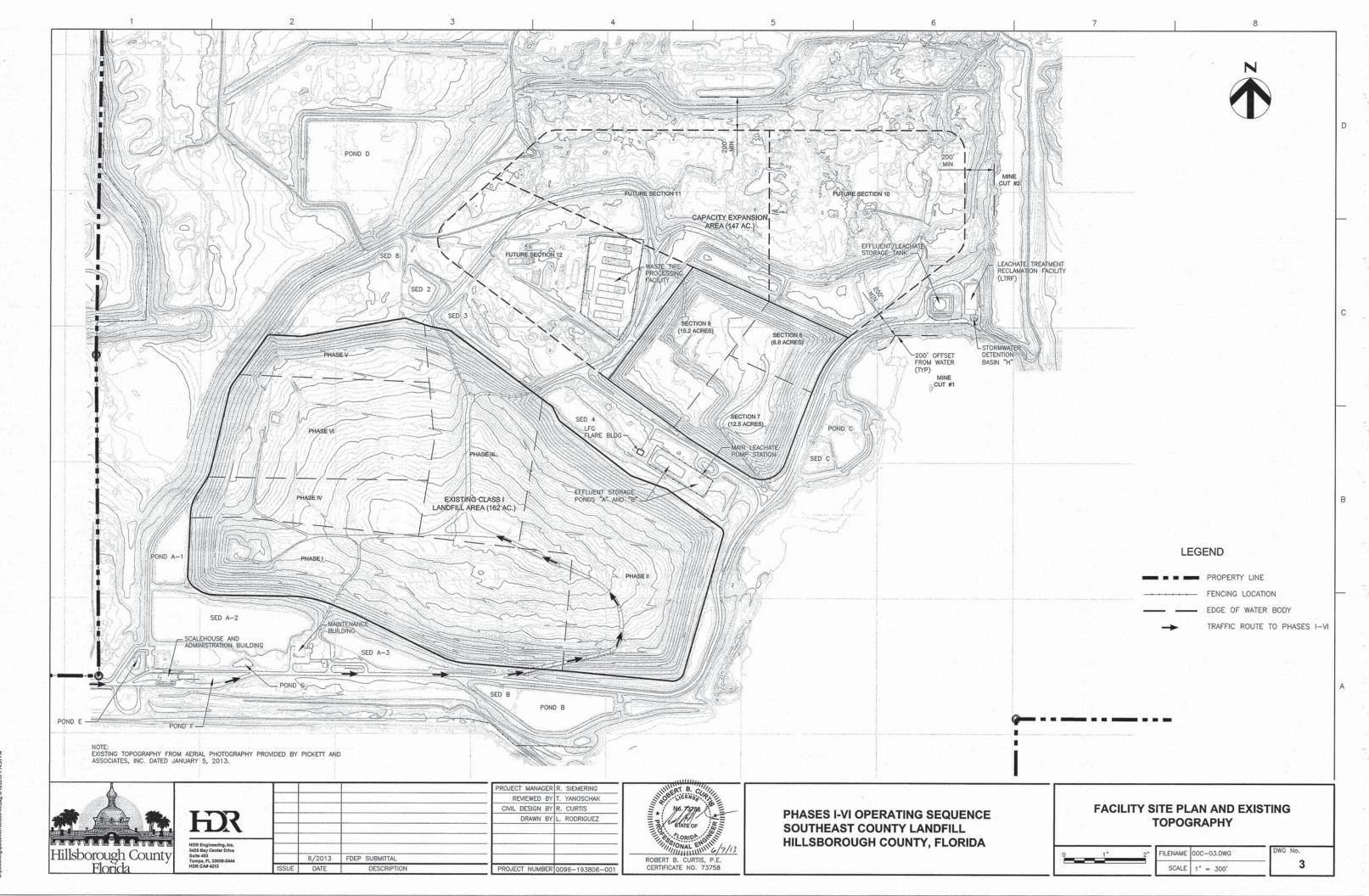
6/2013 FDEP SUBMITTAL ISSUE DATE DESCRIPTION





CERTIFICATE NO. 73758





Categorial and SASTOBOOD DO and Categorial and Categoria and Categorial and Categorial and Categorial and Categorial and Categ



SOUTHEAST COUNTY LANDFILL FILL SEQUENCE REVISION PHASE I - LIFT 13 PUBLIC WORKS DEPARTMENT SOLID WASTE MANAGEMENT DIVISION TAMPA, FL 33619

SHEET 4A of 15



₹ 444444< SOUTHEAST COUNTY LANDFILL FILL SEQUENCE REVISION PHASE VI, IV, I - LIFT 16A HILLSBOROUGH COUNTY
PUBLIC WORKS DEPARTMENT
SOLID WASTE MANAGEMENT DIVISION
TAMPA, FL 33619

ENGINEERS IS, CONRAD AND SCHMIDT L'TING ENGINEERS, INC.

CADD FILE:

APRIL 2017

AS SHOWN DRAWING NO.

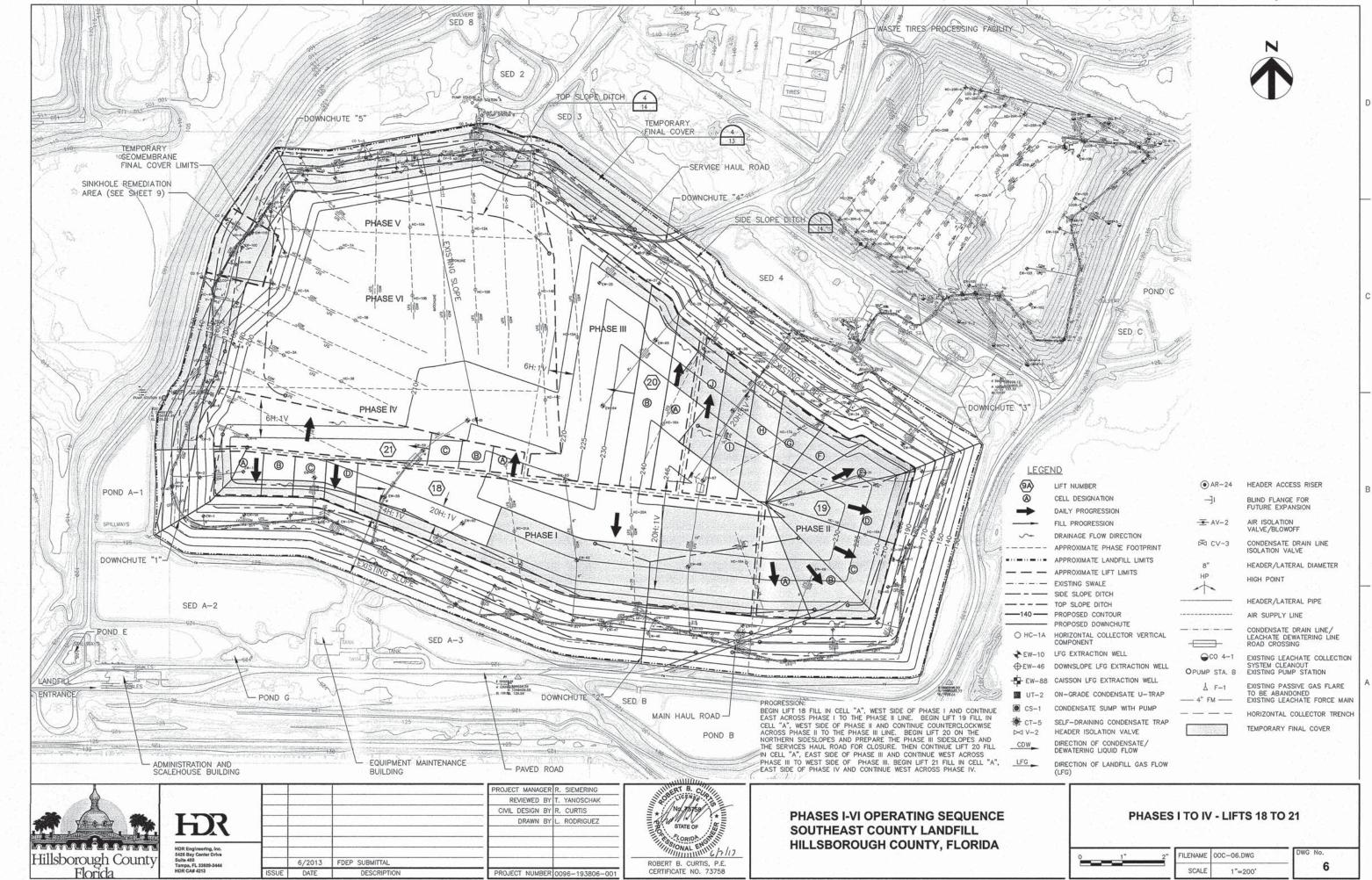
**4B** SHEET 4B of 15

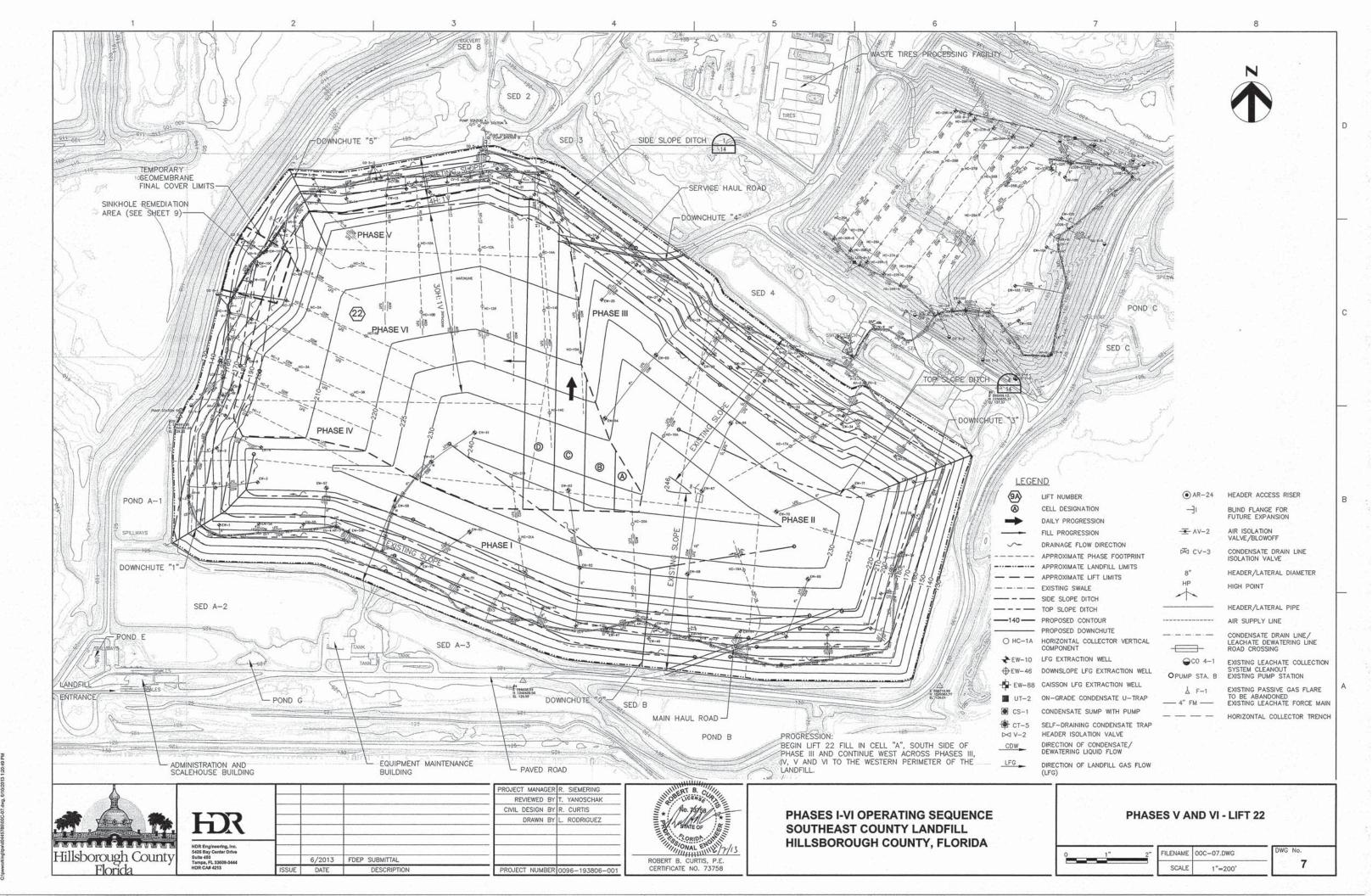


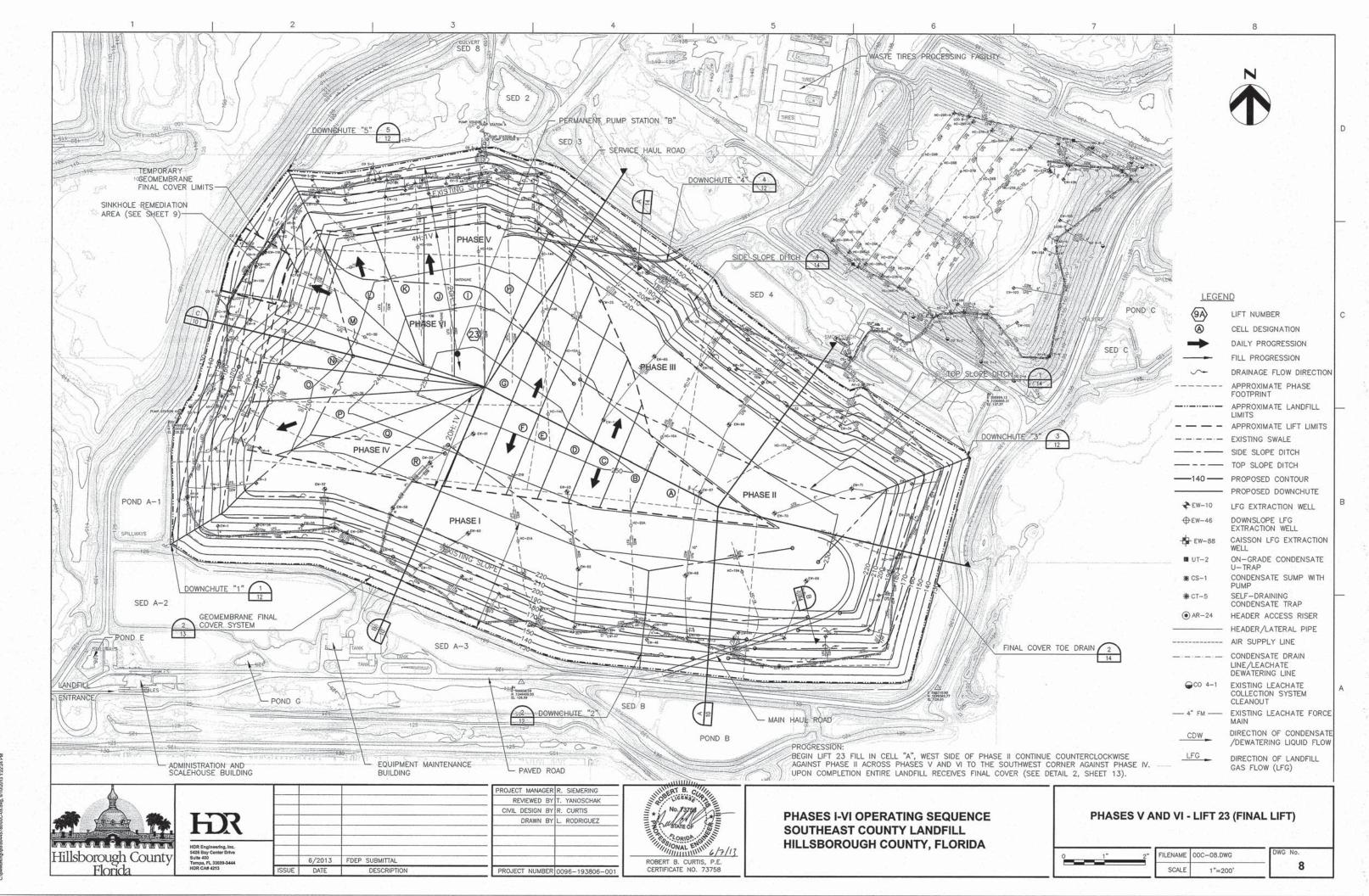
4C SHEET 4C of 15



SHEET 5A of 15









EXISTING 18" ADS PIPES (SEE NOTE 3)



-	TS OF FI	IVAL COVE	-15
DESCRIPTION	NORTHING	EASTING	ELEVATION
W1	1,251,380.1	595,181.34	129.32
W2	1,251,332.6	595,169.56	129.21
W3	1,251,312.3	595,247.07	142.69
W4	1,251,291.4	595,336.55	158.01
W5	1,251,265.5	595,442.88	162.72
W6	1,251,385.8	595,481.43	162.31
W7	1,251,505.8	595,517.36	162.22
W8	1,251,545.4	595,453.35	159.23
W9	1,251,597.7	595,367.51	145.05
W10	1,251,642.4	595,291.38	126.82
W11	1,251,548.6	595,233.61	128.73
W12	1,251,484.4	595,207.36	129.31

### LEGEND:

WOODEN MARKER POST (LOCATIONS ON TABLE THIS

TOE DRAIN — — 155. — — EXISTING CONTOUR

- PROPOSED CONTOUR

- NOTES:
  1. EXISTING TOPOGRAPHY PROVIDED BY PICKETT AND ASSOCIATES, INC. FROM AERIAL PHOTOGRAPHY DATED JANUARY 5, 2013.
- LFG SYSTEM NOT SHOWN FOR CLARITY OF DRAWING.
- EXISTING STORMWATER PIPES TO BE RELOCATED PER STORMWATER PLANS.



			PROJECT MANAGER	R. SIEMERING
			REVIEWED BY	T. YANOSCHAK
			CIVIL DESIGN BY	R. CURTIS
			DRAWN BY	L. RODRIGUEZ
	6/2013	FDEP SUBMITTAL		
ISSUE	DATE	DESCRIPTION	PROJECT NUMBER	0096-193806-00



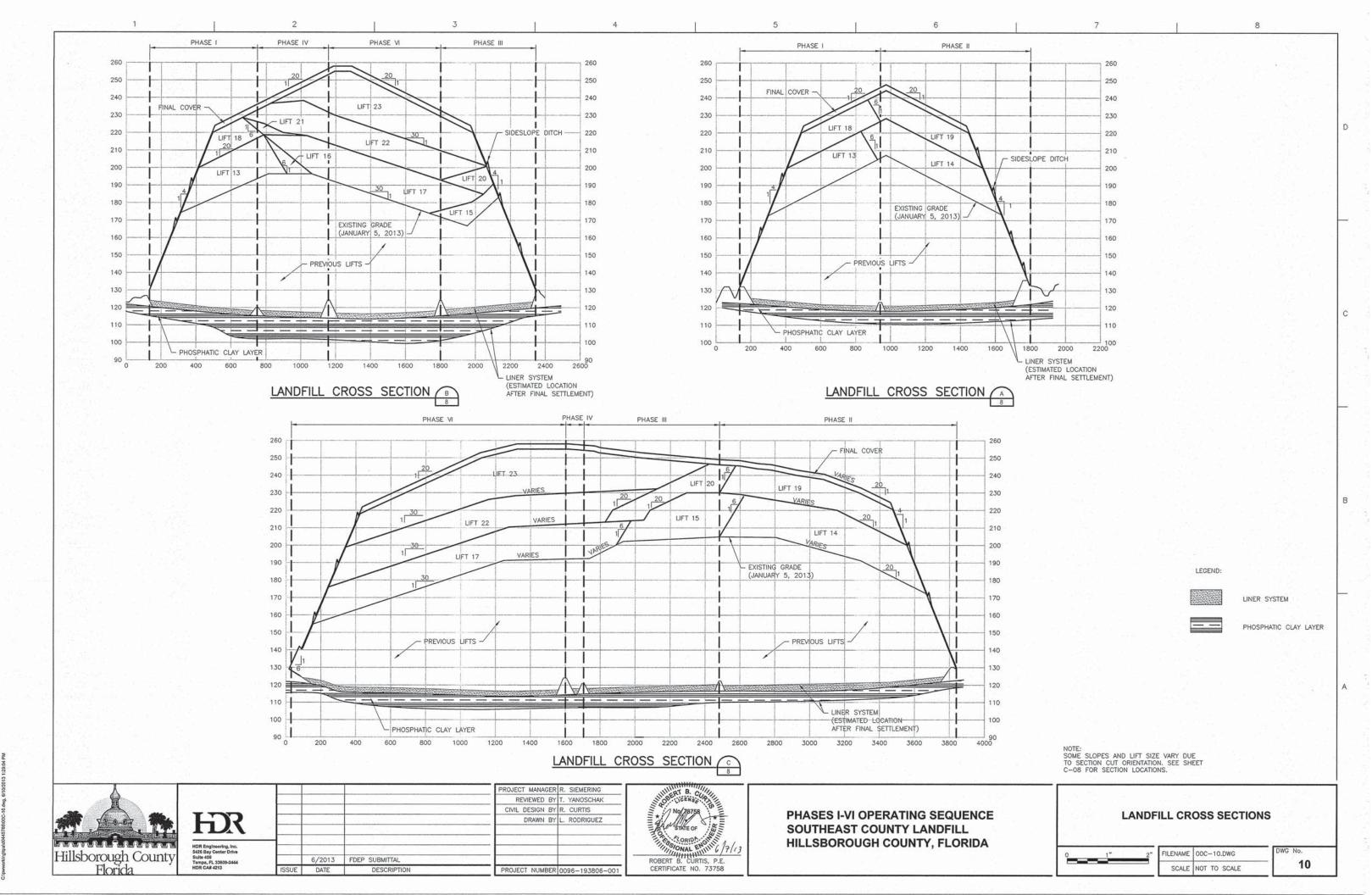
PHASES I-VI OPERATING SEQUENCE SOUTHEAST COUNTY LANDFILL HILLSBOROUGH COUNTY, FLORIDA

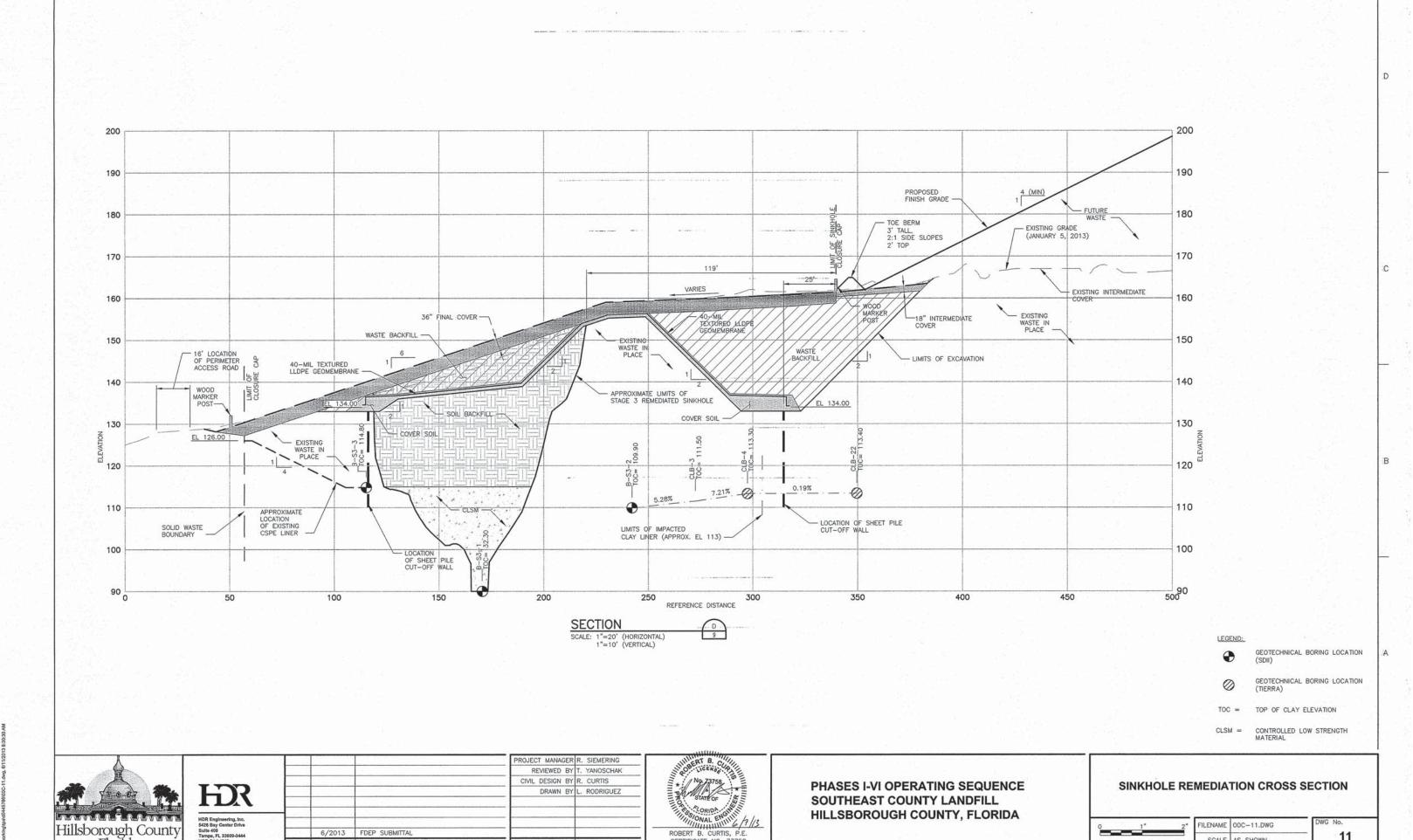
# SINKHOLE REMEDIATION PLAN



FILENAME	00C-09.dwg	
SCALE	1"=50"	

