

# **MANATEE COUNTY LENA ROAD CLASS I LANDFILL OPERATIONS PLAN**

October 27, 2015

## **Part K**

**Prepared by:  
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Appendix B of the Application Package - Fill Sequence Plan Drawings from 2016 to 2036

# 1.0 Trained Operators

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Manatee County Government personnel operate the Lena Road Landfill. The County requires at least one trained landfill operator certified in accordance with F.A.C., Chapter 62-701.500 (1) and one spotter at the working face at all times during waste disposal operations. The spotter is responsible for guiding vehicles and for assisting code enforcement with enforcing provisions for controlling the waste received. An example of a typical workweek staff schedule is shown in Figure K-1.

General daily operations are as follows:

Time	Activity
7:00 am	Landfill Operations Supervisors, Solid Waste Disposal Chiefs and/or the Solid Waste Maintenance Chief (all certified, trained operators) arrive; distribute daily assignments and checks attendance and equipment sheets. The equipment moves to the working area to prepare the roads and sites for that working day. At least one trained operator is always on site during operations. At least one trained spotter is assigned to the working face each time waste is received to inspect each load from the ground level.
8:00 am	The Scalehouse opens and traffic is routed to the appropriate disposal area.
9:00 am	Personnel begin the morning break times
11:30 pm	Personnel begin the lunch break times
2:00 pm	Personnel begin the afternoon break times
5:00 pm	The Scalehouse closes, entry gates are closed, and the working faces are cleared and covered with approved cover material.
5:45 pm	Operators leave work sites and cleanup equipment.
6:00 pm	Equipment and buildings are secured; alarm set, gates locked and personnel depart.

## Training Plan

Each landfill operator or spotter for Manatee County is required to participate in the County's landfill operator and spotter training plan. The County provides operator and spotter training each year through an approved training company to provide the required initial and/or continuing training. A list of each employee's training status and continuing training requirements is maintained by TREEO and is provided as Attachment K-4.

**Landfill Operations - Typical Workweek Staff Schedule**

<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>	<b>Friday</b>	<b>Saturday</b>
Robert Bennett Landfill Operations Supervisor	Robert Bennett Landfill Operations Supervisor	Robert Bennett Landfill Operations Supervisor	Robert Bennett Landfill Operations Supervisor	Robert Bennett Landfill Operations Supervisor	
Keith Jones Disposal Chief	Keith Jones Disposal Chief	Keith Jones Disposal Chief	Keith Jones Disposal Chief		
Armando Ayala Landfill Attendant	Armando Ayala Landfill Attendant	Armando Ayala Landfill Attendant	Armando Ayala Landfill Attendant	Armando Ayala Landfill Attendant	
Wiley Ballard Landfill Operator	Wiley Ballard Landfill Operator	Wiley Ballard Landfill Operator	Wiley Ballard Landfill Operator		
Darrel Seegmiller Landfill Operator	Darrel Seegmiller Landfill Operator			Darrel Seegmiller Landfill Operator	Darrel Seegmiller Landfill Operator
Clayton Mathis Landfill Operator	Clayton Mathis Landfill Operator	Clayton Mathis Landfill Operator	Clayton Mathis Landfill Operator	Clayton Mathis Landfill Operator	
Mike George Landfill Operator	Mike George Landfill Operator			Mike George Landfill Operator	Mike George Landfill Operator
Tim Harper Landfill Operator	Tim Harper Landfill Operator			Tim Harper Landfill Operator	Tim Harper Landfill Operator
		Eric Siegfried Disposal Chief	Eric Siegfried Disposal Chief	Eric Siegfried Disposal Chief	Eric Siegfried Disposal Chief
Juan Garza Landfill Operator	Juan Garza Landfill Operator		Juan Garza Landfill Operator	Juan Garza Landfill Operator	
		Don Lusby Landfill Operator	Don Lusby Landfill Operator	Don Lusby Landfill Operator	Don Lusby Landfill Operator
		Danny Newman Landfill Operator	Danny Newman Landfill Operator	Danny Newman Landfill Operator	Danny Newman Landfill Operator
Matt Stull Landfill Operator	Matt Stull Landfill Operator	Matt Stull Landfill Operator	Matt Stull Landfill Operator		
Anthony Detweiler Landfill Operations Supervisor	Anthony Detweiler Landfill Operations Supervisor	Anthony Detweiler Landfill Operations Supervisor	Anthony Detweiler Landfill Operations Supervisor	Anthony Detweiler Landfill Operations Supervisor	
Richard Jones Maintenance Chief	Richard Jones Maintenance Chief	Richard Jones Maintenance Chief	Richard Jones Maintenance Chief	Richard Jones Maintenance Chief	
Tim Clarkson Landfill Operator	Tim Clarkson Landfill Operator	Tim Clarkson Landfill Operator	Tim Clarkson Landfill Operator	Tim Clarkson Landfill Operator	
John Reed Landfill Operator	John Reed Landfill Operator	John Reed Landfill Operator	John Reed Landfill Operator	John Reed Landfill Operator	
Mark Bell Landfill Operator	Mark Bell Landfill Operator	Mark Bell Landfill Operator	Mark Bell Landfill Operator	Mark Bell Landfill Operator	
Darren Smith Landfill Operator	Darren Smith Landfill Operator	Darren Smith Landfill Operator	Darren Smith Landfill Operator	Darren Smith Landfill Operator	
Richard Beaulieu Landfill Operator	Richard Beaulieu Landfill Operator	Richard Beaulieu Landfill Operator	Richard Beaulieu Landfill Operator	Richard Beaulieu Landfill Operator	