9



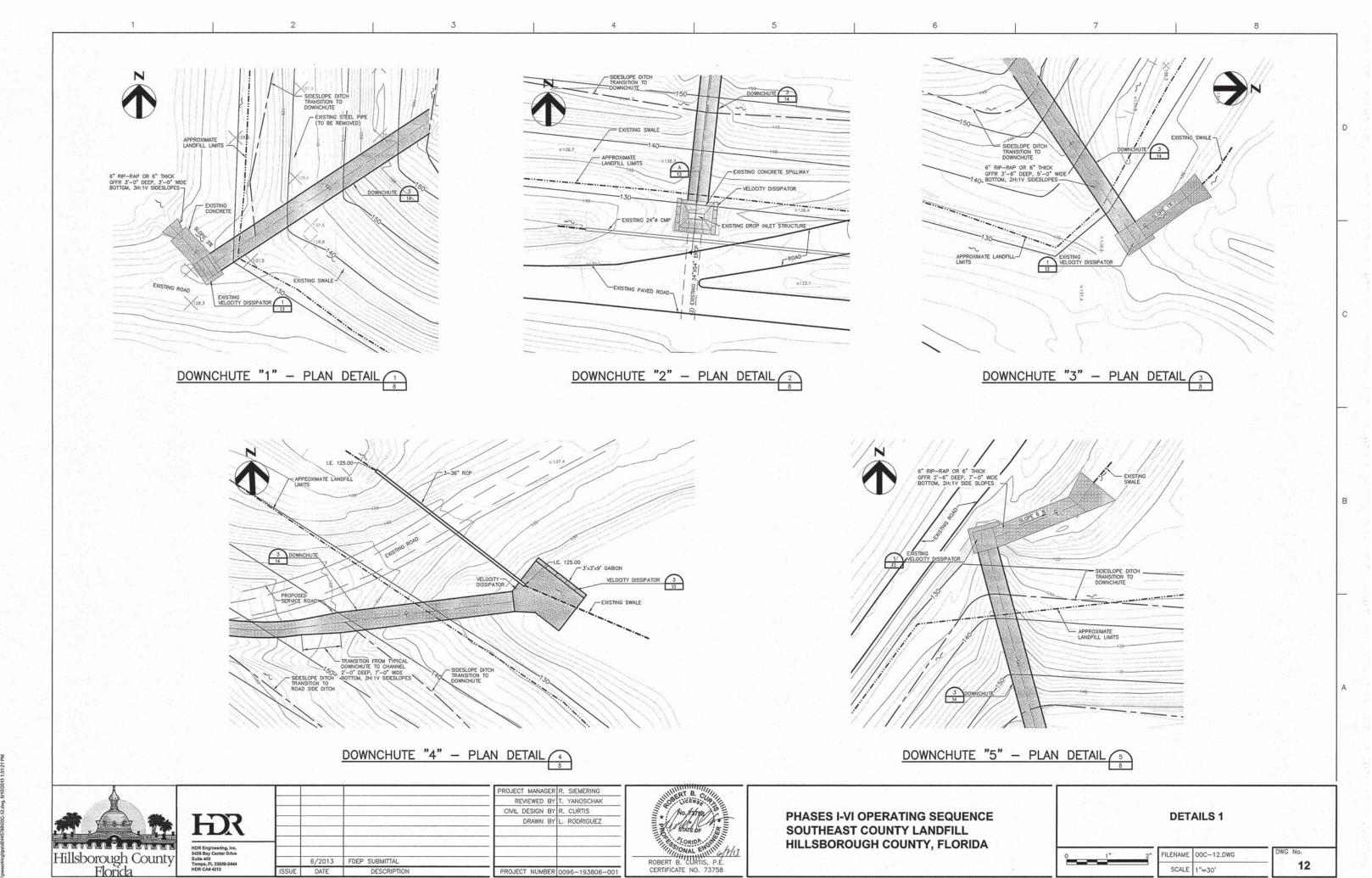


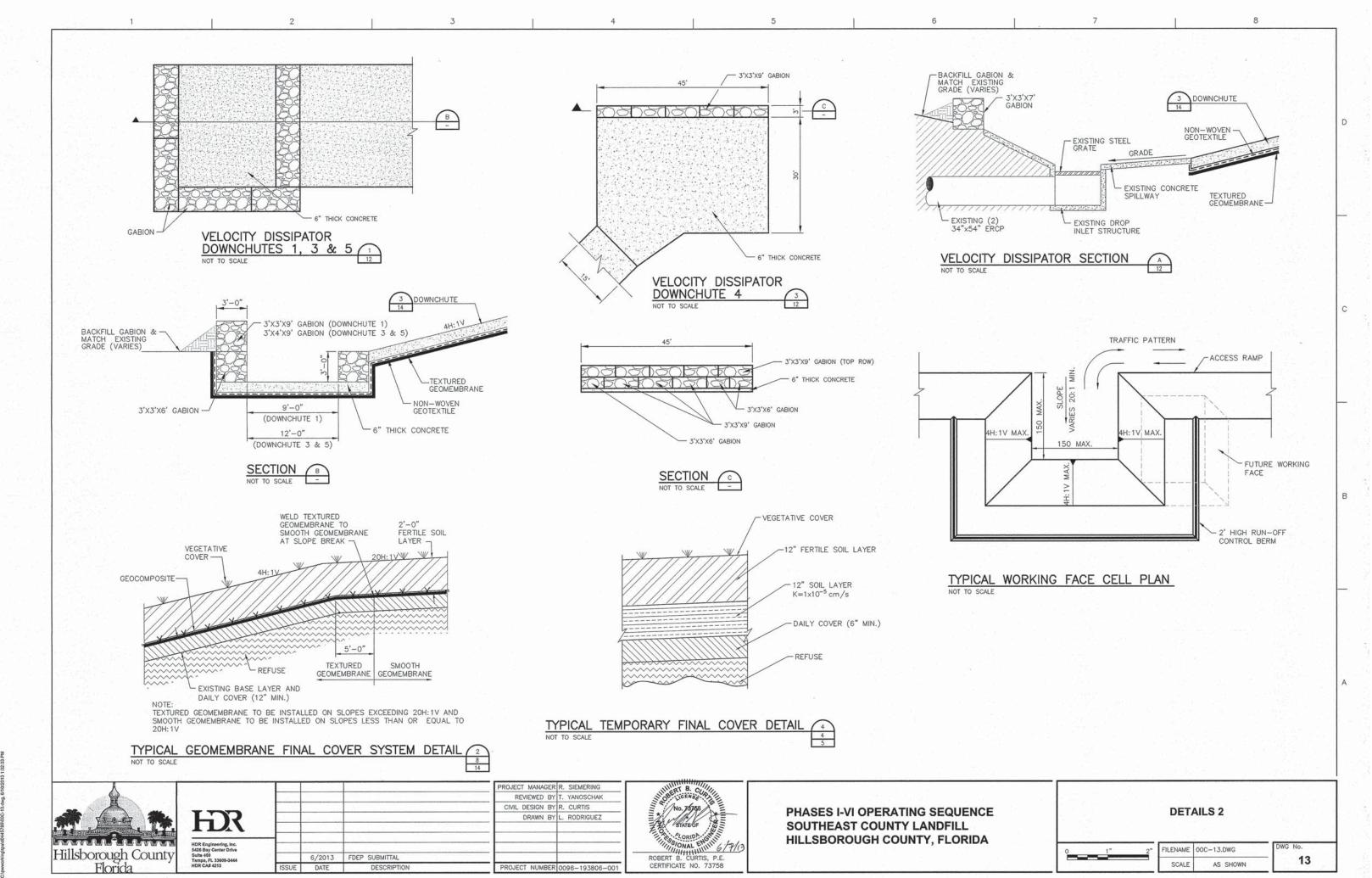
ROBERT B. CURTIS, P.E. CERTIFICATE NO. 73758

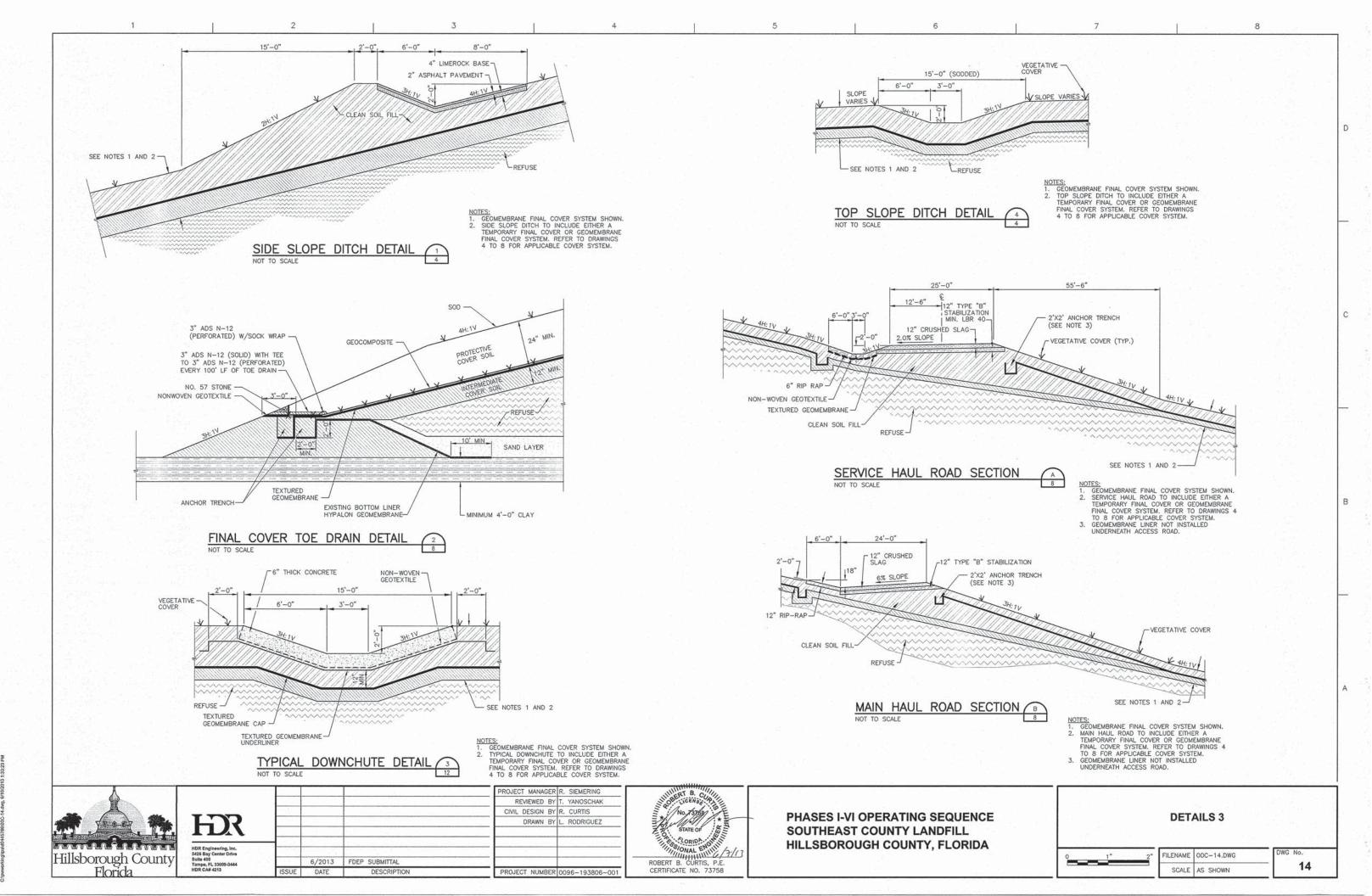
PROJECT NUMBER 0096-193806-001

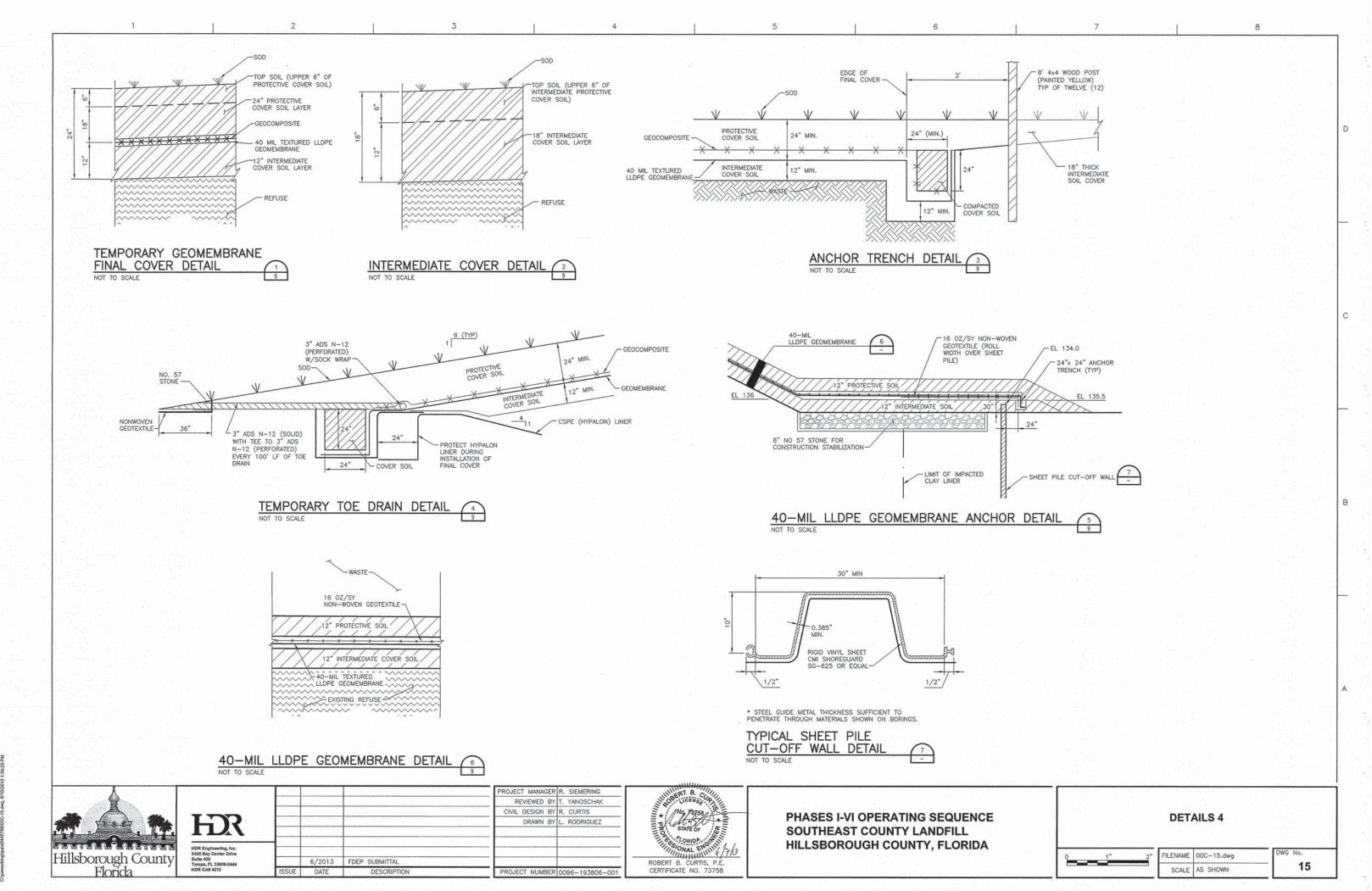
11

6/2013 FDEP SUBMITTAL









# Appendix F Landfill Gas Monitoring Points

# HILLSBOROUGH COUNTY SOLID WASTE MANAGEMENT DEPARTMENT SOUTHEAST COUNTY LANDFILL – LFG READINGS

# **ADMINISTRATION BUILDING**

	Methane		Carbon		
	Gas	LEL	Dioxide	Oxygen	<b>Balance Gas</b>
SP-1					
SP-2					
SP-3					
SP-4					
SP-5					
SP-6					
SP-7					
SP-8					

# MAINTENANCE BUILDING

	Methane Gas	LEL	Carbon Dioxide	Oxygen	<b>Balance Gas</b>
SP-9					
SP-10					
SP-11					
SP-12					

# LEACHATE TREATMENT PLAN

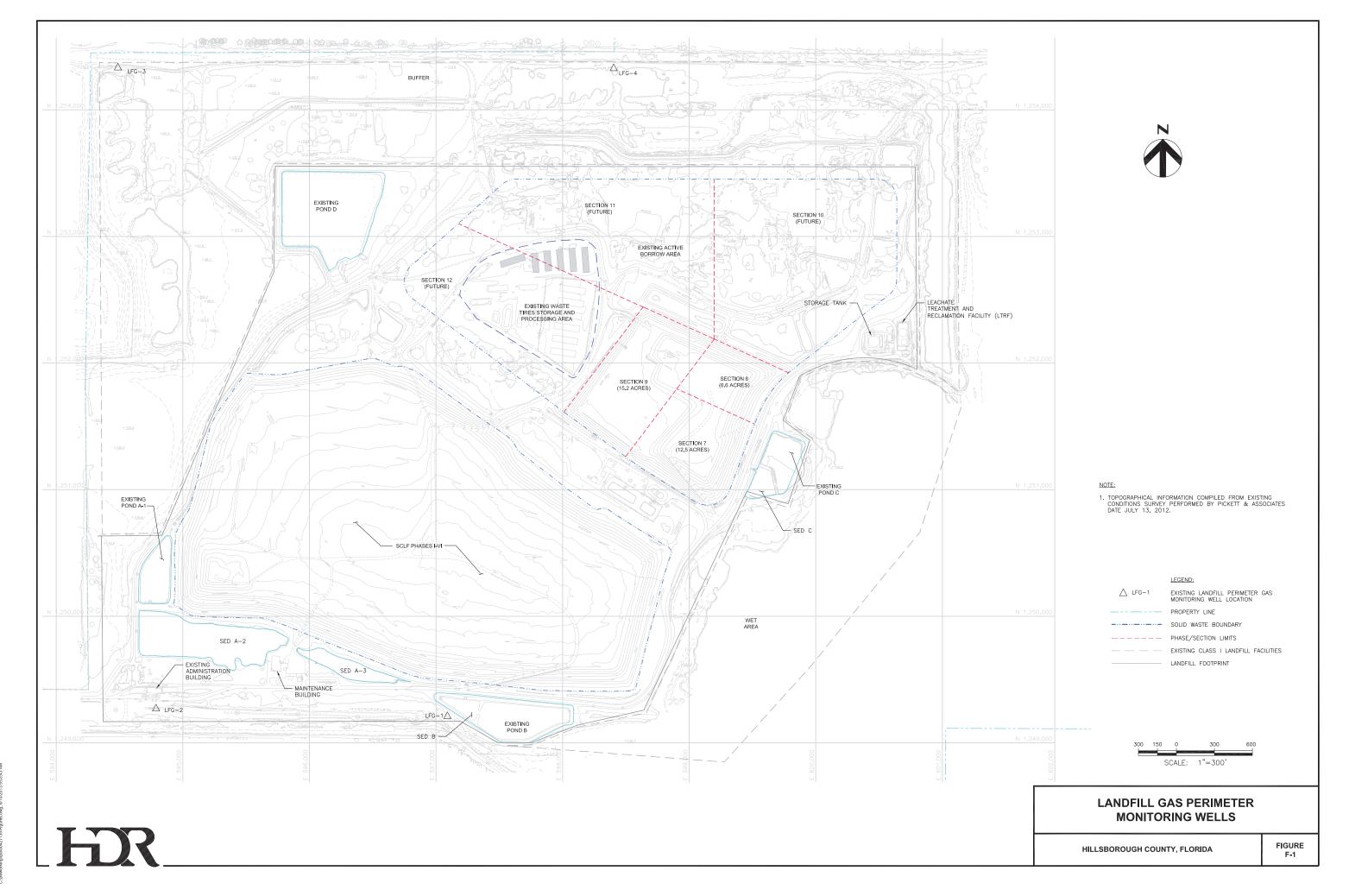
	Methane Gas	LEL	Carbon Dioxide	Oxygen	Balance Gas
SP-13					
SP-14					
SP-15					

# LANDFILL GAS PERIMETER MONITORING POINT

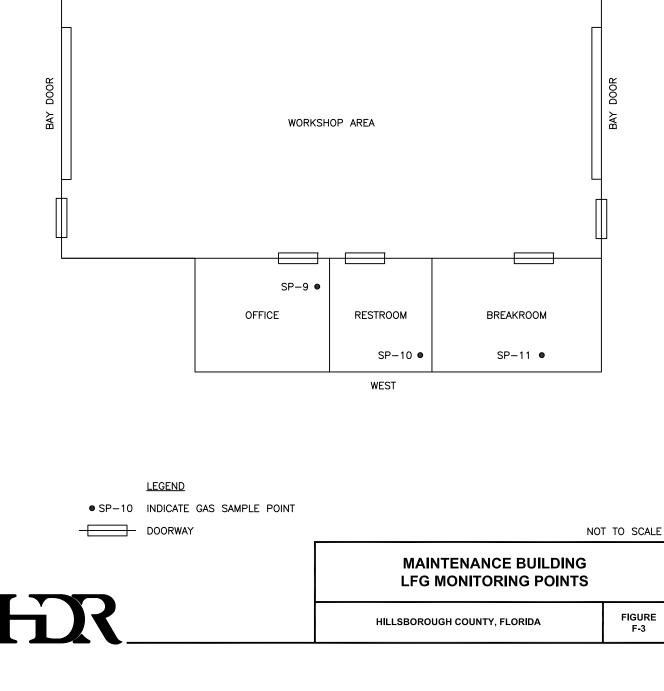
	Methane		Carbon			Objectional Ambient
	Gas	LEL	Dioxide	Oxygen	<b>Balance Gas</b>	Odor (Y/N)
LFG-1						Y/N
LFG-2						Y/N
LFG-3						Y/N
LFG-4						Y/N

TECHNICIAN SIGNATURE:		-	
SUPERVISOR SIGNATURE:		-	
DATE:	-		
COMMENTS:			