Note: This schedule is updated as needed

**FIGURE K - 1**

## 2.0 Operations Plan

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### a. Designation of Responsible Operating and Maintenance Personnel

The Manatee County Solid Waste Management Facility (Landfill) is owned by Manatee County Government and operated under the direction of the Utilities Department, Solid Waste Division. An After Hours Contact List is provided in Table K-1, and a list of landfill positions is given below:

Solid Waste Division Manager	Landfill Superintendent *
Landfill Operation Supervisor (2) *	Household Hazardous Waste Technician
Fiscal Specialist *	
Solid Waste Maintenance Chief *	
Solid Waste Disposal Chief (2)*	Office Assistant
Landfill Operator (14)*	Landfill Attendant*

\* Trained spotters

### b. Contingency Operations for Emergencies

In the event of an emergency, the County may close the landfill during the emergency event, but will maintain open access to the landfill after the emergency condition passes or the threat level drops. For example, the landfill will be closed during a hurricane, but opened after the hurricane has passed. On-site equipment may not be sufficient to maintain the excess volume of waste generated as a result of an emergency. If so, back-up landfill equipment will be rented within 24 hours from the County's approved bid list. Additionally, back-up equipment will be provided for equipment breakdowns and down time for routine maintenance. In the case of equipment failure or emergencies, rental equipment or equipment from other County agencies will be delivered to the site within 24 hours.

Emergency conditions at the landfill may occur as a result of natural weather events (tornado, flooding, hurricane, etc.) or fire. Staff is currently equipped to mobilize to alternative sites that will be designated as such in conjunction with the Manatee County Emergency Management Department. In the event that emergency conditions interrupt operations at the landfill, a contingency plan will be developed and implemented to establish temporary operations on a case-by-case basis, dependent on conditions at alternative sites such as the closed Erie Road Landfill. Such temporary operations will accept storm debris only, and will be terminated and disposal operations resumed at Lena Road Landfill as soon as practical. If the Lena Road Landfill cannot operate during an emergency, solid waste collection trucks will be diverted to Waste Management's Okeechobee Landfill.

When an emergency condition threatens the landfill operation, the following actions will be taken:

1. Daily cover shall be applied to all exposed refuse before a major storm arrives, if possible.
2. All landfill equipment shall be parked near any natural windscreens such as earthen mounds and berms.
3. All lightweight signs and equipment shall be secured.

4. When operation resumes, work shall commence in dry areas only (up from the active face).
5. Refuse shall not be disposed of in standing water.



**Table K-1**  
**Emergency and After Hours Contacts**  
**Lena Road Landfill/Solid Waste Division**

<b>Person/Agency</b>	<b>Telephone Number</b>
<u>Fire Department</u> Battalion Captain Stacey Bailey Chief Byron Teates Manatee County Fire Rescue Administration Office: 3200 Lakewood Ranch Blvd Bradenton, FL 34211 First Responder: Station 2 803 60 <sup>th</sup> Street Court East Bradenton, FL 34202	911 or Non-Emergency 941-751-5611
<u>Ambulance</u>	911
<u>Bomb Squad</u>	911
<u>Sheriff</u>	911
<u>Public Safety Hazardous</u>	Non-Emergency 941-747-3011
<u>Public Safety Hazardous</u>	911
<u>Vacant, Solid Waste Division Manager</u>	H: _____ C: _____ Office: 941-748-5543
<u>Bryan White, Landfill Superintendent</u>	H: 941-322-2369 C: 941-812-2455
<u>Bob Bennett, Landfill Operations Supervisor</u>	H: 941-758-1741 C: 941-704-7855
<u>Anthony Detweiler, Landfill Operations Supervisor</u>	H: 941-322-8703 C: 941-812-8796
<u>Eric Siegfried, Solid Waste Disposal Chief</u>	H: 941-756-3507 C: 941-730-6554
<u>Keith Jones, Solid Waste Disposal Chief</u>	C: 941-704-6640
<u>Richard Jones, Solid Waste Maintenance Chief</u>	C: 941-322-4104
<u>Cari Walz, Household Hazardous Waste Technician</u>	H: 941-358-6820 C: 941-348-7123