**Legend:** SP = Ambient Sample Point



C:\pwworking\tpa\d0427135\Figures.dwg, 6/10/2013 7:31:12 AM

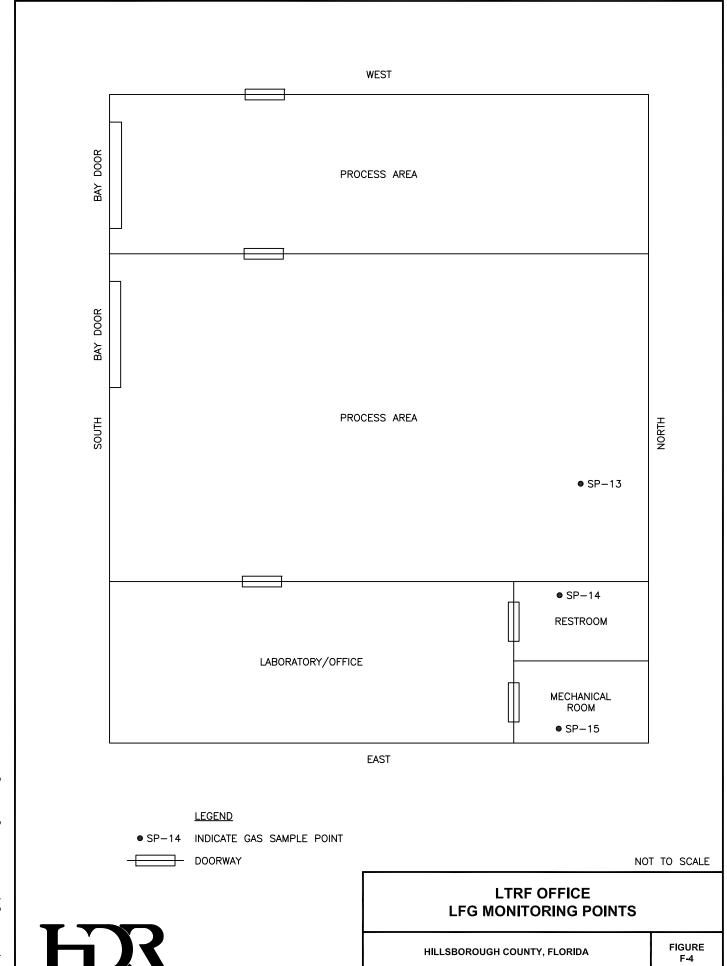


TOOL ROOM

● SP-12

LEAN-TO STORAGE AREA (OPEN)

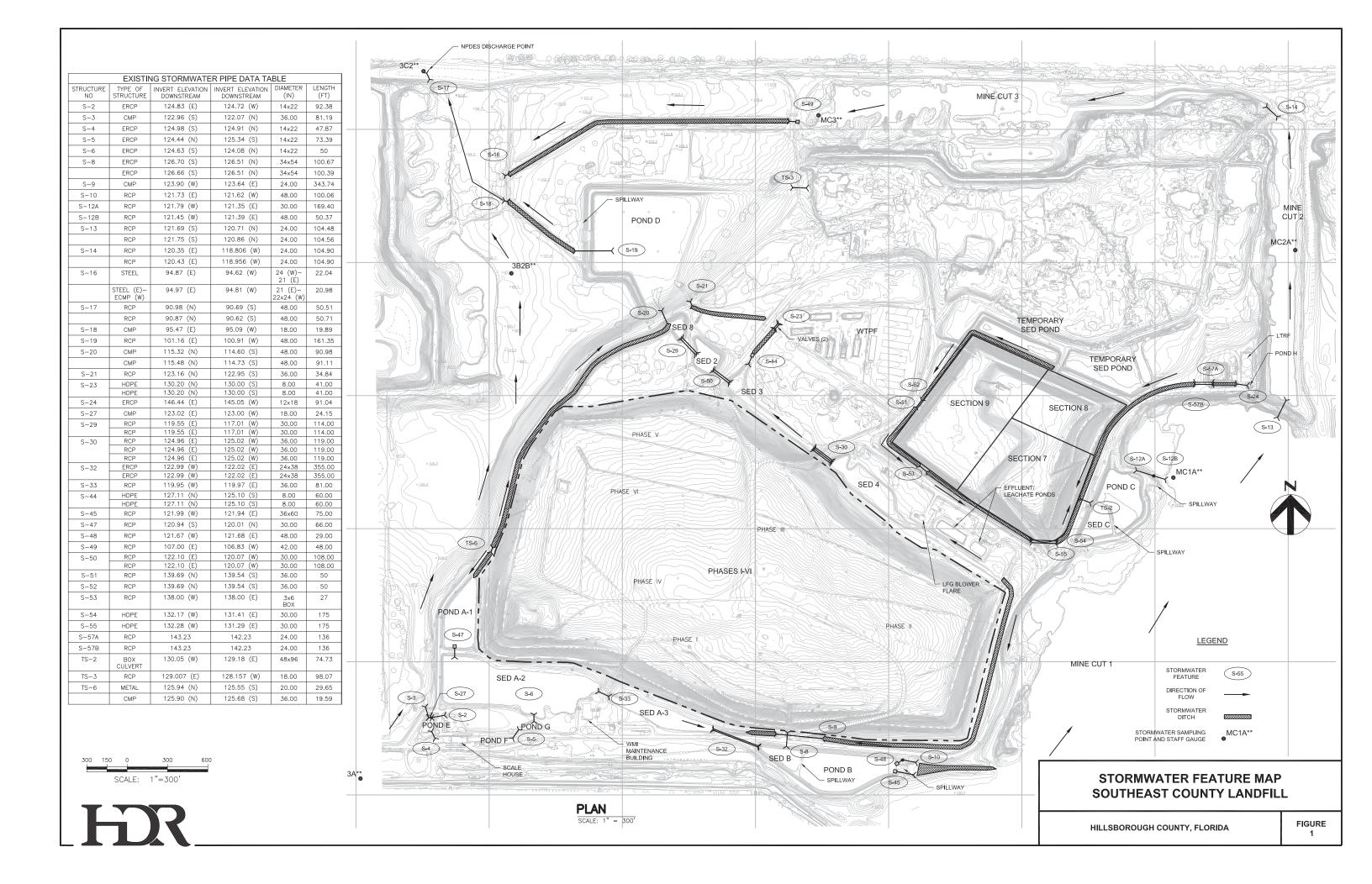
LEAN-TO STORAGE AREA



Appendix G

Not Used

# Appendix H Stormwater Management System (SWMS) Plan



# APPENDIX C SUGGESTED EDITS TO OPERATION PERMIT (SEE PAGE 8 AND PAGE 39 OF THE PERMIT)



# Florida Department of Environmental Protection

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

Carlos Lopez-Cantera Lt. Governor

> Noah Valenstein Secretary

August 23, 2017

# NOTICE OF PERMIT MODIFICATION

By-Email byerk@hillsboroughcounty.net

In the Matter of an Application for Permit by: Hillsborough County Public Works Department Solid Waste Management Division 322 North Falkenburg Road Tampa, Florida 33610 Hillsborough County WACS # 41193 Southeast Landfill

_____/

Attention: Kimberly A. Byer DEP File No: 35435-025-SO-MM

Pursuant to Sections 403.061(14) and 403.707, Florida Statutes, the Department hereby issues modification number 35435-025-SO-MM. The following conditions of permit number 35435-022-SO-01 are modified as follows:

SPECIFIC CONDITIONS	FROM	ТО	TYPE OF MODIFICATION
Page 1	Existing	Amended	Addition of Permit Modification No. 35435-025-SO-MM
1.C	Existing	Amended	Updated Facility Description to include WTE ash screening and storage area
2.C.1	Existing	Amended	Updated reference to revised Appendix 2, Document 6
2.C.3.a(5)	Existing	Amended	Updated to include reference to Temporary Ash Aggregate Screening and Storage Operation and Maintenance plan.
2.C.12.a	Existing	Amended	Updated reference to revised Appendix 2, Document 12
2.C.14	Existing	Amended	Updated reference to revised Appendix 2, Document 15
2.C.15	New	New	Added to include temporary ash screening and storage
2.C.15	Existing	Amended	Re-numbered to 2.C.16
2.C.16	Existing	Amended	Re-numbered to 2.C.17

SPECIFIC	FROM	ТО	TYPE OF MODIFICATION
CONDITIONS			
2.C.17	Existing	Amended	Re-numbered to 2.C.18
Appendix 2	Existing	Amended	Addition of Documents 1, 2, and 3 related to
			Permit Modification No. 35435-025-SO-MM
			and renumbering of Documents
Attachment 2	Existing	Amended	Permit History revised with addition of
			Permit Modification No. 35435-025-SO-MM

Attached is Permit Number 35435-022-SO-01 as modified by this Order. The attached permit replaces all previous permits and permit modifications for this facility.

A person whose substantial interests are affected by this modification of permit may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000.

Petitions by the applicant or any of the parties listed below must be filed within fourteen days of receipt of this written notice. Petitions filed by other persons must be filed within fourteen days of publication of the notice or receipt of the written notice, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Department for notice of agency action may file a petition within fourteen days of receipt of such notice, regardless of the date of publication. The petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the discretion of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Department's action is based must contain the following information:

- (a.) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department File Number and the county in which the project is proposed;
- (b.) A statement of how and when each petitioner received notice of the Department's action or proposed action;
- (c.) A statement of how each petitioner's substantial interests are or will be affected by the Department's action or proposed action;
- (d.) A statement of all material facts disputed by petitioner or a statement that there are no disputed facts:
- (e.) A statement of the ultimate facts alleged, including a statement of the specific facts which the petitioner contends warrant reversal or modification of the Department's action or proposed action;
- (f.) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the Department's action or proposed action; and
- (g.) A statement of the relief sought by the petitioner, stating precisely the action the petitioner wants the Department to take with respect to the Department's action or proposed action.

A petition that does not dispute the material facts on which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

Ms. Kimberly A. Byer August 23, 2017 Page 3 of 3

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

In accordance with Section 120.573, F.S., the Department advises that mediation is not available in this case under the provisions of that statute. This does not prevent any interested parties from agreeing to other forms of alternate dispute resolution.

Any party to this order has the right to seek judicial review of it under Section 120.68, F.S., by filing a notice of appeal under Rule 9.110, Florida Rules of Appellate Procedure, with the clerk of the Department in the Office of General Counsel, Mail Station 35, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000, and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate district court of appeal. The notice of appeal must be filed within thirty days after this order is filed with the clerk of the Department.

Executed in Leon County, Florida.

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

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

# FILING AND ACKNOWLEDGEMENT

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

Tamela Starling	8/23/2017
Clerk	Date

## CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this NOTICE OF PERMIT MODIFICATION and all copies were sent before the close of business on August 23, 2017 to the listed persons.

<u>Tamela Starling</u> Clerk

Enclosure: Permit No. 35435-022-SO-01

Ms. Kimberly A. Byer August 23, 2017 Page 2 of 3

Copies furnished to: Larry Ruiz, Hillsborough County Robert B. Curtis, P.E., SCS Engineers Cory D. Dilmore, P.E. Steve Morgan DEP Financial Assurance

RuizLE@HillsboroughCounty.org rcurtis@scsengineers.com Cory.Dilmore@dep.state.fl.us Steve.Morgan@dep.state.fl.us



# FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

HERSCHEL T. VINYARD JR. SECRETARY

**RICK SCOTT** 

**GOVERNOR** 

BOB MARTINEZ CENTER 2600 BLAIRSTONE ROAD TALLAHASSEE, FLORIDA 32399-2400

#### Permit Issued to:

Hillsborough County Public Utilities Department 925 East Twiggs Street Tampa, Florida, 33602 813-272-5977 Ext 43338

WACS Facility ID No.: 41193
Facility Name: Southeast County Landfill
Facility Address: 15960 County Road 672
Lithia, FL, 33547, Florida

#### Contact Person:

Ms. Kimberly A. Byer, Manager, Solid Waste Management Division 925 E. Twiggs Street Tampa, Florida, 33602 byerk@hillsboroughcounty.org 813-612-7718

> Solid Waste Operation Permit - Class I Landfill Permit No.: 35435-022-SO-01 Replaces Permit No.: 35435-014-SO-01 Permit Modification No.:35435-023-SO-IM Permit Modification No.:35435-024-SO-MM

Permit Modification No.:35435-024-SO-MM Permit Modification No.:35435-025-SO-MM

Permit Issued: 11/7/2013
Permit Renewal Application Due Date: 9/6/2023
Permit Expires: 11/7/2023

Permitting Authority
Florida Department of Environmental Protection
Permitting and Compliance Assistance Program
2600 Blair Stone Rd/MS45656
Tallahassee, Florida 32399
850-245-8707 (voice)
850-245-8811(fax)

#### **SECTION 1 - SUMMARY INFORMATION**

#### A. Authorization

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

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

This permit does not relieve the permittee from complying with any other appropriate local zoning or land use ordinances or with any other laws, rules or ordinances. Receipt of any permits from the Department does not relieve the applicant including those from other Sections within the Department or of the Water Management District.

# B. Facility Location

15960 County Road 672
Lithia, FL, 33547, Florida
Sections 13-15, 18, 19, 22, 23, 24/ Township/ 31South/ Range 21-22 East
Phases I-IV Latitude: 27° 46′ 26″N, Longitude: 82° 11′ 01″W
Landfill Sections 7/8 Latitude: 27° 46′ 39″ N, Longitude: 82° 10′ 34″ W
Landfill Section 9 Latitude: 27° 46′ 15″ N, Longitude: 82°11′ 24″ W
NGVD 1929, WGS 84

# C. Facility Description

This Operation Permit Renewal authorizes continued operations at the Southeast County Landfill facility located 8.8 miles east of US Highway 301 on CR672 in Hillsborough County, Florida. The facility is a Class I Landfill, having approximately 196.9 total acres of total disposal area (162.4 acres in Phases I-IV, 34.5 acres in Sections 7, 8 and 9) with a maximum daily load of 2000 tons per day under normal operating conditions. A pilot biosolids composting facility operates on an inactive lined area of Sections 7-9 of the Capacity Expansion Area. The facility includes a landfill gas collection system and a leachate disposal system. The facility has a Title V Air Permit (#0570854-008-AV expires December 17, 2018). The facility is required to meet the requirements of 62-701.530, F.A.C. and the facility's Title V Air Permit. The Temporary Ash Re-use Screening and Storage Area Operations, approximately 5 acres, will be located within the Phase III disposal area as part of an ash re-use demonstration project.

Page 2 Updated: August 23, 2017

# **General Information**

Phases I-VI:		
Disposal acres	162.4 acres	
Lowest elevation	+113 feet NGVD (approx.) (2001)	
Bottom liner design	In-situ phosphatic clay w/single 36 mil CSPE tied in as side liners	
LCS design	LCS: gravel, tire chips in trenches; 8" HDPE & 8" PVC pipes to perimeter & Pump Stations	
	A & B	
Final elevation	+258 feet NGVD	
Slopes	4H:1V side slopes (exterior), 5% top	
Gas collection & control system	See Permit No. 35435-016-SC/01, or its successors	

Section 7/8:	
Disposal acres	19.3 acres
Lowest elevation	+121 feet NGVD
Bottom liner design	Double, 60 mil HDPE
LCS design	Primary LCS piping on composite geonet
LDS design	Composite geonet
Action leakage rate (ALR)	100 gal/ac/day
Slopes	3H:1V side slopes (exterior), 5% top slope
Gas collection & control system	See Permit No. 35435-016-SC/01, or its successors

Section 9:			
Disposal acres	15.2 acres		
Lowest Bottom elevation of cell	+120.0 ft. NGVD		
(secondary liner leak detection			
sump)	Geomembrane subliner directly below GCL and extending up to elevation +126.0 ft. NGVD to protect GCL from fluctuations in groundwater		
Liner system (bottom to top)	60 mil textured geomembrane subliner, geosynthetic clay liner (GCL), 60 mil textured		
	HDPE geomembrane, 250 mil geocomposite (non-woven GT/geonet/non-woven GT), 60 mil textured HDPE geomembrane, 250 mil geocomposite (non-woven GT/geonet/non-woven		
	GT), 1-foot drainage sand, 1-foot tire chips		
LCS drainage system	Drainage/protective sand ≥ 1 x 10-3 cm/sec		
	One trench draining from northeast to southwest. 8-inch SDR 11 HDPE perforated LCS		
	piping.		
	LCS pipe drain to sump on southwest perimeter, then pumped through side slope risers		
	through force main to onsite Leachate Treatment Facility		
LDS drainage system	Geocomposite to center trench and sump, then same as LCS		
	306 gal/ac/day		
Action leakage rate (ALR)			
Side slopes max.	3H:1V		
Top elevation at final build out			
(Sections 7/8/9)			
Design life			
Leachate storage tanks	One 500,000-gallon glass fused steel storage tank.		
Effluent Storage tank	One above ground welded steel tank w/chemical resistant interior coating; approximately 575,000 gal. max capacity (500,000 gal. nominal capacity w/zero freeboard)		

Page 3 Updated: August 23, 2017

# D. Appendices Made Part of This Permit

APPENDIX 1 - General Conditions

APPENDIX 2 – List of Approved Documents Incorporated Into the Permit

APPENDIX 3 – Water Quality Monitoring Plan

APPENDIX 4- Restrictive Covenant for Use of On-Site Soils

E. Attachments for Informational Purposes Only

ATTACHMENT 1 - Time Sensitive Action Chart

ATTACHMENT 2 - Permit History

#### **SECTION 2 - SPECIFIC CONDITIONS**

# A. Administrative Requirements

- Documents Part of This Permit. The permit application as revised in final form replaced or amended in response to the Department's Request(s) for Additional Information are contained in the Department's files and are made a part of this permit. Those documents that make up the complete permit application are listed in APPENDIX 2.
- 2. Permit Modification. Any change to construction, operation, monitoring, or closure requirements of this permit may require a modification to this permit, in accordance with the provisions of Rule 62-701.320(4), F.A.C.
- 3. Permit Renewal. In order to ensure uninterrupted operation of this facility, a timely and sufficient permit renewal application must be submitted to the Department in accordance with Rule 62-701.320(10), F.A.C. A permit application submitted at least 61 days prior to the expiration of this permit is considered timely and sufficient.
- 4. Transfer of Permit or Name Change. In accordance with Rules 62-701.320(11) and 62-4.120 F.A.C., the Department must be notified by submitting Form 62-701.900(8) within 30 days: (a) of any sale or conveyance of the facility; (b) if a new or different person takes ownership or control of the facility; or (c) if the facility name or permittee's legal name is changed.

Page 4 Updated: August 23, 2017

5. Permit Fee Payment Schedule. The total permit fee required for this permit is \$20,000. The permittee has elected to pay this fee in installments in accordance with Rule 62-701.315(13), F.A.C., and submitted a fee of \$10,000 with the initial application. No later than November 7, 2018 the permittee shall submit to the Department an installment payment for the balance of the permit fee in the amount of \$10,000. This fee is due the State regardless of whether the permittee closes the facility, surrenders the permit, has the permit revoked, or transfers the permit before it expires. If the permittee elects to transfer the permit, it must either pay the entirety of the fee due before submitting the application for transfer, or it must include with the transfer application a signed agreement from the proposed transferee to accept responsibility for the remainder of the permit fee due.

- 6. Submittals Due at Five Years. No later than November 7, 2018 the permittee shall submit a report to the Department that contains the following:
  - a. An updated closure plan to reflect changes in closure design, long-term care requirements, and financial assurance requirements.
  - b. A revised closure cost estimate, made by recalculating the total cost of closure or long-term care, in current dollars.
  - c. A demonstration that the leachate collection system has been water pressure cleaned or inspected by video recording.
  - d. An updated operation plan, if operational procedures have changed.

# B. Construction Requirements

1. This Permit does not authorize construction activities.

# C. Operation Requirements

- 1. General Operating Requirements. The permittee shall operate the landfill in accordance with the approved Operation Plan dated June 2017 (Appendix 2, <a href="Document 63">Document 63</a>). The Department shall be notified before any changes, other than minor deviations, to the approved Operation Plan are implemented in order to determine whether a permit modification is required.
- 2. Operation Plan. A copy of the approved Operation Plan, including the operating record as defined in Rule 62-701.500(3), F.A.C., shall be kept at Southeast County Landfill, 15960 County Road 672, Lithia, FL and shall be accessible to landfill operators.
- 3. Authorized Waste Types. The facility is authorized to manage only the following waste types:
  - a. Waste types defined in Rule 62-701.200, F.A.C.:
    - 1) Class I waste.
    - 2) Yard Waste and Land Clearing Debris (Operation Plan Section K.2.c)

Page 5 Updated: August 23, 2017

- 3) White goods (Operation Plan Section K.2.c).
- 4) Shredded Waste tires (Operation Plan Section K.2.c).
- 5) Ash Residue (Operation Plan Section K.2.c. and Temporary Ash Screening and Storage Project, Operation and Maintenance Plan Appendix 2, Document 2, Specific Condition 2.C.15)
- 6) Asbestos Waste (Operation Plan Section K.2.c (4)).
- 7) Wastewater treatment biosolids (Operation Plan Section K.2.c.(5)).
- 8) Motor Homes (Operation Plan Section K.2.c (2)).
- 9) Special Waste (Operation Plan Section K.2.c (1).
- b. Other Wastes Specifically Authorized: None
- 4. Unauthorized Waste Types. The facility is not authorized to accept process or dispose any waste types not listed in C.3, above. In addition, the facility is not authorized to accept, process or dispose of liquids, used oil as a special waste, lead acid batteries, motor vehicles and shredded waste (except for shredded tires from the on-site tire shredding facility). Any unauthorized waste inadvertently received by the facility shall be managed in accordance with Sections K.2.c (1) and K.6 of the Operation Plan.
- 5. Waste Management and Handling
  - a. Solid waste shall be formed into cells to construct horizontal lifts. The working face of the cell, and side grades above land surface, shall be at a slope no greater than three feet horizontal to one-foot vertical rise or, as authorized by this permit, in accordance with the approved operation plan.
  - b. No solid waste shall be disposed of outside of the permitted footprint of the solid waste disposal units.
  - c. The sequence of waste filling shall be as specified in Sections K.2.f and K.7 of the Operation Plan. Interceptor berms shall be maintained around the working area to prevent leachate runoff from the working face from entering the stormwater management system. Runoff from outside the bermed working face area will be considered stormwater only if the flow passes over areas which have no exposed waste.
- 6. Landfill Elevation. The final (maximum) elevation of the Landfill at final buildout shall not exceed 285 feet NGVD in Sections 7 to 9 as shown on Drawing 8 of Capacity Expansion Area Sections 7,8,9 Operating Sequence dated June 7, 2013 and 258 feet NGVD in Phases I-IV as shown on Drawing 10 of Phases I-VI Operating Sequence dated June 7, 2013.
- 7. Initial Waste Placement. The first layer of waste placed above the liner and leachate collection system shall be a minimum of four feet in compacted thickness and consist of selected waste containing no large rigid objects that may damage the liner or leachate collection system. The selected waste will be MSW and ash not containing large rigid objects and will be spread and compacted from the top of the working face.

Page 6 Updated: August 23, 2017

8. Cover Requirements: All solid waste disposed on in the Class I landfill shall be covered as required by Rule 62-701.500 (7), F.A.C.

- a. Initial cover shall be applied and maintained daily in accordance with Rule 62-701.500(7) (e), F.A.C., and Sections K.7.e and K.7.f of the Operation Plan so as to protect the public health and welfare. All solid waste disposed of in the Class I disposal area must be covered with at least 6 inches of compacted earth or other suitable material as approved by the Department in writing, at the end of each working day.
- b. Alternate initial 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.
  - 1) 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 within the bermed working area.
  - 2) Municipal solid waste ash, or a 50% ash and 50% mulch mixture, applied in a six (6) inch compacted layer may be used as initial cover within the bermed working area.
  - 3) A 50% soil and 50% mulch mixture applied in a six (6) inch compacted layer may be used as initial cover (Operation Plan Sections K.7.e and K.7.f).
  - 4) Ditch cleanings, storm water sediments, and street sweepings, that are adequately dewatered and have had solid wastes removed, may be used for initial cover. Ditch cleanings, stormwater sediments, and street sweepings that will be used for initial cover shall be stored within the lined landfill footprint.
- c. Intermediate cover shall be applied and maintained in accordance with Rule 62-701.500(7) (f), F.A.C. 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 (Operation Plan Section K.7.g).
- d. Materials that have been used for intermediate cover may be removed and reused only if the materials are free of waste (Operation Plan Section K.7.g).
- 9. Erosion Control: Erosion control measures shall be employed to correct any erosion which exposes waste or causes malfunction of the storm water management system. Such measures shall be implemented within three days of occurrence. If the erosion cannot be corrected within seven days of occurrence, the landfill operator shall notify the Department and propose a correction schedule.
- 10. Contingency Plan and Notification of Emergencies. The permittee shall notify the Department in accordance with the approved Contingency Plan. Notification shall

Page 7 Updated: August 23, 2017

be made to the Solid Waste Section of DEP's Southwest District at 813-407-5700 or at SWD Waste@dep.state.fl.us.

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

# 12. Leachate Management.

- a. The permittee shall operate the leachate management system (including the collection, removal, storage, and on-site treatment systems), and maintain the system as designed, so that leachate is not discharged from the system except as provided for in the Leachate Management Plan dated November 2015 and included as part of the approved Application Documents (Appendix 2, Document 12 9).
- b. Routine inspections and maintenance of the leachate management system shall be conducted in accordance with the schedule established in the Leachate Management Plan.
- c. The leachate collection pipes shall be cleaned or video inspected at least once every five years. A summary of the results shall be included in the submittal required in Specific Condition A.7 in Section 2.

  Specific Condition
- d. The permittee shall record quantities of leachate general and permittee shall record quantities of leachate general and permittees in gallons/day, shall record precipitation at the facility exists. This should reference Specific
- e. The permittee shall compare the leachate flow recondition A.6 ection system with the design action leakage rates (ALR) for the deadle inter (Section 1, Part C of this Permit). If measurements indicate the ALR has been exceeded, the permittee shall notify the Department and conduct an assessment to determine the cause of the leak. This data shall be made available to the Department upon request.
- f. Spray irrigation of effluent from the leachate treatment facility is allowed over intermediately closed portions of Phases I-VI of the landfill in accordance with Section 8.3.2 of the Leachate Management Plan. Under no circumstance shall treated leachate effluent be allowed to discharge as runoff to adjacent storm water systems or conveyance ditches.
- 13. Spotters and Operators. This facility shall have the minimum number of spotters present when waste is accepted as specified in the operation plan. A trained operator shall be on duty at the facility at all times the facility is operating. Approved training courses can be found at the following web site: <a href="http://landfill.treeo.ufl.edu/courses.aspx">http://landfill.treeo.ufl.edu/courses.aspx</a>.
- 14. Composting. A biosolid pilot facility is located on an inactive lined area of Sections 7-9 of the Capacity Expansion Area. This area is covered with 18 inches of compacted interim cover material, and located within the landfill's leachate collection system. The working pad is an approximate 6-inch thick layer of

Page 8 Updated: August 23, 2017

compacted asphalt. The pad is graded so that any leachate and surface run-off from the materials mixing area and active windrow curing processing area will be directed to a sump draining into the underlying landfill leachate collection and removal system. Composting is conducted in accordance with the Composting Operation and Maintenance Plan (Appendix 2, Document 15 12)

- 15. Temporary Ash Re-Use Aggregate Screening and Storage. Up to 25,000 tons of ash from the Hillsborough County Waste to Energy facility may be stored and segregated on approximately 5-acres of the Phase III disposal area as part of an ash re-use demonstration project. The area is covered with approximately 24inches of soil and grass and is located within the landfill's leachate collection system. Containment berms surrounding the project area will direct runoff within the containment area to the underlying leachate collection and removal system. All operations in the ash screening and storage area shall be conducted in accordance with the Temporary Ash Aggregate Screening and Storage Project, Operation and Maintenance Plan (Appendix 2, Document 2). The processing and screening areas will be restored to pre-project conditions upon completion of the demonstration project. The remaining unused ash and ash residual will be removed for disposal in the Class I landfill. The project area will be graded to match the grades shown on the Phases I-VI Operating Sequence drawings dated June 7, 2013, and then seeded and mulched.
- 16. Record Keeping Requirements.
  - a. Waste Quantity Records. Waste records shall be compiled monthly, and copies shall be provided to the Department no less than annually by January 15. This information shall be reported to the Department through the DEP Business Portal located at: http://www.fldepportal.com/go.
  - Estimate of Remaining Life. The permittee shall submit the annual estimate of the remaining life and capacity by September 1. The report is required by Rule 62-701.500(13) (c), F.A.C. and must be submitted to the District Office at:

SWD Waste@dep.state.fl.us and to:

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

17. Hazardous Waste. If any regulated hazardous wastes are discovered to be deposited at the facility, the facility operator shall promptly notify the Department, the person responsible for shipping the wastes to the facility, and the generator of the wastes, if known. The area where the wastes are deposited shall immediately be cordoned off from public access. If the generator or hauler cannot be identified, the facility operator shall assure the cleanup, transportation, and disposal of the waste at a permitted hazardous waste management facility. In the event that hazardous wastes are discovered they shall be managed in accordance with the procedures provided in Sections K.2.c and K.6 of the Operation Plan.

Page 9 Updated: August 23, 2017

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

# D. Water Quality Monitoring Requirements

- 1. Zone of Discharge. The zone of discharge for this site is illustrated on Figure 1 (Figure FDEP-1) in APPENDIX 3 and shall extend horizontally 100 feet from the limits of the landfill liner (all active, inactive and closed waste disposal areas) or to the property boundary, whichever is less, and shall extend vertically to the bottom of the surficial aquifer. The permittee shall ensure that Class G-II water quality standards will not be exceeded at the boundary of the zone of discharge, per Rule 62-520.420, F.A.C., and that ground water minimum criteria will not be exceeded outside the boundary of the zone of discharge, per Rule 62-701.320(17), F.A.C.
- 2. Water Quality Monitoring Plan. The Water Quality Monitoring Plan for this permit is included as APPENDIX 3.

# E. Gas Management System Requirements

1. Construction Requirements. All construction shall be done in accordance with the approved gas management system design, drawings, and specifications. The Department shall be notified before any changes, other than minor deviations, to the approved design are implemented in order to determine whether a permit modification is required. The gas monitoring program is described in Section K-9.a of the Operation Plan. Gas monitoring points are specified in the table below and shown graphically on Figures F-1 through F-4 of Appendix F of the Operation Plan.

Monitoring Probe #	Location Description
LFG-1	South property boundary
LFG-2	Southwest property boundary
LFG-3	Northwest property boundary
LFG-4	North property boundary
Ambient Monitoring Location #	Location Description
SP-1	Scale house/Admin. Bldg.
SP-2	Ţ
SP-3	Û
SP-4	Û
SP-5	Û
SP-6	₽
SP-7	₽
SP-8	Scale house/Admin. Bldg.
SP-9	Maintenance Building
SP-10	Û
SP-11	Û
SP12	₽
SP-13	Leachate Treatment Facility Office
SP-14	₽
SP-15	₽

Page 10 Updated: August 23, 2017

Certification of Construction Completion. After construction is completed the
engineer of record shall certify to the Department in accordance with Rule 62701.320(9)(b), F.A.C., that the permitted construction is complete and was
performed in substantial conformance with the approved construction plans except
where minor deviations were necessary. All deviations shall be described and the
reasons therefore enumerated.

- 3. Operational Requirements. Gas controls shall be operated and maintained so that they function as designed and in accordance with Section K.9.b of the Operation Plan.
- 4. Monitoring Requirements. Monitoring for methane gas at the property boundary and within structures on the property shall be performed quarterly to determine the effectiveness of the gas migration controls. The gas monitoring results shall be reported as a percent of the lower explosive limit (LEL), calibrated to methane. The report shall be submitted to the Department's District office at <a href="mailto:SWD-Waste@dep.state.fl.us">SWD-Waste@dep.state.fl.us</a> or under separate cover no later than 15 days after the end of the period in which the monitoring occurred.
- 5. Gas Remediation Plan. The facility landfill gas management system shall be operated to prevent the concentration of combustible gases from exceeding 25% of the lower explosive limit in structures, excluding gas control or recovery components, and from exceeding the lower explosive limit at or beyond the property boundary. If either of these limits is exceeded then a gas remediation plan shall be designed and implemented in accordance with Rule 62-701.530(3) (a), F.A.C.
- 6. Odor Remediation Plan. The facility shall be operated to control objectionable odors. If objectionable odors are confirmed beyond the property boundary then upon notification by the Department the permittee shall develop and implement an odor remediation plan in accordance with the requirements of Rule 62-701.530(3)(b), F.A.C.

# F. Financial Assurance and Cost Estimates

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

Page 11 Updated: August 23, 2017

All submittals in response to this specific condition shall be sent to:
Florida Department of Environmental Protection
Financial Coordinator - Solid Waste Section
2600 Blair Stone Road, MS 4565
Tallahassee, Florida 32399-2400

#### Cost Estimates.

- a. The permittee shall submit closure cost estimates, including annual adjustments for inflation, in accordance with the requirements of Rule 62-701.630(3) and (4), F.A.C., and 40 CFR Part 264.142(a) and .144(a) using Form 62-701.900(28).
- b. An owner or operator using an escrow account shall submit the annual inflation adjusted estimate(s) between July 1 and September 1. An owner or operator using a letter of credit, guarantee bond, performance bond, financial test, corporate guarantee, trust fund or insurance shall submit the inflation adjusted cost estimate(s) by March 1.
- c. A cost estimate covering disposal units not previously covered by financial assurance mechanisms must be submitted prior to submitting financial assurance for such disposal units.
- d. Appendix 4 contains a Declaration of Restrictive Covenant which allows for the use of onsite soils rather than offsite soils as part of the Facility's final cover, as fill, or for other construction purposes when calculating the Facility's closure costs.
- e. All submittals in response to this specific condition shall be sent to the Department's District Office at <a href="mailto:SWD_Waste@dep.state.fl.us">SWD_Waste@dep.state.fl.us</a> and a copy to the address identified in Specific Condition F.1. or to the following email address: Solid.Waste.Financial.Coordinator@dep.state.fl.us.

# G. Closure Requirements

There are currently no closed units at this facility. In the event of closure, the following conditions will apply.

1. Closure Permit Requirements. Prior to initiating closure of a solid waste disposal unit, or part of a solid waste disposal unit, the permittee must receive authorization from the Department in one of the following manners. The permittee may submit an application to the Department for a closure permit on Form 62-701.900(1), which application shall include a closure plan. If the landfill is operating under a Department permit, the permittee may request a modification of the permit to address substantive changes in the closure plan, or the permittee may demonstrate that the closure plan in the existing operation permit includes sufficient detail to provide reasonable assurance of compliance with the provisions

Page 12 Updated: August 23, 2017

for closure. The application or request for modification shall include an updated closure plan which is 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.
- 2. 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 permit modification is required.
- 3. Closure Operation Plan. All closure shall be done in accordance with the approved closure operation plan.
- 4. Certification of closure construction completion. After closure construction has been completed, the engineer of record shall certify to the Department on Form 62-701.900(2) that the closure is complete and that it was done in accordance with the plans submitted to the Department except where minor deviation was necessary. All deviations shall be described in detail and the reasons therefore enumerated.
- 5. List of Closed Units Not in Long-Term Care: There are no closed units at this facility

Permit originally executed in Leon County, Florida. By Tim Bahr, P.G. for Charles Goddard, Program Administrator, State of Florida Department of Environmental Protection on November 7, 2013.

Page 13 Updated: August 23, 2017

#### APPENDIX 1

#### **General Conditions**

- 1. The terms, conditions, requirements, limitations and restrictions set forth in this permit, are "permit conditions" and are binding and enforceable pursuant to Sections 403.141, 403.161, 403.727, or 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
- 2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
- 3. As provided in subsections 403.087(6) and 403.722(5), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of rights, nor any infringement of federal, State, or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in this permit.
- 4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.
- 5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.
- 6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.
- 7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at reasonable times, access to the premises where the permitted activity is located or conducted to:

Page 14 Updated: August 23, 2017

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

- (b) Inspect the facility, equipment, practices, or operations regulated or required under this permit; and
- (c) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules. Reasonable time may depend on the nature of the concern being investigated.
- 8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:
  - (a) A description of and cause of noncompliance; and
  - (b) The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance.

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

- 9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.111 and 403.73, F.S. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.
- 10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance; provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.
- 11. This permit or a copy thereof shall be kept at the work site of the permitted activity.
- 12. The permittee shall comply with the following:
  - (a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
  - (b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required

Page 15 Updated: August 23, 2017

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

- (c) Records of monitoring information shall include:
  - 1. the date, exact place, and time of sampling or measurements;
  - the person responsible for performing the sampling or measurements;
  - 3. the dates analyses were performed;
  - 4. the person responsible for performing the analyses;
  - 5. the analytical techniques or methods used;
  - 6. the results of such analyses.
- 13. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware the relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

Page 16 Updated: August 23, 2017

#### **APPENDIX 2**

# **List of Approved Documents Incorporated Into the Permit**

The approved application documents for Southeast County Class I Landfill Permit Renewal consist of the following.

 Application for Minor Modification of Permit Number 35435-022-SO-01 prepared by SCS Engineers dated August 10, 2017 and received by the Tallahassee Solid Waste Section on August 11, 2017.

Oculus Link:

https://depedms.dep.state.fl.us:443/Oculus/servlet/shell?command=getEntity&[guid=8.265501.1]&[profile=Permitting_Authorization]

 Operation and Maintenance Plan for Temporary Ash Re-Use Aggregate Screening and Storage Project, Southeast County Class I Landfill dated August 2017 and received by the Tallahassee Solid Waste on August 11, 2017.
 Oculus Link:

https://depedms.dep.state.fl.us:443/Oculus/servlet/shell?command=getEntity&[guid=8.265643.1]&[profile=Permitting_Authorization]

 Revised Application Form No. 62-701.900(1) For Temporary Ash Re-Use Aggregate Screening and Storage Project, Southeast County Class I Landfill dated August 2017 and received by the Tallahassee Solid Waste on August 14, 2017. Oculus Link:

https://depedms.dep.state.fl.us:443/Oculus/servlet/shell?command=getEntity&[guid=8.265644.1]&[profile=Permitting_Authorization]

4. Application for Minor Modification of Permit Number 35435-022-SO-01 prepared by SCS Engineers dated April 10, 2017 received by the Tallahassee Solid Waste Section on April 11, 2017.

Oculus Link:

https://depedms.dep.state.fl.us:443/Oculus/servlet/shell?command=getEntity&[guid=8.259896.1]&[profile=Permitting_Authorization]

 Response to Request for Additional Information prepared by SCS Engineers dated June 13, 2017 received by the Tallahassee Solid Waste Section on June 14, 2017. Oculus Link:

https://depedms.dep.state.fl.us:443/Oculus/servlet/shell?command=getEntity&[guid=8.262877.1]&[profile=Permitting Authorization]

6. Approved Conformed Operation Plan for Southeast County Class I Landfill prepared by SCS Engineers dated April, 2017 received by the Tallahassee Solid Waste Section on June, 29, 2017.

Oculus Link:

https://depedms.dep.state.fl.us:443/Oculus/servlet/shell?command=getEntity&[guid=8.263495.1]

Page 17 Updated: August 23, 2017

7. Application for Intermediate Modification of Permit Number 35435-022-SO-01 prepared by HDR Engineering, Inc. dated September 2015 received by the Tallahassee Solid Waste Section on September 24, 2015. Consisting of one three ring binder and electronic copy on compact disk. Oculus Link:

http://depedms.dep.state.fl.us:80/Oculus/servlet/shell?command=getEntity&[guid=8.235623.1]&[profile=Permitting Authorization]

8. Response to Request for Additional Information prepared by SCS Engineers dated November 24, 2015 received by the Tallahassee Solid Waste Section on November 25, 2015.

Oculus Link:

http://depedms.dep.state.fl.us:80/Oculus/servlet/shell?command=getEntity&[guid =8.243574.1]&[profile=Permitting_Authorization]

 Declaration of Restrictive Covenant and Access Easement Agreement for Use of On-site Soils dated March 18, 2016 received by the Tallahassee Solid Waste Section on March 21, 2016.

Oculus Link:

http://depedms.dep.state.fl.us:80/Oculus/servlet/shell?command=getEntity&[guid =8.244567.1]&[profile=Permitting Authorization]

10. Approved Operation Plan for Southeast County Class I Landfill prepared by SCS Engineers dated November 2015 received by the Tallahassee Solid Waste Section on April 18, 2016.

Oculus Link:

http://depedms.dep.state.fl.us:80/Oculus/servlet/shell?command=getEntity&[guid =8.244570.1]&[profile=Permitting_Authorization]

11. Approved Water Quality Monitoring Plan for Southeast County Class I Landfill prepared by SCS Engineers dated November 2015 received by the Tallahassee Solid Waste Section on March 30, 2016.

Oculus Link:

http://depedms.dep.state.fl.us:80/Oculus/servlet/shell?command=getEntity&[guid =8.244572.1]&[profile=Permitting_Authorization]

12. Approved Leachate Management Plan for Southeast County Class I Landfill prepared by SCS Engineers dated November 2015 received by the Tallahassee Solid Waste Section on April 18, 2016.

Oculus Link:

http://depedms.dep.state.fl.us:80/Oculus/servlet/shell?command=getEntity&[guid =8.244571.1]&[profile=Permitting_Authorization]

13. Biosolids Composting Pilot Project Non-Objection Letter for Sections 7, 8, 9 of Southeast County Class I Landfill dated February 3, 2016.

Page 18 Updated: August 23, 2017

#### Oculus Link:

http://depedms.dep.state.fl.us:80/Oculus/servlet/shell?command=getEntity&[guid =8.218219.1]&[profile=Permitting_Authorization]

14. Biosolids Composting Pilot Project Approval Letter dated January 22, 2016.
Oculus Link:

http://depedms.dep.state.fl.us:80/Oculus/servlet/shell?command=getEntity&[guid =8.237902.1]&[profile=Permitting Authorization]

15. Biosolids Composting Pilot Project O&M Manual dated September 2015 received by the Tallahassee Solid Waste Section on September 24, 2015.

Oculus Link:

http://depedms.dep.state.fl.us:80/Oculus/servlet/shell?command=getEntity&[guid =8.244637.1]&[profile=Permitting_Authorization]

16. Title V Air Permit #0570854-008-AV expires December 17, 2018. Oculus Link:

http://depedms.dep.state.fl.us:80/Oculus/servlet/shell?command=getEntity&[guid =8.244617.1]&[profile=Permitting Authorization]

17. Initial permit renewal application for Southeast County Class I Landfill Permit Renewal prepared by HDR Engineering, Inc. dated June 10, 2013 stamped received by the Tallahassee Solid Waste Section on June 12, 2013. Consisting of one three ring binder and electronic copy on compact disk. Oculus Link:

http://depedms.dep.state.fl.us:80/Oculus/servlet/shell?command=getEntity&[guid=8.181518.1]&[profile=Permitting_Authorization]

18. Response to RAI #1 for Southeast County Class I Landfill Permit Renewal prepared by HDR Engineering, Inc. dated August 1, 2013 stamped received by the Tallahassee Solid Waste Section on August 12, 2013.

Oculus Link:

http://depedms.dep.state.fl.us:80/Oculus/servlet/shell?command=getEntity&[guid =8.183794.1]&[profile=Permitting_Authorization]

19. Operation Plan for Southeast County Class I Landfill prepared by HDR Engineering, Inc. dated June 10, 2013. Received by the Tallahassee Solid Waste Section on June 12, 2013.

Oculus Link:

http://depedms.dep.state.fl.us:80/Oculus/servlet/shell?command=getEntity&[guid =8.187985.1]&[profile=Permitting_Authorization]

20. Water Quality Monitoring Plan for Southeast County Class I Landfill prepared by HDR Engineering, Inc. dated June 10, 2013. Received by the Tallahassee Solid Waste Section on June 12, 2013. Included as Appendix 3 to this permit. Oculus Link:

Page 19 Updated: August 23, 2017

http://depedms.dep.state.fl.us:80/Oculus/servlet/shell?command=getEntity&[guid =8.187986.1]&[profile=Permitting_Authorization

21. Leachate Management Plan for Southeast County Class I Landfill prepared by HDR Engineering, Inc. dated June 10, 2013. Received by the Tallahassee Solid Waste Section on June 12, 2013.

Oculus Link:

http://depedms.dep.state.fl.us:80/Oculus/servlet/shell?command=getEntity&[guid =8.187987.1]&[profile=Permitting_Authorization

Page 20 Updated: August 23, 2017

#### **APPENDIX 3**

#### WATER QUALITY MONITORING PLAN

Hillsborough Southeast County Landfill PERMIT NO: 35435-022-SO-01 WACS FACILITY ID: 41193 PERMIT MODIFICATION DATE: 6/6/16

#### I. GENERAL

- 1. The field testing, sample collection and preservation and laboratory testing, including quality control procedures, shall be in accordance with Chapter 62-160, F.A.C. Approved methods as published by the Department or as published in Standard Methods, ASTM, or EPA Methods shall be used. [62-701.510(2)(b), F.A.C.]
- 2. The organization collecting samples at this site must use the Field and Laboratory Standard Operating Procedures (DEP-SOP-001/01) referenced in Chapter 62-160, F.A.C. The laboratory designated to conduct the chemical analyses must be certified by the Florida Department of Health Environmental Laboratory Certification Program (DOH ELCP). This Certification must be for the test method and analyte(s) that are reported. [62-160.210(1), 62-160.300(1), 62-701.510(2)(b), F.A.C. and DEP SOP FS 1008.]

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

- 3. The permittee must ensure that the analytical laboratory conducting the analyses uses analytical methods capable of achieving detection limits at or below the Groundwater Cleanup Target Levels (GCTLs) or the Freshwater Surface Water Cleanup Target Levels (SWCTLs) in Table I, Chapter 62-777, F.A.C. except those listed in Table C of the "FDEP Guidance for the Selection of Analytical Methods and for the Evaluation of Practical Quantitation Limits dated 10/12/2004". GCTLs and SWCTLs that are not water quality standards are used as screening tools and interim guidelines for ground water minimum criteria until standards are promulgated. [DEP SOP FM 1000]
- 4. If, at any time, analyses detect parameters which are significantly above background water quality, or which are at levels above the Department's water quality standards or criteria specified in Chapter 62-520, F.A.C., in the detection wells or at the edge of the Zone of Discharge, the Permittee may confirm the data by resampling the affected wells within thirty (30) days of receipt of the sampling data. Should the permittee choose not to resample, the Department will consider the water quality analysis as representative of current ground water conditions at the facility. If the data is confirmed, or if the permittee chooses not to resample, the permittee shall notify the Department within 14 days of this finding. [62-701.510(6)(a), F.A.C.]

Page 21 Updated: July 14, 2017

PERMITTEE NAME: Hillsborough County Utilities FACILITY NAME: Southeast County Class I Landfill

PERMIT NO.: 35435-022-SO-01 WACS Facility ID: 41193

If the resampling event detects parameters which are significantly above background water quality, or which are at levels above the Department's water quality standards or criteria specified in Chapter 62-520, F.A.C., the Permittee shall notify the Department in writing within 14 days of receipt of the sampling data. Confirmed data must be submitted to the Department within 60 days from completion of lab analyses, unless a different due date is approved. Use "CONF" (for confirmation data) in the report type column. [62-701.510(8)(a), F.A.C.]

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

# II. GROUND WATER QUALITY MONITORING

- 1. The detection monitoring well network consists of 3 background wells, 15 horizontal detection wells, and two vertical compliance wells. Wells TH-40 and TH-78 are designated as vertical compliance wells. Background well TH-19 is the upgradient Floridan aquifer background well, and TH-22A and TH-36A are the upgradient surficial aquifer background monitoring wells. The eighteen ground water monitoring wells/piezometers included in this monitoring plan and designated for water quality testing are listed on Table 1 and shown on Figure FDEP-1. The 32 piezometers designated for water level measurements are also shown on Figure 1. [62-701.510(3)(d)2 & 3, F.A.C.]
- 2. Any initial sample collected from a new or replacement ground water monitoring well 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.