<b>Person/Agency</b>	<b>Telephone Number</b>
<u>David Pickup, Manager-Special Waste</u>	C: 941-962-7087
<u>Jeanne' Detweiler, Superintendent Solid Waste Enforcement</u>	C: 941-812-4301
<u>Debora Braziel-Jones, Solid Waste Collections Supervisor</u>	H: 941-350-9399
<u>Barb Grunas, Solid Waste Collections Supervisor</u>	County Cell: 941-405-9817
<u>Department of Environmental Protection</u> Melissa Madden	Office: 813-470-5700 Direct: 813-4705795

### Fire Event

Small fires on the working face will be controlled by a water wagon, bulldozer or landfill compactor and ample water and cover material to extinguish the fire. On-site stockpiles of soil cover material are available for suppressing fires. In the event an uncontrollable fire does occur at the landfill site, the East Manatee Fire Rescue District (941-751-5611) is the responding Department and will be called immediately. The East Manatee Fire Rescue District presently maintains a fire station approximately 3.5 miles west of the facility. In the event of a fire or other emergency, the landfill operator will notify the FDEP within twenty-four (24) hours by telephone and within seven (7) days a written report will be submitted describing the origins of the emergency, actions taken, result of the actions taken, and an analysis of the success or failure of the actions.

A hot load area is provided in a location away from the working face to allow vehicles arriving at the landfill with a fire in their load to dump quickly in an area where the material can be spread out and quickly sprayed by the water wagon. All water sprayed on hot loads will be managed as leachate. The location of the hot load area will change from time to time with the changing working face locations. Hot loads will not be dumped on the working face until sufficiently cool to avoid combustion.

The landfill has accommodations for wet weather solid waste disposal for the residential or small business patrons. The location of the wet weather operations area changes depending upon progression of the fill sequence. The area is bermed and a stabilized tipping surface is provided.

The solid waste disposed of in the wet weather area is loaded into dump trucks and transported to the working face for proper disposal. The wet weather area is also cleaned at the end of each day in order to provide proper litter and vector control.

#### c. Control of Types of Materials Received

Procedures for observing waste as it is brought to the landfill and unloaded are provided in Section K.2.e. The load-checking program is described in Section K.6. The landfill may dispose of Class I solid waste as defined in 62-701.200 (13).

The following separate areas are maintained for special wastes:

1.        Lead-Acid Battery Collection Area
2.        Household Hazardous Waste Collection Site
3.        White Goods/Scrap Metal Storage Area
4.        Yard Waste Processing Area
5.        Tire Storage Area
6.        Freon Containing Staging Area
7.        E-Scrap

Special wastes such as white goods, tires, and yard wastes, require special handling and management. The locations for the Waste Tire Facility, White Goods/Scrap Metals Facility, Household Hazardous Waste Drop-off Facility and Yard Waste Facility are shown on Sheet C-2 of the Fill Sequence Plan. The County temporarily stores white goods and whole tires prior to processing. The white goods are stored in an upright position until such time as the contracted commercial recyclers remove them. Waste tires are stored in the permitted waste tire site prior to removal by the recycler. Tires mixed in loads are removed from the active face. Yard wastes are processed on site by a contracted vendor and removed from the site for re-use in land applications or waste-to-energy plants as fuel. Waste types not accepted for landfilling include all hazardous wastes, all infectious wastes, pesticides and unexpended pesticide containers, free liquids, flammable and volatile wastes, and radioactive wastes.

#### Asbestos

Asbestos waste haulers are required to notify the landfill operator in advance and provide information on the estimated volume and delivery date of friable asbestos. All incoming asbestos material is required to comply with all applicable permit conditions and to be wet down and double bagged. Asbestos will not be accepted during adverse weather conditions. Asbestos is covered with non-asbestos containing waste or soil and the location will be recorded. Additional procedures for handling asbestos are given in Section K-14.0.c Special Waste Handling - Asbestos.

#### Hazardous Waste

If hazardous wastes are located at any area of the landfill, the area must be isolated and management notified immediately. Management/Supervisory staff must notify the below listed agencies dependent on the type of material brought to the landfill.

Management/Supervisory staff must notify the following offices for handling and proper disposal of hazardous wastes:

1.        Environmental Management Department - (941) 742-5980
2.        Sheriff's Department/HazMat Section - (941) 721-2693
3.        Utilities Department Director - (941) 792-8811, Extension 5323
4.        Household Hazardous Waste Technician (941)348-7123  
(Household Hazardous Waste & E-Scrap Only)

All events regarding receipt of non-household hazardous waste material are kept at the landfill office.

A brief outline of the following materials/programs is given below.

Typical household hazardous wastes (HHW) are as follows:

paint	pesticides	used motor oil	ammunition
herbicides	aerosol cans	propane tanks	flares
gasoline	mercury containing devices	cleaning supplies	

The Household Hazardous Waste Technician (Tech) responsible for operation of the Household Hazardous Waste Collection and Storage Facility must be notified if HHW material is to be disposed. The Tech will arrange for removal and proper disposal. The maximum onsite storage and frequency for removing these recyclables from the site is as follows:

- Used oil (up to 1000 gallons) is to be removed quarterly
- Paints (up to 16,600 gallons) are to be removed quarterly
- Batteries (up to 300 batteries) are to be removed quarterly
- Light bulbs (up to 800) are to be removed at least quarterly
- Electronic devices (up to 50,000 pounds) are to be removed quarterly
- Household Hazardous Waste (up to 2,500 pounds) are to be removed quarterly

A detailed Operations Plan for the HHW facility is provided in Attachment K-2

#### White Goods

All white goods containing Freon (e.g., refrigerators, air conditioners) are segregated from the waste stream and placed upright in the staging area. Freon is removed by a certified operator, and the item marked as being Freon free. The compressors are removed and oils drained off-site for collection by a licensed hazardous waste transporter under the direction of the scrap metal processor. The white goods are then moved to the general white goods/scrap metal area for collection by the scrap metal contractor at the location indicated on Sheet C-2 of the Drawings.

All white goods, as defined in 62-701.200 (141), entering the landfill in separated loads are sent directly to the designated white goods/scrap metal storage area to be collected by a private scrap metal contractor for recycling purposes.

Up to 400 tons of scrap metal and white goods (a maximum of 600 pieces of white goods) can be stored in this area. The minimum frequency for removal is every six months.

#### Yard Waste

All incoming yard waste is directed to the designated area to be processed on site by a contracted vendor and removed from the site for re-use in land applications or waste-to-energy plants as fuel. Mulch is also used for the wet weather area during rainy season to assure access to the tipping area during rain events. The minimum frequency for processing yard trash is once every six months or when 3,000 tons (12,000 cubic yards) are accumulated. The contracted vendor then removes the

shredded material for resale to various outlets for land applications or waste-to-energy plants for fuel. The fines generated are also utilized at the landfill and mixed with soil for use as initial cover.

### Tires

Tires entering the landfill are directed to the permitted storage area. Large agricultural equipment tires and large or solid forklift tires that cannot be processed for recycling are sent to the landfill disposal area for disposal in the landfill. The contracted vendor removes the tires to a waste-to-energy facility for processing and use as a fuel additive. Removal by the vendors is conducted on an on-call basis.

### Batteries

State regulations prohibit disposal of lead-acid batteries in a landfill. The County prohibits collection of batteries by its franchised waste haulers. The Solid Waste Management Act aids in providing for proper disposal by requiring that all entities that sell batteries at retail shall accept used batteries as trade-ins for new batteries.

The County accepts batteries at no cost to its residents who bring them to the landfill facility. Upon entering the scales, the transporter is advised to place all batteries in the storage shed located in the Community Drop Off area. In addition, batteries are accepted at the HHW Facility during its collection events.

The Household Hazardous Waste Technician conducts frequent inspections of the storage shed and HHW Facility to monitor the number of batteries on site. When the on-site count reaches 300, the contracted battery vendor is called to remove them for recycling and/or proper disposal.

The contracted vendor collects the batteries on an on-call basis. When the vendor arrives on site, they are met by the Household Hazardous Waste Technician who observes the transfer of batteries from the collection shed to the vendor's vehicle. The vendor must sign a battery log before the batteries are removed from the facility. The log is also signed by the Household Hazardous Waste Technician verifying the count of batteries removed. The collection agreement is renewed or updated on an annual basis.