3. The twenty (20) active monitoring wells for the landfill shall be routinely sampled and analyzed semi-annually during February and August for the following Ground Water Monitoring Parameters. [62-701.510(5)(c) & (7)(a), F.A.C.]

Page 22 Updated: July 14, 2017

^{*} Appendix I is not listed because it is a subset of Appendix II

Field Parameters	<b>Laboratory Parameters</b>
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

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

#### III. SURFACE WATER MONITORING

- 1. The four (4) surface water sites included in this monitoring plan are listed on Table 1 and shown on Figure 1. [62-701.510(4)(c), F.A.C.]
- 2. Semi-annual samples from the four (4) surface water monitoring sites shall be collected during February and August. 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
Specific Conductivity	1. Unionized ammonia as N
2. pH	2. Total hardness as CaCO3
Dissolved oxygen	3. Biochemical oxygen demand (BOD ₅ )
4. Turbidity	4. Iron
5. Temperature	5. Mercury
6. Colors and sheens (by observation)	6. Nitrate
	7. Total Dissolved Solids (TDS)
	8. Total Organic Carbon (TOC)
	9. Fecal Coliform
	10. Total Phosphorus as P
	11. Chlorophyll A
	12. Total nitrogen
	13. Chemical Oxygen Demand (COD)
	14. Total Suspended Solids (TSS)
	15. Those parameters listed in 40 CFR Part 258 Appendix I

#### IV. MONITORING WELL REQUIREMENTS

1. If a monitoring well or piezometer becomes damaged or inoperable, the Permittee shall notify the Department's District office at <a href="SWD_Waste@dep.state.fl.us">SWD_Waste@dep.state.fl.us</a> 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)(1), F.A.C.]

Page 23 Updated: July 14, 2017

2. 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.]

- 3. 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.]
- 4. The Department's District office shall be notified in writing or by email at <a href="mailto:SWD_Waste@dep.state.fl.us">SWD_Waste@dep.state.fl.us</a> before any monitoring wells are abandoned or plugged. Wells shall be abandoned using standard, accepted practices for well abandonment. [62-701.510(3)(d)6, F.A.C.]

# V. REPORTING REQUIREMENTS

#### A. FIELD ACTIVITIES

1. The Department's District office must be notified in writing, hard copy or by email at <a href="mailto:SWD_Waste@dep.state.fl.us">SWD_Waste@dep.state.fl.us</a>, 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**

2. 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's District office at <a href="SWD_Waste@dep.state.fl.us">SWD_Waste@dep.state.fl.us</a> 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.]

Page 24 Updated: July 14, 2017

#### C. SURVEYING

3. One (1) paper copy and one (1) electronic copy (Adobe pdf format) of a drawing must be submitted to the Department's District office at <a href="mailto:SWD_Waste@dep.state.fl.us">SWD_Waste@dep.state.fl.us</a> within sixty (60) days following monitoring well installation showing the location of all monitoring sites (active, abandoned, and Evaluation Monitoring), piezometers, water bodies and waste filled areas. The location of features on the drawing must be horizontally and vertically located by standard surveying techniques. The drawing shall include all monitoring well locations, each monitoring well name and identification (WACS) number, the top of casing, pad elevation, permanent benchmark(s) and/or corner monument marker(s) referenced to a nationally recognized datum (such as NGVD 1929 or NAVD 1988) to the nearest 0.01 feet. The latitude and longitude of each well in degrees, minutes and seconds, to two (2) decimal places, must be determined and provided on the drawing. The survey shall be conducted and certified by a Florida Licensed Surveyor and Mapper. [62-701.510(1)(c)&(3)(d)1, and 62-520.600(6)(i), F.A.C.]

4. 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

5. A total depth measurement must be made on each well at time of the Technical Report specified in Section V.H.10. 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

- 6. Required monitoring reports must be submitted to the Department within sixty (60) days from completion of laboratory analyses and shall follow the Department's electronic reporting requirements using the ADaPT software. [Rule 62-701.510(8)(a), F.A.C.]
- 7. 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:

  <a href="http://www.dep.state.fl.us/waste/categories/shw/pages/ADaPT.htm">http://www.dep.state.fl.us/waste/categories/shw/pages/ADaPT.htm</a>. Water quality monitoring reports shall be signed and sealed by a Florida registered professional

Page 25 Updated: July 14, 2017

geologist or professional engineer with experience in hydrogeological investigations and shall include the following:

- a) Cover letter;
- b) Summary of exceedances and recommendations;
- c) Ground water contour maps;
- d) Chain of custody forms;
- e) Water levels, water elevation table;
- f) Water Quality Monitoring Certification using Form Rule 62-701.900(31), F.A.C.;
- g) Appropriate information using the Groundwater Sampling Log, Form FD 9000-24 (DEP-SOP-001/01); and,
- h) Laboratory and Field EDDs and error logs, as applicable.

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

٦	semitions in response to this specific conditi	on shan ce sem com to.	
Solid Waste Section		Florida Department of Environmental Protection	
	Florida Department of Environmental	Solid Waste Section	
	Protection	2600 Blair Stone Road, MS 4565	
Southwest District Office		Tallahassee, Florida, 32399-2400	
	13051 North Telecom Parkway	ADaPT.EDDs.and.Reports@dep.state.fl.us	
	Temple Terrace, Florida 33637		
	SWD_Waste@dep.state.fl.us		

#### F. WATER ELEVATIONS

8. 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

9. Ground water elevation contour maps for each monitored aquifer zone must be submitted semi-annually to the Department, with contours at no greater than two 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

Page 26 Updated: July 14, 2017

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

- 10. 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.
- 11. One (1) paper and one (1) electronic copy (Adobe pdf format) of the Technical Report shall be submitted to the Department's Southwest District and Tallahassee offices. Required water quality monitoring reports and water quality data for the Technical Report shall be submitted in electronic format as described in Specific Conditions 6 and 7 of this APPENDIX. [62-160.240, and 62-701.510(8)(a), F.A.C.]

#### **List of Attachments**

**Table 1** – Water Quality Sampling Testsite Information **Figure FDEP-1** – Water Quality Monitoring Locations Map

Page 27 Updated: July 14, 2017

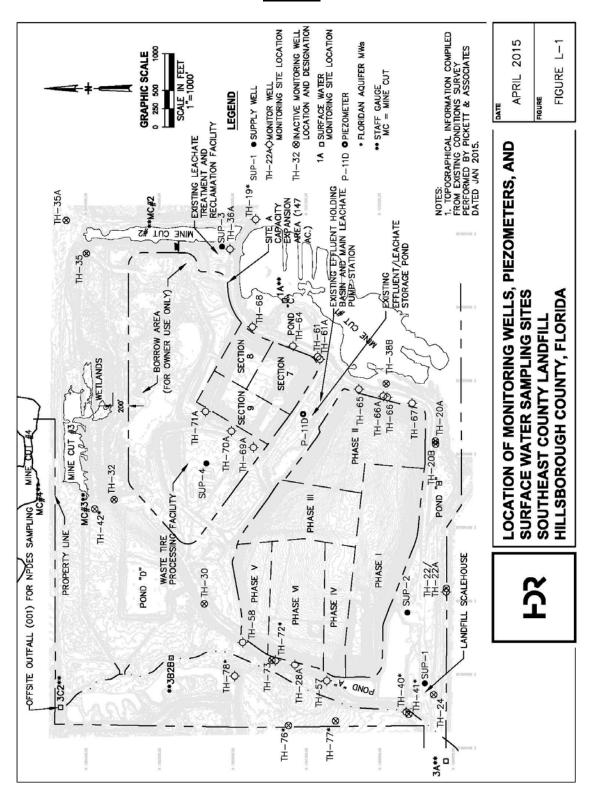
Table 1 – Water Quality Sampling Testsite Information				
Wells Associated With the Monitoring of Phases I-VI				
Well #	WACS Testsite #	<u>Aquifer</u>	Designation	Location
TH-19	821	Floridan	Background	Figure L-1
TH-22A	19861	Surficial	Background	Û
TH-28A	19862	Surficial	Detection	Û
TH-40	822	Floridan	Compliance	Û
TH-57	1570	Surficial	Detection	Û
TH-58	1571	Surficial	Detection	Û
TH-65	20530	Surficial	Detection	Û
TH-66	20531	Surficial (deep)	Detection	Û
TH-66A	22961	Surficial (shallow)	Detection	Û
TH-67	20532	Surficial	Detection	Û
TH-72	27753	Floridan	Detection	Û
TH-78	29337	Floridan	Compliance	Û
Wells Associated With the Monitoring of Sections 7, 8 and 9				
TH-36A	20329	Surficial	Background	Û
TH-61	20493	Surficial	Detection	Û
TH-61A	22595	Surficial	Detection	Û
TH-64	20494	Surficial	Detection	Û
TH-68	22039	Surficial	Detection	Û
TH-69A	22958	Surficial	Detection	Û
TH-70A	22959	Surficial	Detection	Û
TH-71A	22960	Surficial	Detection	Û
Surface Water ID #	WACS Testsite #	Location		
1-A	831	Northern portion of Smith Lake		
3A	836	Drainage ditch to Long Flat Creek at SW boundary		
3B2B	837	Drainage ditch to Long Flat Creek, WNW of TH-30		
3C2	838		Flat Creek at NW boundar	

Note: Existing monitor wells TH-20A, TH-20B, TH-22, TH-24, TH-30, TH-32, TH-35, TH-35A, TH-38B, TH-41, TH-42, TH-73, TH-76, and TH-77 shall be considered as inactive wells and reserved for future use. These inactive monitor wells and the existing piezometer P-11D shall be included in water level measurements conducted at the Southeast County Landfill by Hillsborough County. Existing piezometers P-4S, P-4D, P-5D, P-6D, P-7D, P-8D, P-12S, P-13S, P-14S, P-15S, P-16S, P-16I, P-16D, P-17S, P-17I, P-17D, P-18S, P-19, P-20, P-21, P-22, P-23 and monitor wells TH-19A, TH-34A, TH-74 and TH-75 will be abandoned. The Department's District office shall be notified in writing or by email at SWD_Waste@dep.state.fl.us before any monitoring wells are abandoned or plugged. Wells shall be abandoned using standard, accepted practices for well abandonment.

Page 28 Updated: July 14, 2017

PERMIT NO.: 35435-022-SO-01 WACS Facility ID: 41193

Figure 1



PERMITTEE NAME: Hillsborough County Utilities FACILITY NAME: Southeast County Class I Landfill

PERMIT NO.: 35435-022-SO-01 WACS Facility ID: 41193

# **APPENDIX 4**

# Restrictive Covenant for Use of On-Site Soils March 18, 2016

Project No. 2016-013-U SE County Landfill Restrictive Covenant Parcel: Future Borrow Area Folio #:088548.0000 Sec 13 Twp 31 Rge 21

This instrument prepared by: Eric Watkins, Real Property Supervisor Hillsborough County Real Estate and Facilities Services Dept. P.O. Box 1110, Tampa, Florida 33601 INSTRUMENT#: 2016105020, O BK 23948 PG 1480-1488 03/18/2016 at 10:14:40 AM, DEPUTY CLERK: MPEDRERO Pat Frank, Clerk of the Circuit Court Hillsborough County

# DECLARATION OF RESTRICTIVE COVENANT AND ACCESS EASEMENT AGREEMENT

THIS DECLARATION OF RESTRICTIVE COVENANT AND ACCESS AGREEMENT (the "Declaration") is made by and between Hillsborough County (the "County") a Florida political subdivision of the State, and THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (the "Department").

#### RECITALS:

- A. The County is the fee simple owner of that certain real property situated in Hillsborough County, Florida, more particularly described in Exhibit "A" attached hereto and made a part hereof (the "Entire Property"), within which lies the "Restricted Property," more particularly described in Exhibit "B" attached hereto and made a part hereof.
- B. The facility name at the time of this Declaration is Hillsborough County Southeast Landfill (the "Facility"). The Department's WACS Facility Identification Number is 41193. The Facility is a Class I Landfill disposal facility.
- C. Rule 62-701.630 Florida Administrative code (F.A.C.) permits the use of on-site soils rather than offsite soils as part of the Facility's final cover, as fill, or for other construction purposes when calculating the Facility's closure costs under certain circumstances including, but not limited to, entering into a legal agreement with the Department to ensure that the designated on-site soils will be available and accessible for the benefit of the Department and the County, for the proposed closure-related uses.
- D. The Department may need access to and use of the property for the purpose of closure of the Facility pursuant to Rule 62-701 and the County desires to grant the Department an easement for that purpose.
- E. The County deems it desirable that this Declaration of Restrictive Covenant be entered into and that the Restricted Property be held subject to the restrictions, all of which are more particularly hereinafter set forth.

NOW, THEREFORE, to meet the requirements of Rule 62-701.630 F.A.C., and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged by each of the undersigned parties, the County agrees as follows:

APPROVED
Board of County Commissioners
Date MARCH 2, 2016
Real Estate & Facilities
Services Department

Page 30 Updated: July 14, 2017

- 1. The foregoing recitals are true and correct and are incorporated herein by reference.
- 2. The County hereby imposes on the Restricted Property the following use restrictions:
  - a. Subject to the authorization through the issuance of the proper permits by the local regulatory agencies, including Hillsborough County, Florida, the on-site soils delineated in the Restricted Property shall be available and accessible for the benefit of the Department and the County for closure-related uses.
  - b. The County shall not, without the written prior consent of the Department, utilize onsite soils in the Restricted Property except for closure-related uses.
  - c. To ensure the designated on-site soils will be available and accessible for the benefit of the Department and the County for closure related uses, the County shall submit a report by July 1st of each year following the execution of this Declaration of Restrictive Covenant that is certified by a Florida registered Professional Engineer. This report shall certify that the quantity of suitable soils needed for use as final cover of the facility remain within the Restricted Property.
- 3. For the purpose of monitoring the restrictions contained herein and for the purpose of closure of the Facility pursuant to 62-701, the Department and its respective successors or assigns, as well as the Department's agents, including but not limited to contractors working on closure of the Facility pursuant to 62-701, shall have site access to the Restricted Property at reasonable times and with reasonable notice to the County, its successors and assigns.
- 4. It is the intention of the County that the restrictions contained in this Declaration shall touch and concern the Restricted Property, run with the land and title to the Restricted Property, and apply to, be binding upon, and inure to the benefit of the successors and assigns of the County and to the Department, its successors and assigns, and to any and all parties hereafter having any right, title or interest in the Restricted Property or any part thereof. The Department and its successors and assigns may enforce the terms and conditions of this Declaration by injunctive relief and other appropriate available legal remedies. Any forbearance on behalf of the Department or its successors or assigns to exercise its right in the event of the failure of the County, and its successors and assigns, to comply with the provisions of this Declaration shall not be deemed or construed to be a waiver of the Department's rights hereunder. This Declaration shall continue in perpetuity, unless otherwise modified in writing by the County and the Department as provided in Paragraph 6 hereof. These restrictions may be enforced in a court of competent jurisdiction by the Department or its successor agency, or by any other person, firm, corporation or governmental agency that may substantially benefit from these restrictions. If the County does not or will not be able to comply with any or all of the provisions of this Declaration, the County shall notify the Department in writing within three (3) calendar days. Additionally, the County shall notify the Department thirty (30) days prior to any conveyance or sale, granting or transferring the Restricted Property or portion thereof, to any heirs, successors, assigns or grantees, including, without limitation, the conveyance of any security interest in said Restricted Property.

Page 2 of 9

Page 31 Updated: July 14, 2017

PERMITTEE NAME: Hillsborough County Utilities FACILITY NAME: Southeast County Class I Landfill

PERMIT NO.: 35435-022-SO-01 WACS Facility ID: 41193

- 5. To ensure the perpetual nature of these restrictions, the County, its successors and assigns, shall reference these restrictions in any subsequent deed of conveyance, including the Official Records Book and Page of record of this Declaration. Furthermore, prior to the entry into a landlord-tenant relationship with respect to the Restricted Property, the County agrees to notify in writing all proposed tenants of the Restricted Property of the existence and contents of this Declaration of Restrictive Covenant.
- 6. This Declaration is binding until a release of covenant is executed by the Department's Secretary (or its designee) and by the County (or its successors and assigns), and is recorded in the Hillsborough County Public Records. This Declaration may be modified in writing only. Any subsequent amendment must be executed by both the County and the Department or their respective successors or assigns, and thereafter recorded by the County, or its successors and assigns, as an amendment hereto.
- If any provision of this Declaration is held to be invalid by any court of competent jurisdiction, the invalidity of such provision shall not affect the validity of any other provisions hereof. All such other provisions shall continue unimpaired in full force and effect.
- 8. The County covenants and represents that, on the date of execution of this Declaration, it is seized of the Entire Property in fee simple, and has good right to create, establish and impose this restrictive covenant on the use of the Restricted Property. The County also covenants and warrants that the Entire Property is free and clear of any and all liens, mortgages or encumbrances that could impair the County's right to impose the restrictive covenant described in this Declaration, or that would be superior to the restrictive covenant described in this Declaration.
- The parties agree that the Declaration and all documents associated with the transaction contemplated herein may be executed by electronic signature in a manner that complies with Chapter 668, Florida Statutes, and as approved by the Hillsborough County Board of County Commissioners in Resolution R15-025 on February 4, 2015.

[SIGNATURES ON FOLLOWING PAGE]

Page 3 of 9

Page 32 Updated: July 14, 2017

PERMIT NO.: 35435-022-SO-01 WACS Facility ID: 41193

IN WITNESS WHEREOF, the County has executed this Declaration of Restrictive

March Covenant this 2nd day of 20 16.

Hillsborough County

Lesley "Les" Miller, Jr.

Chairman, Board of County Commissioners

APPROVED AS TO FORM AND LEGAL

Assistant County Attorney

ATTEST: Pat Frank, Clerk of Circuit Clerk

By: Deputy Clerk

BOARD OF COUNTY COMMISSIONERS HELSBOROUGH COUNTY FLORIDA DOCUMENT NO.

16-0269

[SIGNATURES CONTINUED ON FOLLOWING PAGE]

PERMIT NO.: 35435-022-SO-01 WACS Facility ID: 41193

FLORIDA DEPARTMENT OF

	ENVIRONTMENTAL
	PROTECTION
Approved as to form by:	By:
You'h Strutered	f. Japa lell J.
Toni Sturtevant, Asst. General Counsel	F. JOSÉPH ULLO, Jr., P.E., Director
Office of General Counsel	Division of Waste Management
Signed, sealed, and delivered in n the presence of:	Dept. of Environmental Protection Division of Waste Management 2600 Blairstone Road Tallahassee, FL 32399-2400
Stone Show	Meledy Doluse
Witness Signature	Witness Signature
Stove Shores	Melody Johnson
Printed Name	Printed Name

#### STATE OF FLORIDA COUNTY OF LEON

The foregoing instrument was acknowledged before me this <u>15^{TP}</u> day of <u>MARCH</u> 2016, by F. JOSEPH ULLO, who is personally known to me.



Notary Public, State of Florida at Large

PERMIT NO.: 35435-022-SO-01

WACS Facility ID: 41193

EXHIBIT "A" (the Entire Property)

Page 6 of 9

Page 35 Updated: July 14, 2017

#### EXHIBIT "A" Legal Description

#### PARCEL I:

North side of State Road S-672: South 1/2 of Section 21; South 1/2 of Section 22; South 1/2 of Section 23, LESS that portion of the North 200 feet of the South 1/2 of said Section 23, lying Easterly of the centerline of a 200 foot Tampa Electric Company Easement dated November 13, 1962, recorded in Official Record Book 1058, page 441, conveyed to Hillsborough County, Florida, by Deed dated October 11, 1983 and recorded October 28, 1983 in Official Record Book 4209, page 375, Public Records of Hillsborough County, Florida.

All lying and being in Township 31 South, Range 21 East, Hillsborough County, Florida.

#### PARCEL II:

South side of State Road S-672: West 1/2 of Northwest 1/4, Section 28; Northwest 1/4 of the Southwest 1/4, Section 28; Northeast 1/4, Section 29; East 1/2 of Northwest 1/4, Section 29; Northeast 1/4 of Southwest 1/4, Section 29; North 1/2 of Southeast 1/4, Section 29; LESS the West 15 feet of the East 1/2 of the Northwest 1/4 of Section 29.

All lying and being in Township 31 South, Range 21 East, Hillshorough County, Florida.

#### PARCEL III:

That part of the Southeast 1/4 of Southwest 1/4 of Section 29, lying North of the center line of the existing county drainage canal, which center line is located approximately as follows: Commencing 33 feet, more or less, South of the Northwest corner of said Southeast 1/4 of Southwest 1/4 on the West boundary of said Southeast 1/4 of Southwest 1/4, thence proceed in a northeasterly direction to the Northeast corner of said Southeast 1/4 of Southwest 1/4.

All lying and being in Township 31 South, Range 21 East, Hillsborough County, Florida.

PERMIT NO.: 35435-022-SO-01

WACS Facility ID: 41193

EXHIBIT "B" (the Restricted Property)

Page 8 of 9

Page 37 Updated: July 14, 2017



ATTACHMENT 1											
Time Sensitive Action Chart											
Reference	Submittal Due Date	Required Item									
Specific Permit Condition A.3	By September 6,2023	Submit application for permit renewal									
Specific Permit Condition A.4	Within 30 days of (a) any sale or conveyance of the facility; (b) if a new or different person takes ownership or control of the facility; or (c) if the facility name or permittee's legal name is changed	Submit Form 62-701-900(8) for transfer of permit or name change									
Specific Permit Condition C.12.c	March 1, 2018 and at least one time every 5 years or at the time of the next permit renewal	Submit leachate system assessment report, videotape, inspection results, etc.  The Specific Permit Condition C.12.c reference date of March 1, 2018									
Specific Condition C.12.e	Within 24 hours of discovery	Notistics should be replaced by an Action Date of November 1, 2018.									
Specific Permit Condition C.14.a.	Annually, by January 15 th each year	Waste quantity records									
Specific Permit Condition C.14.b.	Annually, by September 1 st each year	Annual estimate of remaining life and capacity									

Page 39 Updated: July 14, 2017

	ATTACHMENT 1 (Continued)									
Time Sensitive Action Chart										
Reference	Submittal Due Date	Required Item								
Specific Permit Condition C.12.d and Leachate Monitoring Plan 8.3.2	Quarterly, by January 15 th , April 15, July 15 th , and October 15 each year	Submit leachate generation reports								
Leachate Management Plan 9.1.1	Semi-annually, within 60 days from completion of laboratory analysis.	Laboratory report for treated leachate effluent sampling.								
Leachate Management Plan 9.1.2	Annually, within 60 days from completion of laboratory analysis.	Laboratory report for biosolids TCLP sampling.								
Leachate Management Plan 11.2.9	Within 7 days of verbal notification.	Notification of leachate spill occurrence. Written notification and corrective action plan.								
Specific Permit Condition E.4	Quarterly, no later than 15 days after the end of the period in which the monitoring occurred	Submit gas monitoring results								
Specific Permit Condition F.2.a.	Annually, by March 1 each year	Submit revised cost estimates								
Specific Permit Condition F.2.b.	Annually	Submit proof of funding								
Appendix 3: Water Quality Monitoring Plan V.A.1.	At least 14 days prior to installation and/or sampling of any monitoring well(s)	Notification in writing, hard copy, or email of field activities								
Appendix 3: Water Quality Monitoring Plan II.3.	Semi-annually in February and August	Conduct ground water routine sampling event								
Appendix 3: Water Quality Monitoring Plan V.E.6.	Within 60 days from completion of laboratory analysis	Monitoring reports for initial and semi-annual sampling								
Appendix 3: Water Quality Monitoring Plan IV.1.	Within 2 days of discovery  Within 10 days of notice	Notification of a monitoring well or piezometer being damaged or inoperable  Written notification of nature of								
	of problem	problem & remedial actions taken to prevent recurrence								

Page 40 Updated: July 14, 2017

#### ATTACHMENT 1 (Continued) Time Sensitive Action Chart Reference Submittal Due Date Required Item Appendix 3: Prior to installation of Request and receive Department Water Quality new or replacement wells Approval Monitoring Plan IV.2. Within 30 days of Appendix 3: Provide Monitoring Well Completion Water Quality installation of new wells Report Mon Plan V.B.2. Appendix 3: Within 60 days of Provide survey drawing installation of new wells Water Quality Monitoring Plan V.C.3. Appendix 3: Prior to abandonment Notify Department of planned well Water Quality abandonment. Monitoring Plan IV.4. Appendix 3: Within 14 days of Notification of: monitoring parameters significantly above background water Water Quality discovery Monitoring Plan quality, or exceeding ground water I.4. standards or minimum criteria Conduct surface water sampling Appendix 3: Semi-annually in August Water Quality and February Monitoring Plan III.2. Appendix 3: At the time of the Total depth measurements on each well Water Quality Technical Report or every reported as total apparent depth below ground surface and should be compared Monitoring Plan 5 years to the original total depth of the V.D.5. well Semi-annually Water levels in all monitoring wells, Appendix 3: all piezometers, and all surface water Water Quality Monitoring Plan sites V.F.8. Appendix 3: Semi-annually Ground water elevation contour maps Water Quality for each monitored aguifer zone Monitoring Plan V.G.9. Appendix 3: Every two and one-half Technical Report Water Quality years during the active Monitoring Plan life of the facility and V.H.10 and 11. every 5 years during long-term care

PERMIT NO.: 35435-022-SO-01

WACS Facility ID: 41193

Page 41 Updated: July 14, 2017

ATTACHMENT 1 (Continued) Time Sensitive Action Chart Reference Required Item Submittal Due Date Operations Plan Within 7 days of Submit gas remediation plan K.9 detection Specific Permit No later than 90 days Submit Closure Permit application for Condition G.1. prior to the date when Department approval wastes will no longer be received

PERMIT NO.: 35435-022-SO-01 WACS Facility ID: 41193

If any of the deadlines in the Time Sensitive Action Chart are inconsistent with the time deadlines in the permit conditions, the time deadline in the permit condition shall be followed. The chart is provided as a courtesy to the operator and is not represented to be inclusive. The operator is responsible for maintaining familiarity with and, honoring all regulatory requirements pertaining to the facility.

Page 42 Updated: July 14, 2017

PERMITTEE NAME: Hillsborough County Utilities
FACILITY NAME: Southeast County Class I Landfill

## ATTACHMENT 2 - Permit History Southeast County Class I Landfill

PERMIT NO.: 35435-022-SO-01

WACS Facility ID: 41193

Permit Number	Name	Issue Date	Description
34535-024-SO-MM	Minor Modification to Operation	8/23/2017	Class I Landfill Operation
	<u>Permit</u>		
34535-024-SO-MM	Minor Modification to Operation	7/14/2017	Class I Landfill Operation
	Permit		_
34535-023-SO-IM	Intermediate Modification to	6/2/2016	Class I Landfill Operation
	Operation Permit		
35435-022-SO-01	Solid Waste Operation Permit	11//7/2013	Class I Landfill Operation

Page 43 Updated: July 14, 2017

## APPENDIX D PROPOSED PS-2 CONSTRUCTION DRAWINGS

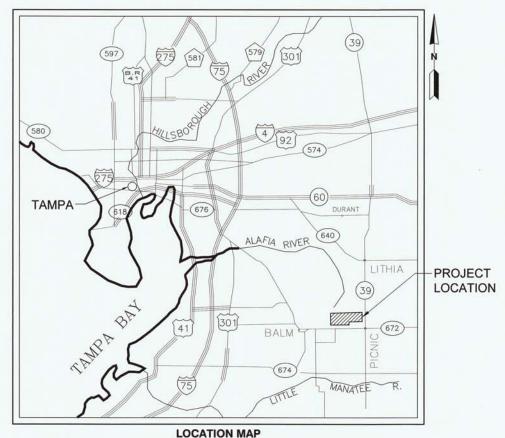
# PUMP STATION - 2 CONTAINMENT PAD SOUTHEAST COUNTY LANDFILL HILLSBOROUGH COUNTY

### TAMPA, FLORIDA JUNE 2018



#### **BOARD OF COUNTY COMMISSIONERS**

SANDRA L. MURMAN
VICTOR D. CRIST
LESLEY MILLER, JR.
STACY R. WHITE
KEN HAGAN
PAT KEMP
AL HIGGINBOTHAM
- DISTRICT 1
- DISTRICT 3
- DISTRICT 5
- DISTRICT 6
- DISTRICT 7



Number

C-0 COVER SHEET

C-1 SYMBOLS AND ABBREVIATIONS

C-2 EXISTING CONDITIONS

C-3 PUMP CONTAINMENT PLAN AND PROFILE

C-4 CONTAINMENT DETAILS

C-5 PIPING DETAILS

E-1 ELECTRICAL PLAN

INDEX OF DRAWINGS

**Sheet Title** 

Sheet

#### NOT TO SCALE

#### **SCS ENGINEERS**

STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS, INC. 3922 COCONUT PALM DRIVE, SUITE 102 TAMPA, FLORIDA 33619 PH. (813) 621-0080 FAX. (813) 623-6757 FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892 WWW.SCSENGINEERS.COM

SCS PROJECT NO. 09215600.06

#### GENERAL:

- WITHIN 10 DAYS AFTER AWARD OF CONTRACT, THE CONTRACTOR WILL SUBMIT FOR APPROVAL A SCHEDULE TO THE ENGINEER, FOR COMPLETION OF THE PROJECT.
- ALL EXCAVATED WASTE SHALL BE PLACED IN THE ACTIVE WASTE FILLING AREA. CONTRACTOR SHALL COORDINATE ANY WASTE DISPOSAL WITH THE LANDFILL OPERATOR.
- HOURS FOR CONSTRUCTION: 7:30 AM TO 5:30 PM MONDAY
- CONTRACTOR WILL ADD EROSION AND SEDIMENT CONTROL AS NECESSARY TO PREVENT SEDIMENTATION AND DAMAGE ADJACENT AREAS AND AS SHOWN ON THE DRAWINGS.
- CONTRACTOR WILL INSPECT AND REPAIR, AS NECESSARY, ANY EROSION AND SEDIMENT CONTROL DAILY AND FOLLOWING EACH MEASURABLE RAIN EVENT.
- CONTRACTOR IS RESPONSIBLE FOR MONITORING DOWNSTREAM CONDITIONS THROUGHOUT THE CONSTRUCTION PERIOD AND CLEARING ANY DEBRIS AND SEDIMENT RESULTING FROM
- EROSION CONTROL FENCING MUST MEET THE REQUIREMENTS OF THE DEPARTMENT OF TRANSPORTATION, STATE OF FLORIDA STANDARD SPECIFICATIONS. EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES.
- ADDITIONAL FROSION AND SEDIMENT CONTROL MEASURES WILL INSTALLED IF DEEMED NECESSARY BY ON-SITE INSPECTION

#### EARTHWORK:

- EXCAVATION IS UNCLASSIFIED AND INCLUDES REMOVAL OF EXCAVATION IS UNCLASSIFED AND INCLUDES REMOVAL OF EARTH FILLS, RUBBLE, AND OTHER MATERIALS ENCOUNTERED IN EXCAVATION AND GRADING OPERATIONS TO DEPTH AND EXTENT SHOWN ON DRAWINGS OR SPECIFIED. THE ENGINEER SHALL BE THE FINAL AUTHORITY AND SHALL MAKE THE FINAL DECISION DURING CONSTRUCTION AS TO THE DEPTH AND EXTENT TO WHICH MATERIALS MUST BE REMOVED AND
- CONTRACTOR SHALL LIMIT DIRT, DUST, NOISE AND OTHER OBJECTIONABLE NUISANCES PER PERMIT REQUIREMENTS.
- CUT AND FILL SLOPES FOR STRUCTURAL EMBANKMENTS SHALL NOT EXCEED 2 HORIZONTAL TO 1 VERTICAL. THE CONTRACTOR IS RESPONSIBLE FOR ALL SHORING AND BRACING DURING

THERE MAY BE OTHER UTILITIES NOT SHOWN ON THESE PLANS. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR LOCATIONS SHOWN AND IT SHALL BE THE RESPONSIBILITY FOR LOCATIONS SHOWN AND IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATIONS OF ALL UTILITIES WITHIN THE LIMITS OF THE WORK PRIOR TO CONSTRUCTION. ALL DAMAGE MADE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. ALL COORDINATION AND REQUIRED UTILITY COMPANY TEMPORARY PROTECTION SHALL BE AT THE CONTRACTOR'S EXPENSE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE UNINTERRUPTED SERVICE AND REPLACEMENT OF DAMAGED UTILITIES.

- COORDINATES REFERENCE FLORIDA STATE PLANE WEST ZONE, NAD83, 1990 ADJUSTMENT. ELEVATIONS ARE TO NATIONAL GEODETIC VERTICAL DATUM (NGVD) OF 1929.
- THE CONTRACTOR SHALL PROVIDE THE FOLLOWING SURVEY
- a. EXISTING CONDITIONS
- b. FINAL GRADES
- CONTRACT DRAWINGS MAY INDICATE BOTH EXISTING GRADE AND FINISHED GRADE REQUIRED FOR CONSTRUCTION OF PROJECT.
- a. STAKE ALL UNITS, STRUCTURES, PIPING, ROADS, AND ESTABLISH THEIR ELEVATIONS.
- b. PERFORM OTHER LAYOUT WORK REQUIRED.
- SURVEY BENCHMARKS, MONUMENTS AND OTHER REFERENCE POINTS WILL BE PROTECTED FROM DAMAGE AND
  DISPLACEMENT. IF DISTURBED OR DESTROYED, THEY WILL BE
  REPLACED BY THE CONTRACTOR AT NO EXPENSE TO THE
- ALL REQUESTED SURVEY DATA MUST BE PROVIDED TO THE ENGINEER IN FLORIDA STATE PLANE COORDINATES AND BE SIGNED AND SEALED BY A STATE OF FLORIDA LICENSED SURVEYOR.

#### SOILS/GEOTECHNICAL

- THE OWNER WILL PROVIDE FOR THE ON-SITE SERVICES OF A CQA INSPECTOR TO SELECTIVELY TEST MATERIALS AND MONITOR COMPLIANCE WITH THE REQUIREMENTS OF THESE PROFESSIONAL TODAY.
- THE CONTRACTOR WILL AFFORD THESE REPRESENTATIVES ACCESS TO THE JOB SITE FOR THE PERFORMANCE OF THEIR
- THE CONTRACTOR SHALL GIVE MINIMUM OF 24-HOUR ADVANCE NOTICE TO ENGINEER WHEN READY FOR COMPACTION OF SUBGRADE TESTING AND INSPECTION.

- BACKFILL: MATERIALS (ONLY) PROVIDED BY OWNER AND SHOULD BE FREE OF DELETERIOUS MATERIAL (STICKS, ROOTS, WASTE, ETC.) AND ROCK FRAGMENTS, BOULDERS, OR COBBLES GREATER THAN 1/2 INCHES IN SIZE, BACKFILL SHALL CONSIST OF OWNER-PROVIDED RECLAIMED ASPHALTIC MATERIAL COLLECTED FROM AN AREA IDENTIFIED BY THE OWNER.
- ALL HANDLING (EXCAVATION, HAULING, STOCKPILING, ETC.) WILL BE COMPLETED BY THE CONTRACTOR.

#### SITE EXCAVATION, STOCKPILING, BACKFILLING, COMPACTION, AND GRADING

- THE WORK INCLUDES ALL OPERATIONS IN CONNECTION WITH EXCAVATION, BORROW, BACKFILLING, CONSTRUCTION OF MILLING LAYERS, ROUGH GRADING, AND DISPOSAL OF EXCESS MATERIALS IN CONNECTION WITH THE PREPARATION OF THE SITE(S) FOR CONSTRUCTION OF THE WORK.
- 2. DEWATERING (AS REQUIRED: PROVIDE AND MAINTAIN DEWATERING OF ALL SUFFACE WATER AND/OR GROUNDWATER AS DEWATERING OF ALL SUFFACE WATER AND/OR GROUNDWATER AS REQUIRED FOR EXCAVATION. WHERE GROUNDWATER IS EXPECTED TO BE ENCOUNTERED DURING BORROW AREA EXCAVATION, INSTALL A DEWATERING SYSTEM TO PREVENT SOFTENING AND DISTURBANCE OF EXCAVATION, ALLOW BORROW MATERIAL TO BE EXCAVATED DRY, AND MAINTAIN A STABLE EXCAVATION.
- DO NOT PLACE FILL WHEN THE UNDERLYING MATERIAL IS FROZEN, WET, LOOSE, OR SOFT.
- 4. MOISTURE CONTROL:
- a. MOISTURE CONTENT OF MATERIALS PRIOR TO, AND DURING COMPACTION, SHALL BE UNIFORM THROUGHOUT EACH LAYER OF MATERIAL.
- b. GRANULAR MATERIALS SHALL BE THOROUGHLY WETTED DURING OR IMMEDIATELY PRIOR TO COMPACTION
- c. SUPPLEMENTARY WATER SHALL BE ADDED AS REQUIRED TO MATERIALS BY SPRINKLING AND MIXING UNIFORMLY THROUGHOUT LAYER.
- d. MATERIALS TOO WET FOR PLACING SHALL BE TEMPORARILY SPREAD OR AERATED UNTIL MOISTURE CONTENT IS ACCEPTABLE. IF THESE MATERIALS CANNOT BE PROCESSED IN TIME TO USE, THE CONTRACTOR SHALL FIND ALTERNATIVES ACCEPTABLE TO THE ENGINEER.
- 5. RECLAIMED ASPHALT BASE MATERIAL SHALL BE USED AS BACKFILL AND COMPACTED IN 6-INCH LIFTS USING METHODS AND EQUIPMENT OUTLINED IN SECTION 283 OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

#### ADDITIONAL NOTES:

- 4. THE CONTRACTOR IS ADVISED THAT NO ACTIVITIES MAY INTERFERE, DISRUPT, BLOCK, OR OTHERWISE CONFLICT WITH LANDFILL OPERATIONS. IF CONFLICTS ARE ANTICIPATED, THEY SHALL BE COORDINATED AND APPROVED BY THE OWNER AND ENGINEER PRIOR TO DISRUPTION.
- 5. THE PROJECT SITE IS A SOLID WASTE CLASS I LANDFILL, AS SUCH, CONDITIONS ARE SUBJECT TO CHANGE WITH TIME. CONTROLS, IN PARTICULAR VERTICAL GROUND ELEVATION, CONTROLS, IN PARTICULAR VERTICAL GROUND ELEVATION, SHOULD BE EXPECTED (AND ANTICIPATED) TO VARY FROM THOSE SHOWN ON THESE DRAWINGS DUE TO ONGOING SUBSIDENCE RESULTING FROM REFUSE DECOMPOSITION WITHIN THE PROJECT LIMITS. RELATIVE ELEVATION DIFFERENCES IN EXISTING AND PROPOSED ELEVATIONS SHOWN ON THE DRAWINGS SHALL BE ADJUSTED ACCORDINGLY AND THE ENGINEER NOTIFIED. LOCATION OF STRUCTURES SHALL BE PLACED IN ACCORDANCE WITH HORIZONTAL CONTROLS. VERTICAL PLACEMENT OF STRUCTURES SHALL BE IN ACCORDANCE WITH CONSTRUCTION DOCUMENTS, OR AS APPROVED BY THE FINGINEER. AS APPROVED BY THE ENGINEER.
- 6. SINCE THE PROJECT SITE IS ON A SOLID WASTE CLASS I LANDFILL COMBUSTIBLE GAS SHOULD BE EXPECTED (AND ANTICIPATED) ESPECIALLY WHEN EXCAVATING TRENCHES.
- 7. ANY AND ALL FINES IMPOSED ON THE OWNER BY ANY REGULATORY AGENCY DUE TO ACTIONS OF THE CONTRACTOR SHALL BE PAID BY THE CONTRACTOR AT NO EXPENSE TO THE
- 8. INSPECTION: EXAMINE AREAS FOR CONDITIONS UNDER WHICH INSPECTION: EXAMINE AREAS FOR CONDITIONS UNDER WHICH WORK IS TO BE PERFORMED. REPORT IN WRITING TO THE ENGINEER ALL CONDITIONS CONTRARY TO THOSE SHOWN ON THE DRAWINGS OR SPECIFIED HEREIN AND ALL OTHER CONDITIONS THAT WILL AFFECT SATISFACTORY EXECUTION OF WORK. DO NOT PROCEED WITH WORK UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED. STARTING WORK CONSTITUTES ACCEPTANCE OF THE CONDITIONS UNDER WHICH WORK IS TO BE PERFORMED. AFTER SUCH ACCEPTANCE, THE CONTRACTOR SHALL, AT CONTRACTORS EXPENSE, BE RESPONSIBLE FOR CORPRECING ALL LINESTISFACTORY AND DEFECTIVE WARK CORRECTING ALL UNSATISFACTORY AND DEFECTIVE WORK RESULTING FROM SUCH UNSATISFACTORY CONDITIONS.
- 9. PROTECTIONS: INSTALL TEMPORARY BARRIERS, FENCES. BARRICADES, LIGHTS, WARNING SIGNS AND OTHER DEVICES NECESSARY TO PROTECT STRUCTURES, UTILITIES, LANDSCAPING, EXCAVATIONS, AND OTHER ITEMS AS NECESSARY, PROTECT SURVEY BENCHMARKS AND MONUMENTS FROM DISPLACEMENT.
- 10. ALL WORK SHALL BE PERFORMED IN A QUALITY WORKMANLIKE
- 11. DEVIATIONS FROM THESE PLANS AND SPECIFICATIONS WITHOUT PRIOR WRITTEN CONSENT OF THE ENGINEER OR OWNER MAY CAUSE THE WORK TO BE UNACCEPTABLE AND WILL BE ADJUSTED OR REPAIRED AT THE CONTRACTOR'S EXPENSE.
- 12. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL NECESSARY LICENSES AND PERMITS ASSOCIATED WITH THE CONSTRUCTION OF THIS PROJECT UNLESS NOTIFIED OTHERWISE IN WRITING BY
- 13. ALL WORK, UNLESS OTHERWISE NOTED IN THE SPECIFICATIONS, SHALL HAVE A ONE YEAR WARRANTY. THE ONE YEAR WARRANTY WILL BECOME EFFECTIVE WHEN THE PROJECT IS SUBSTANTIALLY COMPLETE, AS DETERMINED BY ENGINEER.
- 14. ACTUAL DIMENSIONS AND LOCATIONS MAY VARY BASED ON FIELD LOCATIONS AND WITH APPROVAL OF THE ENGINEER.
- 15. CONTRACTOR TO PROVIDE SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL PRIOR TO ORDERING MATERIALS.
- 16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PAYING THE THE CONTRACTOR SHALL BE RESPONSIBLE FOR PAYING THE COST FOR ALL INSPECTION FEES AND ENGINEERING HOURS OVER THE 50 HOURS PER WEEK WORK SCHEDULE AT ACTUAL BILLING RATES. CONTRACTOR SHALL SUBMIT IN WRITING TO THE ENGINEER WITHIN FIVE CALENDAR DAYS NOTICE TO JUSTIFY THE EXTENSION OF TIME.
- AREAS DISTURBED BEYOND THE LIMITS OF CONSTRUCTION SHALL BE RE-SODDED AT NO COST TO THE OWNER OR ENGINEER.

#### CONTAINMENT PAD

- 1. ALL REBAR SHALL CONSIST OF #4 STEEL REBAR AND SHALL BE BENT AS SPECIFIED.
- CONCRETE SHALL BE ABLE TO PASS AN ASTM C39 4500 PSI COMPRESSION STRENGTH TEST AT 28 DAYS OF CURING.
- #57 STRUCTURAL NONCALCAROUS STONE SHALL MEET FDOT
- NKAGE ISOLATION JOINT CUTS SHALL BE EQUIDISTANT FROM EACH EDGE OF THE CONCRETE PAD.
- 5. SHRINKAGE ISOLATION JOINTS SHALL BE FILLED WITH APPROVED JOINT SEALANT.
- 6. ALL CONCRETE EDGES SHALL BE CHAMFERED.
- 8. EXPOSED CONCRETE SHALL BE PAINTED WITH RUST-OLEUM BRAND 10X ADVANCED DECK AND CONCRETE RESURFACER IN THE COLOR OF "TIMBERLINE."

#### SECTION AND DETAIL DESIGNATION

DESIGNATION LETTER INDICATES SECTION, NUMBER INDICATES DETAIL OR ELEVATION

SECTION IS TAKEN

FDOT

N.T.S.

RIFE

SCH

SDR

TYP.

DENCHMARK ELEVATION NORTHING EASTING

(MW)

M

FM FLOW METER

CO 2-1 O

MINIMUM

MAXIMUM

SCHEDULE

TYPIC AL

DIAMETER

BENCHMARK

CLEAN-OUT

MONITORING POINT

MONITORING WELL

SPOT FLEVATION

CHECK VALVE (FLOW IN DIRECTION OF ARROW)

- A EXISTING FORCEMAIN

- EXISTING UNDERGROUND ELECTRICAL

- EXISTING LINED PAD AND ACCESS

NOT TO SCALE

POUNDS PER SQUARE INCH

POLYTETRAFLUORETHYLENE

STANDARD DIMENSION RATIO



AB	BBREVIATIONS	
APPROX.	APPROXIMATE	b.
CMP	CORRUGATED METAL PIPE	
CONC.	CONCRETE	
ELEV.	ELEVATION	95
E.O.P.	EDGE OF PAVEMENT	c.
EXIST	EXISTING	

d. SECTIONS OF PIPE WITH CUTS, SCRATCHES OR GOUGES DEEPER THAN I. SECTIONS OF MIPE WITH CUTS, SCRAICHES OR GOUGES BEEPER THAN RECOMMENDED AS ACCEPTABLE BY MANUFACTURER SHALL BE REPLACED AT CONTRACTOR'S EXPENSE. DAMAGED PIPE THAT RESULTS IN A REDUCTION OF THE WALL THICKNESS BEYOND 10 PERCENT SHALL BE CUT OUT AND DISCARDED. DAMAGED PIPE SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S RECOMMENDATION, AND AT NO FLORIDA DEPARTMENT OF TRANSPORTATION HIGH DENSITY POLYETHYLENE LINEAR FEET LANDFILL GAS

ON THE JOINTS.

ON THE DRAWINGS

FUSION TECHNICIANS.

4. INSTALLATION

3. PRODUCTS

ADDITIONAL COST TO THE OWNER. e. MECHANICAL JOINTS SHALL BE MADE IN ACCORDANCE WITH

THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL PIPE, PIPE FITTINGS AND APPURTENANCES, INCLUDING THE HDPE PIPES AND FITTINGS, HDPE FORCEMAIN, AND RELATED HARDWARE AS SHOWN ON THE DRAWNOS.

MANUFACTURER'S RECOMMENDATIONS FOR STORAGE HANDLING

b. MANUFACTURER'S CERTIFICATION THAT THE HIGH DENSITY

c. BACKUP RINGS AND RELATED HARDWARE. FLOW METER MANUFACTURER AND MODEL INFORMATION, AND LEAK

a. NAMES OF THE PIPE, PIPE FITTING, AND VALVE SUPPLIERS, CERTIFICATES OF COMPLIANCE ON MATERIALS TO BE FURNISHED, AND

NSTALLATION, INSPECTION, AND REPAIR OF EACH TYPE OF PIPE AND PIPE FITTING TO BE FURNISHED.

MANOPACIONES S CENTIFICATION THAT THE PRIOR DESIGN TO POLYETHYLENE (HOPE) PIPE WAS MANUFACTURED FROM RESINS IN COMPLIANCE WITH THESE SPECIFICATIONS. THE CERTIFICATE SHALL STATE THE SPECIFIC RESIN, ITS SOURCE AND THE SPEC

a. THE POLYETHYLENE PIPE AND PIPE FITTINGS SHALL BE PE 3608 (FORMERLY PE3408) HIGH DENSITY POLYETHYLENE PIPE. THE PIPE SHALL BE SDR 11 AS NOTED ON THE DRAWINGS. THE PIPE SHALL BE

EQUAL TO "DRISCOPIPE" AS MANUFACTURED BY PHILLIPS DRISCOPIPE NC., RICHARDSON, TEXAS; PLEXICO, FRANKLIN PARK, ILL.; OR EQUAL

b. ALL HDPE PIPE AND FITTINGS SHALL BE FURNISHED BY A SINGLE

MANUFACTURER WHO IS FULLY EXPERIENCED, REPUTABLE, AND QUALIFIED IN THE MANUFACTURE OF THE ITEMS TO BE FURNISHED. THE PIPE SHALL CONTAIN NO RECYCLED COMPOUND EXCEPT THAT

c. ALL HDPE FITTINGS, INCLUDING REDUCING TEES, CROSS TEES, AND ELBOWS SHALL BE FACTORY MOLDED AND/OR FABRICATED WITH BU FUSION. ALL FITTINGS SHALL MEET THE REQUIREMENTS OF ASTM D-3261 AND F-714.

d. BACK-UP RING SHALL BE STAINLESS STEEL, TYPE 316, PLATE TYPE ANSI B16.5-B1, CLASS 150 POUND. THE BOLT-HEADS AND NUTS FOR THE BACK-UP RING SHALL BE HEXAGONAL WITH MACHINE THREADS MANUFACTURED OF HOT DIPPED GALVANIZED STEEL. GALVANIZED STEEL LAT WASHERS SHALL BE USED. ALL BACK-UP RINGS SHALL HAVE 1/8-INCH THICK GASKETS MADE OF HYPALON ALL WALSES (CATE AND CUEFCY) SAIL DE OF ETHE SIZE AND TYPE SUPPORTS

VALVES (GATE AND CHECK) SHALL BE OF THE SIZE AND TYPE SHOWN

a. THE INSTALLATION OF HDPE PIPE AND FITTINGS SHALL BE STRICTLY IN ACCORDANCE WITH THE MANUFACTURER'S TECHNICAL DATA AND PRINTED INSTRUCTIONS, AT LOCATIONS SHOWN ON THE DRAWINGS.

HDPE PIPE SHALL NOT BE BENT MORE THAN THE MINIMUM RADIUS RECOMMENDED BY THE MANUFACTURER FOR TYPE, GRADE, AND SDR. CARE SHALL BE TAKEN TO AVOID IMPOSING STRAINS THAT MILL OVER STRESS OR BUCKLE THE HDPE PIPING OR IMPOSE EXCESSIVE STRESS

PIPE SHALL BE LAID TO LINE AND GRADE, AND WITH BEDDING AND BACKFILL MATERIAL AS SHOWN ON THE DRAWINGS.

ALL HEAT FUSION JOINTS SHALL BE DONE BY FACTORY QUALIFIED

GENERATED IN THE MANUFACTURER'S OWN PLANT FROM RESIN OF THE SAME MANUFACTURER'S SPECIFICATION AS THE RAW MATERIAL

- MANUFACTURER'S RECOMMENDATIONS. COUPLING EQUIPMENT AND TRAINED OPERATOR WILL BE PROVIDED BY CONTRACTOR. HOPE PIPE COUPLING EQUIPMENT SHALL BE OF THE SIZE AND NATURE TO ADEQUATELY JOIN ALL HOPE PIPE SIZES AND FITTINGS NECESSARY TO COMPLETE THE PROJECT. BEFORE COUPLING HOPE PIPE, EACH LENGTH SHALL BE INSPECTED FOR THE PRESENCE OF DIRT, SAND, MUD, SHAVINGS, AND OTHER DEBRIS. ANY FOREIGN MATERIAL SHALL BE COMPLETELY REMOVED.
- f. FUSION JOINTS SHALL BE MADE IN ACCORDANCE WITH FUSION JOINIS SHALL BE MADE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. COUPLING EQUIPMENT AND TRAINED OPERATOR(S) SHALL BE PROVIDED BY CONTRACTOR. HDPE PIPE COUPLING EQUIPMENT SHALL BE OF THE SIZE AND NATURE TO ADEQUATELY JOIN ALL HDPE PIPE SIZES AND FITTINGS NECESSARY TO COMPLETE THE PROJECT. BEFORE COUPLING HDPE PIPE, EACH LENGTH SHALL BE INSPECTED FOR THE PRESENCE OF DIRT, SAND, MUD, SHAVINGS, AND OTHER DEBRIS. ANY FOREIGN MATERIAL SHALL BE COMPLETELY REMOVED.
- g. HDPE PIPE INSTALLATION: LENGTHS OF FUSED PIPE (4 INCHES IN DIAMETER OR GREATER) TO BE HANDLED AS ONE SECTION SHALL NOT DIAME IER OR GREATER) TO BE HANDLED AS ONE SECTION SHALL NOT 
  EXCEED 400 FEET. HDPE PIPE SHALL BE ALLOWED SUFFICIENT TIME 
  TO ADJUST TO FOUNDATION SOIL TEMPERATURE PRIOR TO ANY 
  TESTING, SEGMENT TIE—INS, AND/OR BACKFILLING. THE SUB ENDS, 
  WITH STAINLESS STEEL BACK—UP RING, SHALL BE FUSION WELDED TO 
  THE PIPE AS SHOWN ON THE DRAWNIGS. FIELD FABRICATED BENDS 
  CONFORMING TO THE CONTOURS AND GRADES OF THE CELL SHALL BE 
  FARRICATED IN THE EIGH. FABRICATED IN THE FIELD.
- h. THE ENGINEER SHALL BE NOTIFIED PRIOR TO ANY PIPE INSTALLATION.
- i. MECHANICAL CONNECTIONS OF THE HDPE PIPE TO AUXILIARY EQUIPMENT THROUGH FLANGED CONNECTIONS SUCH AS MANHOLES, SHALL CONSIST OF BUTT FUSED FLANGE ENDS WITH BACK-UP RINGS, BACK-UP RING SHALL BE STAINLESS STEEL, TYPE 316, AND BE SIZED
- AR LEAK TESTING OF THE PIPE SHALL BE CONDUCTED OVER THE AIR LEAR LESTING OF THE PIPE SHALL BE CONDUCTED OVER THE COURSE OF T-HOUR AT 100 PSIG. PRESSURE DROP OVER THE HOUR SHALL NOT EXCEED ONE PERCENT. THE PRESSURE DROP SHALL BE CORRECTED FOR TEMPERATURE CHANGES BEFORE DETERMINING PASS OR FAILURE. THE ENGINEER AND CONSTRUCTION QUALITY CONTROL CONSULTANT SHALL BE NOTIFIED PRIOR TO THE COMMENCEMENT OF TESTING AND SHALL BE PRESENT DURING THE TEST.

#### HDPE PIPE AND PIPE FITTINGS SEEDING AND SODDING

- THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS NECESSARY TO INSTALL SOD. THE WORK SHALL INCLUDE, BUT NOT NECESSARILY BE LIMITED TO: SOIL PREPARATION, LIMING, FERTILIZING, SODDING AND MAINTENANCE OF ALL AREAS REQUIRING VEGETATION AS SHOWN ON THE CONTRACT DRAWINGS.
- 5. SUBMITTALS PRIOR TO PLACING SOD, NOTIFY THE ENGINEER OF SOURCE AND PERMIT THE ENGINEER TO INSPECT. SUBMIT DOCUMENTATION FROM SUPPLIER REGARDING SPECIES AND PERCENTAGES OF PURITY, FURNIS DUPLICATE COPIES OF INVOICES FOR ALL FERTILIZER USED ON PROJECT, ALONG WITH CERTIFICATION OF QUALITY AND WARRANTY, FURNISH COPIES OF MANUFACTURER/SUPPLIER WARRANTIES OR GUARANTEES FOR ALL PRODUCTS.

#### 6. PRODUCTS

- a. SOD PROVIDE DENSE, STRONGLY ROOTED BAHIA—GRASS SOD OR BERMUDA—GRASS SOD LESS THAN TWO (2) YEARS OLD AND FREE OF WEEDS AND UNDESIRABLE NATIVE GRASSES. SOD SHALL BE CERTIFIED BY THE SUPPLIER TO MEET FLORIDA STATE PLANT BOARD SPECIFICATIONS.
- FERTILIZER PROVIDE COMMERCIAL FERTILIZER CONFORMING TO FDOT STANDARD SPECIFICATIONS, SECTION 982.
- c. WATER THE WATER USED IN THE SEEDING AND SODDING WAIER - THE WAIER USED IN THE SEEDING AND SODDING OPERATIONS MAY BE OBTAINED FROM ANY SPRING, POND, LAKE, STREAM OR MUNICIPAL WATER SYSTEM APPROVED OF BY THE STREAM OR MUNICIPAL WATER SYSTEM APPROVED OF BY THE CHEMICALS, ACIDS, ALKALOIDS, OR ANY SUBSTANCE, WHICH MIGHT BE HARMFUL TO PLANT GROWTH. WATER CONTAINING GREATER THAN 800 PARTS PER MILLION (PPM) DISSOLVED SOLIDS SHALL NOT BE USED.

#### 7. SODDING OPERATIONS

a. THE SETTING OF SOD PIECES SHALL BE STAGGERED IN SUCH A MANNER AS TO AVOID CONTINUOUS SEAMS WHERE POSSIBLE. SOOS SHALL BE CAREFULLY PLACED BY HAND, EDGE TO EDGE, IN ROWS AT RIGHT ANGLES TO THE SLOPE. SODDING SHALL BE IN ACCORDANCE WITH FDOT STANDARD SPECIFICATIONS, SECTION 575–3.3. WATERING SHALL BE IN ACCORDANCE WITH FDOT SPECIFICATION S

#### 5. MAINTENANCE

- g. THE CONTRACTOR SHALL KEEP ALL SEEDED AND SODDED AREAS WATERED AND IN GOOD CONDITION UNTIL THE CONTRACTOR HAS RECEIVED FINAL PAYMENT INCLUDING THE CONTRACTOR'S RELEASE AND ALL SUBCONTRACTOR AFFIDAVITS (FINAL COMPLETION).
- b. THE REPAIR OF ANY EROSION OR SOD RELOCATION NECESSARY PRIOR TO THE SOD BECOMING FIRMLY ROOTED TO THE EXISTING SOIL WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- c. BEGIN MAINTENANCE OF SEEDED AND SODDED AREAS IMMEDIATELY AFTER EACH PORTION IS PLANTED AND CONTINUE UNTIL FINAL

#### PUMP AND FLOW METER

- THE CONTRACTOR SHALL PROVIDE A 20 HORSE POWER, 1800 RPM, DIRECT DRIVE, ELECTRIC, GODWIN CD100M VACUUM ASSISTED PUMP MOUNTED ON A PORTABLE SINGLE LIFT POINT SKID.
- a. THE SKID SHALL BE FABRICATED WITH FOUR F ANCHOR BOLT HOLES LOCATED ACCORDING TO THE PROPOSED LOCATION OF WEDGE ANCHORS SHOWN ON THE DETAIL SHEETS.
- b. THE DISCHARGE AND THE INTAKE FLANGES SHALL FACE THE SAME DIRECTION (REAR FACING DISCHARGE).
- c. A FIVE (5) YEAR MANUFACTURER'S PUMP INSPECTION AND MAINTENANCE PLAN SHALL BE INCLUDED IN THE PRICE OF THE PUMP. THE PLAN SHALL INCLUDE, AT MINIMUM, QUARTERLY INSPECTIONS AND ROUTINE MAINTENANCE.
- d. A FIVE (5) YEAR MANUFACTURER WARRANTY SHALL BE INCLUDED IN THE PRICE OF THE PUMP.
- THE CONTRACTOR SHALL PROVIDE ALL ELECTRICAL EQUIPMENT INDICATED ON THE ELECTRICAL DRAWINGS INCLUDING A THREE PHASE CONTROLLER IN A RACK-MOUNTED WEATHERPROOF HOUSING, PUMP CONTROLLER SHALL BE GODWIN PUMPS OF AMERICA, INC. ITEM NUMBER CPCA3P0322905 OR EQUIVALENT AS APPROVED BY THE ENGINEER.
- THE CONTRACTOR SHALL PROVIDE AND INSTALL AN ENDRESS&HAUSER PROMAG L 400, 5L4CH, DN100 4" ELECTROMAGNETIC INLINE FLOW METER FULLY SUITABLE FOR WASTEWATER.
- FLOW METER SHALL BE CHARACTERIZED BY COMPACT SENSOR DESIGN, SHORT INSTALLATION LENGTH, CORROSION RESISTANT TRANSMITTER
- b. FLOW METER SHALL BE ACCOMPANIED BY TWO PROMAG GROUNDING/PROTECTION DISKS, MODEL NUMBER DK5GD—1HAUL.
- c. FLOW METER SHALL BE ACCOMPANIED BY L/W/P/S,E, GROUNDING CABLE KIT, MODEL NUMBER DK5GC-1HL

## **ABBREVIATIONS** ATION - 2 IENT PAD LANDFILI PUMP STAT CONTAINME SOUTHEAST I AND BOLS SYM

HILLSBOROUGH COUNTY UBLIC WORKS DEPARTMENT D WASTE MANAGMENT DIVISIO TAMPA, FLORIDA 33619 SOLID

ENGINEERS
NS, CONRAD AND SCHILLING ENGINEERS
CONUT PALM DRIVE, SUITE 1

SCS STEARN CONSUL 3922 COC PH (813) 6 FLORIDA C CADD FILE UMP CONTAINMEN JUNE 2018

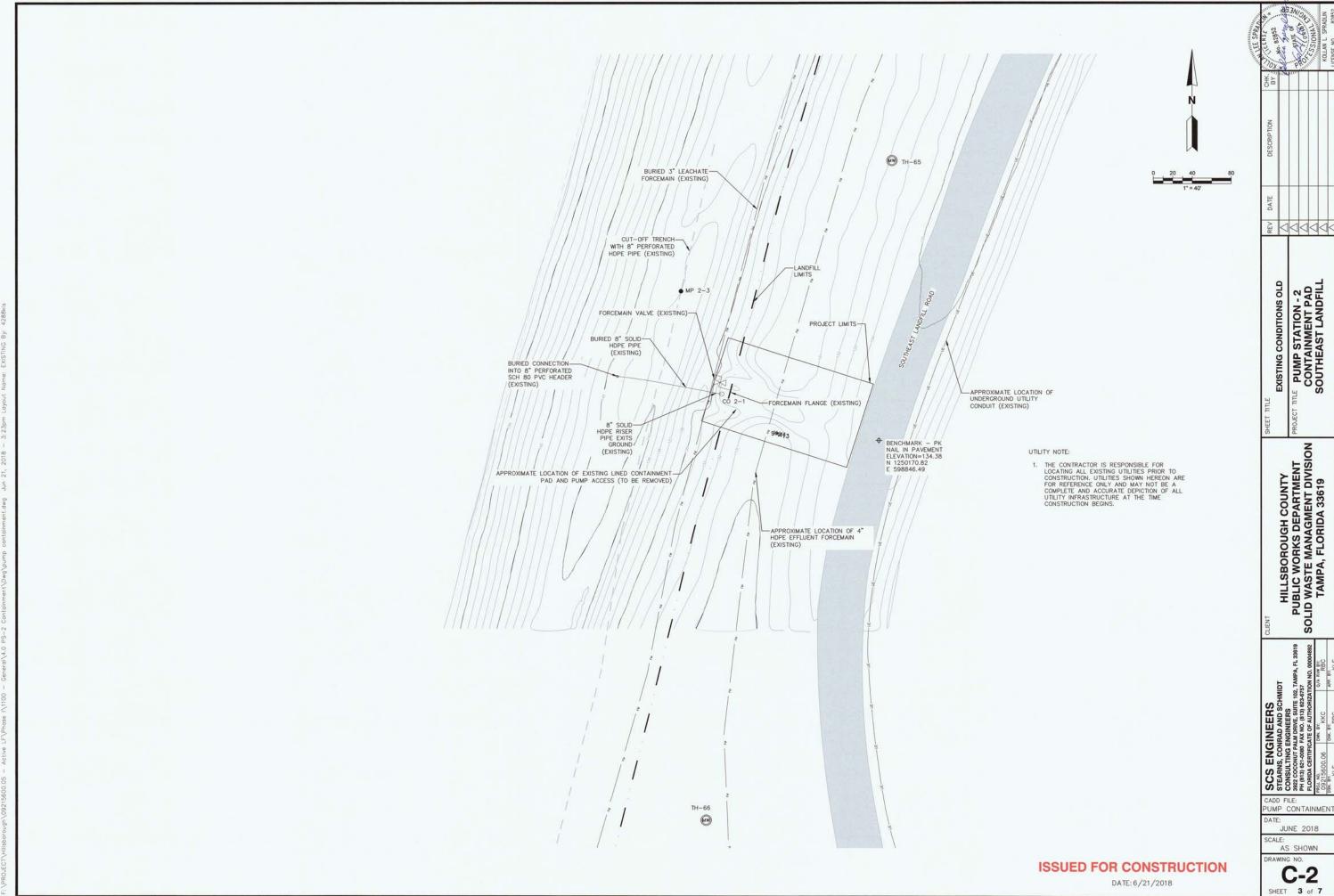
AS SHOWN DRAWING NO.

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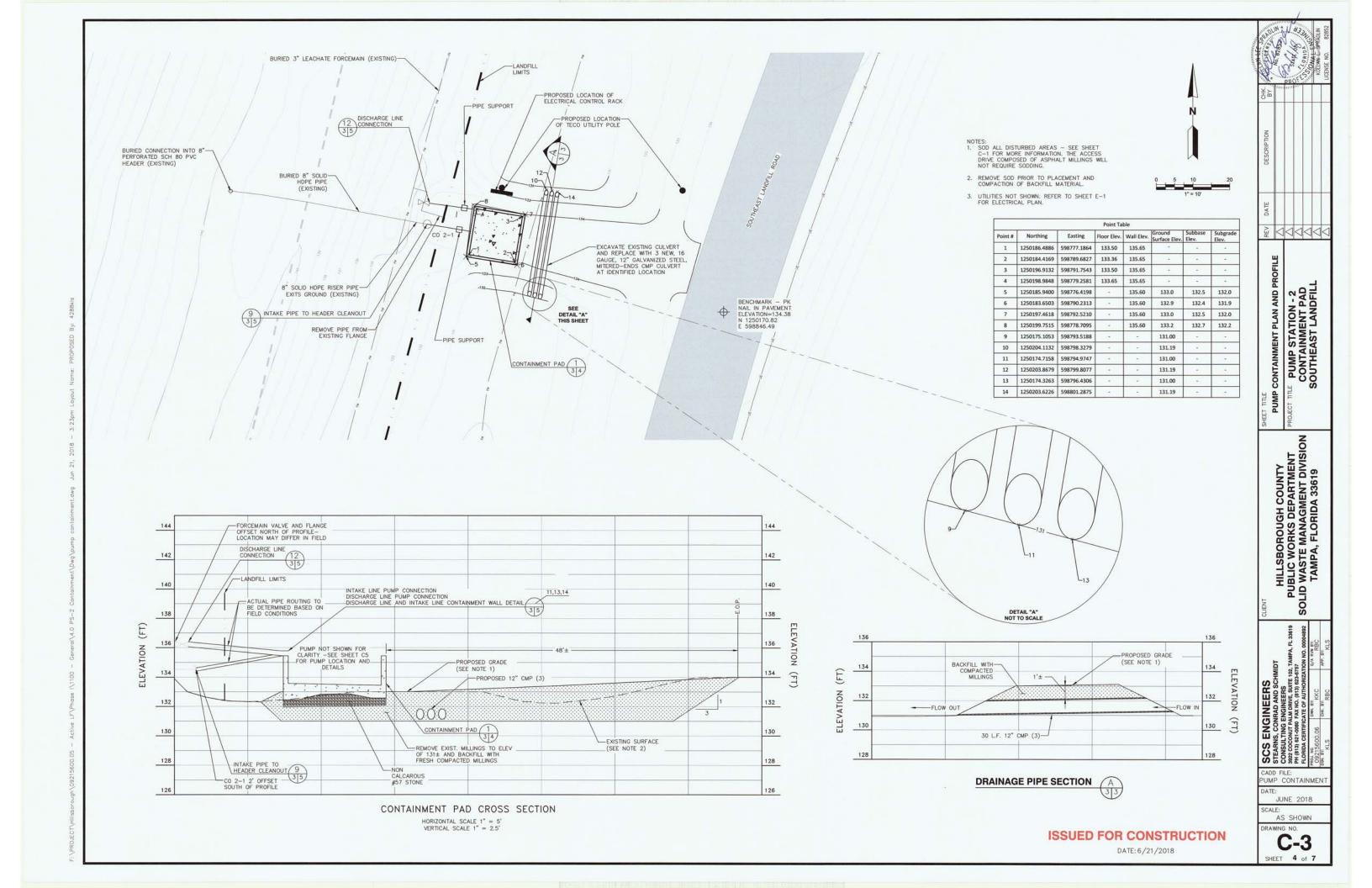
SHEET 2 of 7

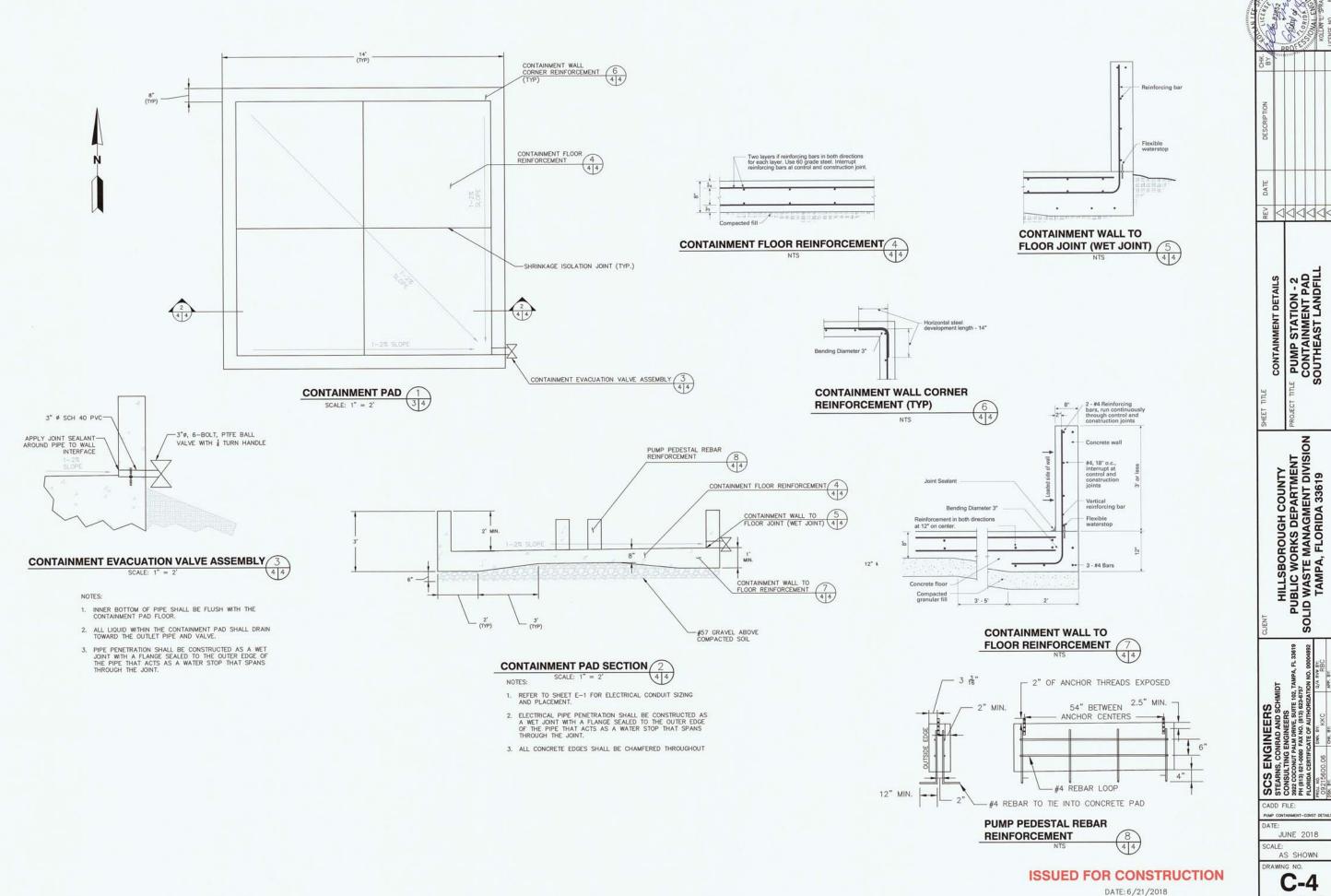
ISSUED FOR CONSTRUCTION

DATE: 6/21/2018



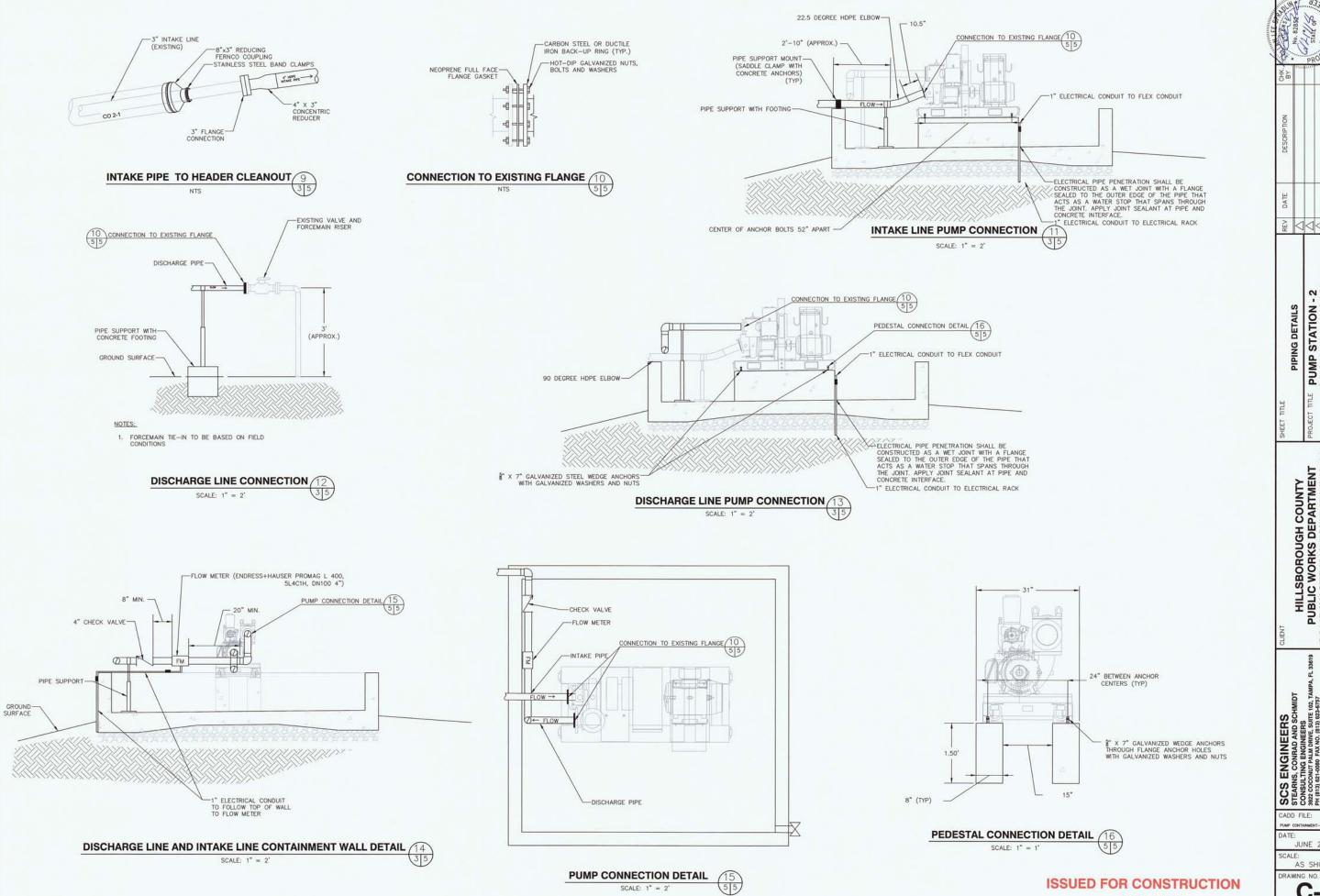
PUMP CONTAINMEN JUNE 2018





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TE PUMP STATION - 2 CONTAINMENT PAD SOUTHEAST LANDFILL



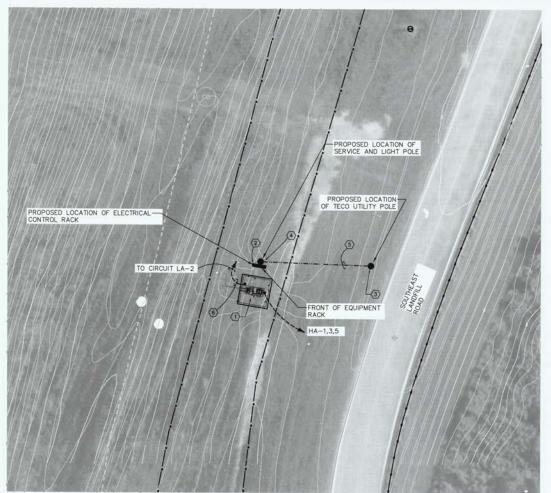
DATE: 6/21/2018

# 00000 CONTAINMENT PAD SOUTHEAST LANDFILL PIPING DETAILS HILLSBOROUGH COUNTY IBLIC WORKS DEPARTMENT WASTE MANAGMENT DIVISION TAMPA, FLORIDA 33619 SOLID SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
SEZ COCOUNT PALM DRIVE; SUITE 102, TAM
HI (813) R21-0080 FAX NO. (813) 823-8757
FLORIDA CERTIFICATE OF AUTHORIZATION I CADD FILE: JUNE 2018

AS SHOWN

**C-5** 

SHEET 6 of 7



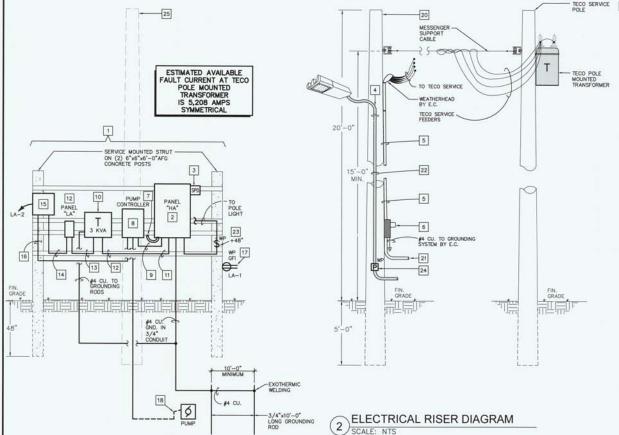
#### O ELECTRICAL SITE PLAN NOTES

- 1. PROPOSED LOCATION OF NEW 20HP PUMP.
- 2. PROPOSED LOCATION OF ELECTRICAL EQUIPMENT RACK.
- PROPOSED LOCATION OF TECO POLE NEW POWER SERVICE, COORDINATE WITH TECO FOR ALL REQUIREMENTS AND FINAL LOCATION OF SERVICE POLE.
- 4. PROPOSED LOCATION OF SERVICE FEEDER AND POLE LUMINAIRE.
- 5. NEW OVERHEAD SERVICE FEEDER.
- WIRE FLOW METER TO CIRCUIT INDICATED, INSTALL (2)—#12 THWN CU. AND (1)—#12 CU. GROUNDING CONDUCTOR IN 1/2" CONDUIT. STUBUP CONDUIT BELOW METER AND FLEX TO METER WITH LIQUID TIGHT CONDUIT.

REFER TO CIVIL DRAWING SHEET C-5 FOR CONDUITS PENETRATION LOCATIONS AND REQUIREMENTS TO FLOW METER AND PUMP.

PANEL "HA"				SERVICE ENTRANCE RATED				MAINS: 100 A.,M.C.B. VOLTAGE: 277/480 V.,3ø, 4 W.						
LOAD	CND. SIZE	WAE	OKT. E		IR.	VC SA	ATS-A	MPS dic	CIR.		KR.	MRE	CND. SIZE	LOAD
20 HP PUMP	1	6	60	3		479	-	-	-	15	2	12	1/2	3 KVA TRANSFORME
	1	1	0	7	2	-	7,479		É	-	1	T	1	FOR PANEL "LA
			/	T	5	96	-	7,479		15	1	12	1/2	POLE LIGHT
SPACE				H	7				5					SPACE
SPACE					9	18		1	10		Т			SPACE
SPACE				1	Π.				12		Ü			SPACE
SPACE				1	27	=			14	30	3	10	1/2	SPE
SPACE				1	Cur II	1	=	1	16		7		7	T
SPACE		- 4	1	1	7			=	18	/	1		/	
NOTES & MODIFIC	ATIONS:					П		П		TOTAL TOTAL				25,533 VA 31 AMPS
									NO. OF POLES					18
									ENCLOSURE					N-3 STAINLESS STEEL
									MOUNTING			3		SURFACE
									AIC RATING					14,000 AMPS

PARTIAL ELECTRICAL SITE PLAN SCALE: 1" = 20'-0"



#### TECO SERVICE ELECTRICAL RISER DIAGRAM NOTES

- 1. PROVIDE AND INSTALL EQUIPMENT RACK. PROVIDE STAINLESS STEEL UNISTRUT SUPPORT TO MOUNT EQUIPMENT.
- 2. NEW ELECTRICAL PANEL. REFER TO PANEL BOARD SCHEDULE.
- TYPE "1" SURGE PROTECTOR DEVICE (SPD) IN NEMA-3R ENCLOSURE. SPD SHALL BE UL 1449 4TH EDITION PQ#PQC100 OR APPROVED EQUAL.
- INSTALL NEW POLE MOUNTED LUMINAIRE LUMARK #NAV-AE-02-E-277-T4FT-PER TO BE MOUNTED ON UTILITY METAL CANTILEVER ARM AT 12'-0" A.F.G.
- 5. SERVICE POWER FEEDER TO PANEL "HA". INSTALL (4)-#3 THHN/THWN CU. IN 1 1/2" CONDUIT.
- METER ENCLOSURE BY ELECTRICAL CONTRACTOR. METER ENCLOSURE SHALL BE COMPATIBLE WITH TECO METERING SYSTEM.
- 7. FLEX WITH SERVICE FEEDER, REFER TO RISER DIAGRAM NOTE #21.
- 8. PUMP CONTROLLER PROVIDED BY OTHERS, ELECTRICAL CONTRACTOR TO INSTALL.
- 9. INSTALL (3)-#6 THWN CU. AND (1)-#10 CU. GROUNDING CONDUCTOR FROM PANEL "HA" TO PUMP CONTROLLER.
- INSTALL NEW 480V SINGLE PHASE TO 120/240V SINGLE PHASE, 3 KVA STEP DOWN TRANSFORMER IN NEMA-3R ENCLOSURE.
- INSTALL (2)-#12 THWN CU. AND (1)-#12 CU. GROUNDING CONDUCTOR IN 1/2" CONDUIT FROM PANEL "HA" TO FEED TRANSFORMER.
- 12. INSTALL LOAD CENTER 40 AMP M.L.O. RATED IN NEMA-3R ENCLOSURE. PROVIDE LOAD CENTER WITH (1)-15 AMP CIRCUIT BREAKER TO POWER TELEMETRY AND (1)-20 AMP CIRCUIT BREAKER TO POWER RECEPTACLE. LOAD CENTER SHALL IN NEMA "3" ENCLOSURE AND IOKAIC RATED.
- 13. INSTALL (2)-#10 THWN CU. AND (1)-#10 THWN CU. GROUNDING CONDUCTOR IN 3/4" CONDUIT.
- INSTALL (2)-#12 THWN CU. AND (1)-#12 CU. GROUNDING CONDUCTOR FROM (1)-POLE/15 AMP CIRCUIT BREAKER OF PANEL "LA" TO TELEMETRY.
- 15. TELEMETRY SYSTEM FOR REMOTE MONITORING. TELEMETRY IS OWNER PROVIDED, ELECTRICAL CONTRACTOR TO INSTALL. FIELD COORDINATE WITH OWNER FOR ALL REQUIREMENTS OF INSTALLATION.
- 16. INSTALL 3/4" WITH PULL WIRE FROM TELEMETRY SYSTEM TO PUMP CONTROLLER.
- 17. MOUNT GFI RECEPTACLE ON CONCRETE POST, PROVIDE RECEPTACLE WITH IN-USE COVER.
- 18. STUB UP POWER FEED ADJACENT TO PUMP AND FLEX TO PUMP WITH (3)-#6 THWN CU. AND (1)-#10 CU. GROUNDING CONDUCTOR IN 1* LIQUID TIGHT FLEX CONDUIT.
- 19. OVERHEAD SERVICE WIRING TO WEATHERHEAD BY TECO.
- INSTALL NEW 20 FEET, CLASS 6 PRESSURE TREATED POLE. INSTALLATION OF POLE SHALL SUSTAIN 140 MPH WIND MTH 1.3 GUST FACTOR MOUNT POLE BEHIND EQUIPMENT RACK AS CLOSE AS POSSIBLE. POLE SHOWN ON SIDE OF RACK FOR CLARITY. REFER TO RISER NOTE #25 FOR ACTUAL LOCATION.
- FROM METER INSTALL 1 1/2" LIQUID TIGHT FLEX CONDUIT WITH REQUIRED WRING TO MAKE SERVICE PENETRATION TO PANEL "HA" FROM THE BOTTOM OF PANEL.
- 22. INSTALL (2)-#12 THWN CU. AND (1)-#12 CU. IN 1/2" CONDUIT GROUNDING CONDUCTOR FOR POLE LUMINAIRE.
- 24. INSTALL WEATHERPROOF PULL BOX AND FLEX WITH 1/2" LIQUID TIGHT CONDUIT WITH REQUIRED WIRING TO POLE LUMINAIRE.
- 25. PROPOSED LOCATION OF POLE BEHIND RACK, REFER TO RISER NOTE #20.

#### GENERAL SYMBOL NOTES

- MOUNTING HEIGHTS GIVEN TO CENTER LINE OF DEVICE (UNO).
- THE SYMBOLS SHOWN ON THE LIST ARE A MASTER LIST AND ALL DO NOT NECESSARILY APPEAR ON THE DRAWING
- MOUNTING HEIGHTS FOR DEVICES INSTALLED EXCLUSIVELY FOR EQUIPMENT SHALL BE COORDINATED WITH EQUIPMENT SUPPLIER

AFF ABOVE FINISHED FLOOR IAW IN ACCORDANCE WITH WP WEATHER PROOF ABOVE FINISHED GRADE IG ISOLATED GROUND +42" MOUNTING HEIGHT A.F.F. MTD. MOUNTED Ø PHASE NIC NOT IN CONTRACT NTS NOT TO SCALE ELECTRICAL CONTRACTOR NTS NOT TO SCALE GROUND FAULT INTERRUPTER SG STAFF GAGE UNO UNLESS NOTED OTHERWISE ---- UNDERGROUND CONDUIT

10

ALL SYMBOLS OR ABBREVIATIONS MAY NOT APPEAR ON PLANS. CONTRACTOR IS ONLY RESPONSIBLE FOR EQUIPMENT INDICATED ON CONSTRUCTION PLANS OR BY SPECIFICATION

CONDUIT STUB-UP ------ OVERHEAD SERVICE FEEDER

#### **ELECTRICAL NOTES**

- A. ALL WORK TO CONFORM WITH THE LATEST REQUIREMENTS OF NATIONAL, STATE, AND LOCAL ELECTRICAL CODES.
- B. ALL SERVICE EQUIPMENT TO CONFORM TO REQUIREMENTS OF LOCAL POWER COMPANY.
- C. PROVIDE LABOR, MATERIAL AND EQUIPMENT NECESSARY TO FURNISH COMPLETE ELECTRICAL SYSTEM(S).
- CONTRACTOR SHALL COORDINATE WITH POWER COMPANY PRIOR TO START OF WORK, THE FOLLOWING:
   LOCATION OF TRANSFORMER OR SERVICE DROP.
   AVAILABLE VOLTAGE.
   AVAILABLE GROUND FAULT CURRENT.
- E. ALL CONDUCTORS SHALL BE STRANDED COPPER, 600 VOLT WITH MINIMUM SIZE OF #12 AWG. THHN/THWN UNLESS OTHERWISE SPECIFIED.
- F. ALL EQUIPMENT SHALL BE RATED FOR MAXIMUM AVAILABLE VOLTAGE AND GROUND FAULT CURRENT. ALL EQUIPMENT SHALL BE U.L. LISTED.
- G. CONTRACTOR SHALL COORDINATE ELECTRICAL REQUIREMENTS AND MAKE FINAL CONNECTIONS OF EQUIPMENT FURNISHED BY OTHER TRADES.
- CONTRACTOR SHALL MAINTAIN A COMPLETE TEMPORARY POWER AND LIGHTING SYSTEM DURING CONSTRUCTION.
- J. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL ELECTRICAL PERMITS AND INSPECTIONS.
- ALL WIRE SHALL BE INSTALLED IN CONDUITS. ALL EXPOSED CONDUITS SHALL BE PVC COATED GRS. CONDUITS INSTALLED BELOW SLAB, OR UNDERGROUND SHALL BE SCHEDULE 40 PVC (3/4" MINIMUM). ALL CONNECTORS SHALL BE COMPRESSION TYPE WHERE SUBJECT TO MOISTURE. ALL CONDUIT SHALL BE CONCEALED WHERE POSSIBLE.
- L. PROVIDE ALL REQUIRED SUPPORTS FOR MATERIAL AND EQUIPMENT.
- M. ALL UNFINISHED PRODUCTS SHALL BE STAINLESS STEEL.
- N. ALL DEVICE PLATES SHALL BE STEEL SIZED FOR THE SPECIFIC OUTLET OR DEVICE COVERED. OUTLETS INSTALLED IN WET LOCATIONS SHALL BE PROVIDED WITH WEATHERPROOF BOX AND IN-USE COVER PLATE.
- PROVIDE GREEN GROUND WIRE IN EACH RACEWAY. SIZE WIRE IN ACCORDANCE WITH TABLE 250.122 OF THE NATIONAL ELECTRICAL CODE,
- PANELBOARDS SHALL BE "4X" STAINLESS STEEL SQUARE-D COPPER BUS "NOOD" WITH BOLT-ON BREAKERS, OR APPROVED EQUAL PRODUCTS AS MFG. BY I.T.E., OR CUTLER-HAMMER. PANELBOARDS SHALL HAVE A HINGE LOCKING DOOR, PROVIDE A TYPEWRITTEN CIRCUIT DIRECTORY WITH PROTECTIVE COVERING. ALL WIRES IN PANEL SHALL BE TAGGED WITH CIRCUIT NUMBER.
- PANELBOARDS, CIRCUIT BREAKERS, DISCONNECT SWITCHES, STARTERS, TIMECLOCKS, OR OTHER ELECTRICAL APPARATUS INSTALLED FOR THE OPERATION OF ANY EQUIPMENT SHALL BE PROPERLY IDENTIFIED WITH ENGRAVED LAMINATED PLASTIC NAMEPLATES ATTACHED TO EQUIPMENT BY TWO PART PROVY
- ALL WIREWAYS, PULLBOXES, OUTLET AND JUNCTION BOXES SHALL BE PROPERLY SIZED PER THE NATIONAL ELECTRICAL CODE, PULL AND OUTLET BOXES SHALL HAVE ALL WIRING TAGGED TO INDICATED PANEL AND CIRCUIT NUMBERS.
- ALL FUSES WHEN REQUIRED SHALL BE BUSMANN CURRENT LIMITING TYPE RK-1 SIZED PER EQUIPMENT REQUIREMENTS
- PERFORM REQUIRED TRENCHING, BACK FILLING AND COMPACTION. PROVIDE REQUIRED SODDING TO MATCH EXISTING TYPE OF SOD WHERE TRENCHING TAKES PLACE.
- V. CONTRACTOR SHALL VISIT JOB SITE PRIOR TO BID AND BE FAMILIAR WITH ALL EXISTING CONDITIONS.
- W. COORDINATE ALL WORK WITH MOTOR/ACTUATOR SHOP DRAWINGS BEFORE ROUGH-IN.

- 1. PROVIDE (2) TWO COPIES OF TECHNICAL DATA FOR ALL ELECTRICAL EQUIPMENT FURNISHED.
- 2. PROVIDE RECORD DRAWINGS UPON COMPLETION OF WORK. PRESENT THE OWNER WITH (3) THREE RECORD SETS OF RECORD DRAWINGS. RECORD DRAWINGS SHALL BE UPDATED DAILY.
- 3. PROVIDE THE OWNER WITH INSTRUCTION IN THE OPERATION OF ALL ELECTRICAL SYSTEMS.
- PROVIDE THE OWNER WITH (2) TWO SETS OF MAINTENANCE AND OPERATIONS MANUAL FOR ALL ELECTRICAL EQUIPMENT.

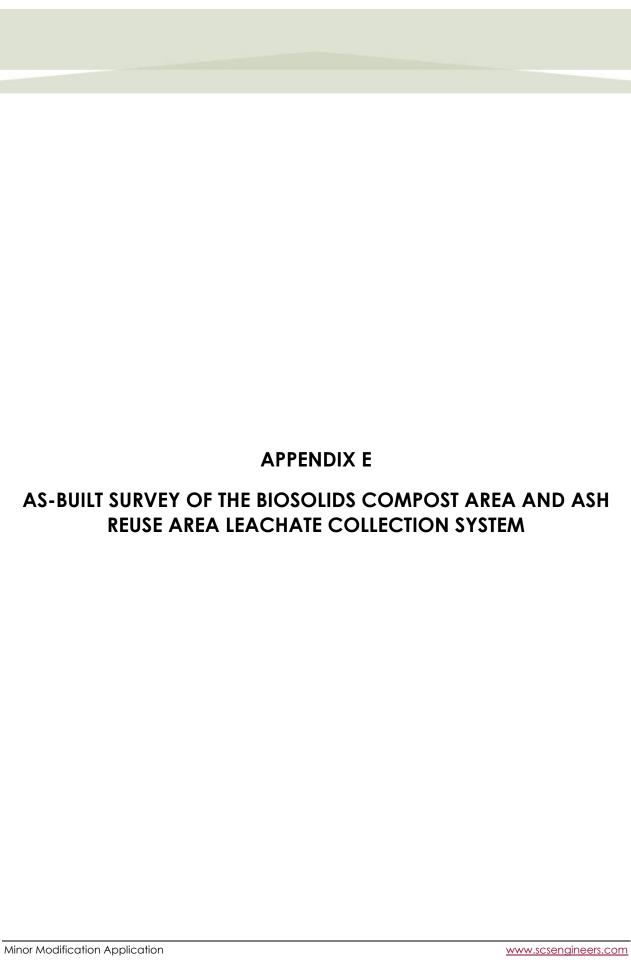


CONTAINMENT PAD SOUTHEAST LANDFILL PLAN

HILLSBOROUGH COUNTY UBLIC WORKS DEPARTMENT D WASTE MANAGMENT DIVISIO TAMPA, FLORIDA 33619 9 SOI

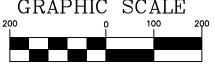
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#### GRAPHIC SCALE



( IN FEET ) 1 inch = 200 ft.

- SURVEYOR'S NOTES:

  1.) North Grid and coordinates basis is the West Zone of the Florida State Plane Coordinate System NAD 83/90 adjustment. The vertical datum is NAD1929 using control as provided by client prepared by Pickett & Associates.
- This survey was prepared to show constructed improvements along the proposed project site as of 11/20/2017. Elevations shown taken on top of pipe.
- THIS SURVEY IS NOT VALID WITHOUT THE SIGNATURE AND SEAL OF A FLORIDA LICENSED SURVEYOR AND

#### LEGEND:

NO. NUMBER ELEVATION ELEV.