#### d. Weighing Incoming Waste

The Scalehouse operations are supervised and operated by the Manatee County Utilities Department, Solid Waste Section. Three scales are located at the entrance to the landfill. Two are inbound and one is outbound. The weighing of waste is required prior to entering the landfill and weight records are reported to the Department quarterly. Vehicles that enter the electronic scales are recorded on an information management system. This system records the date, type of vehicle, weight, material to be disposed, daily transaction number, and any other information available pertaining to account name or status. The driver is directed to the appropriate disposal area by the scale attendant.

#### e. Vehicle Traffic Control and Unloading

The landfill facility is surrounded by fencing and other natural barriers that limit vehicle access to the landfill. Directional signs have been placed to safely direct vehicles to the current waste disposal area. These signs have large legible letters and are cleaned, refurbished and moved as necessary. The signs are strategically placed so that the route is clear to the drivers. In addition, verbal instruction is issued by the Scalehouse attendant as required. Fencing or temporary barricades are employed as additional traffic control features. Speed limit, safety, and prohibitive practice signs are also placed as necessary in order to encourage a safe, clean operating area.

The Disposal Chiefs direct disposal operations. The landfill attendant acts as the spotter at the active face. Unloading is permitted only at the designated tipping area next to the working face. At the fill areas, temporary signs and at least one spotter direct vehicles to the proper tipping areas. The spotter directs those persons requiring additional assistance. Haulers are responsible for unloading their own vehicles. Wastes requiring special handling are coordinated with and unloaded under the direct supervision of landfill personnel. Spotters shall be trained and stationed per 62-701.320 (15) (d) Spotter location. The spotter shall be stationed where they can inspect each shipment of waste for unauthorized waste. If spotters are located on heavy equipment spreading the waste at the working face, the heavy equipment operator shall be trained as a spotter and as a heavy equipment operator. When unauthorized waste is discovered, the operator must either move the unauthorized waste away from the active area for later removal and proper management, or must stop operation and notify another person on the ground or on other equipment who will come to the active area and remove the unauthorized waste before operations are resumed. Also, each load of waste must be visually inspected for unauthorized waste prior to being compacted. The spotter may move about the working face on foot or on a vehicle as needed to properly direct the positioning of vehicles for unloading and to observe waste as it is unloaded.

Any suspicious loads or vehicles are stopped by the Scalehouse staff for inspection. The County also has a random load inspection program in place as discussed in Section K.6. Spot checking also occurs at the active face. If the spotter detects prohibited, special or hazardous waste while the hauler is still present, the waste is reloaded into the vehicle and is removed from the site. If the hauler cannot be identified, it is the County's responsibility to remove the waste from the landfill for proper disposal.

f. Method and Sequence of Filling Waste

The Fill Sequence Plan from 2016 to 2036 is bound separately and included in Appendix B with the permit application.

g. Waste Compaction and Application of Cover

Waste is typically dumped at the toe of the active face and is spread over the face in a maximum two-foot lift with dozers. Upon completion of waste spreading, compactors typically roll the waste with six passes prior to spreading of additional waste. To achieve the optimum compaction, while minimizing initial cover usage, the active face slopes are maintained at approximately 5:1 (H:V). The flatter the slope, the greater is the compaction rate and greater amount of soil to cover the

waste. The 5:1 face slope provides a good compromise between compaction and soil usage. The compaction with the given equipment and working conditions is approximately 1,200 lb/cy.

Cover material for daily operations of the landfill is obtained from the designated stockpile area. The location for the Cover Material Stockpile is shown on Sheet C-2 of the Fill Sequence Plan drawings. The stockpile is located in the footprint of the Stage II Landfill, as shown on the Fill Sequence Plans located in Appendix B to this permit application. The landfill currently has sufficient cover material available for one year. The County has an open purchase order to buy cover soil as needed to supplement the on-site stockpiles. To minimize soil usage, Manatee County has purchased mechanically operated tarp-type alternate daily cover system (ADC). Tarps are laid across the working face and taken up the next day. Tarps are loaded to minimize the effects of wind uplift. If waste is not deposited on the working face within 24 hours, then soil is used as the cover material. The areas of the working face not covered by the tarps are covered with soil.

- h.        Operations of Gas, Leachate, and Storm Water Controls - Leachate management is described in K-8.0, gas monitoring in K-9.0 and storm water controls in K-10.0
- i.        Water Quality Monitoring - See Part L of this permit application.
- j.        Maintaining and Cleaning the Leachate Collection System – The entire LCRS was jetted and pressure cleaned in June and July 2015. The report on the pressure cleaning is provided in Appendix A to the permit application.

### 3.0 Landfill Records and Record Locations

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The operating records consist of all records, reports, analytical results, demonstrations, and notifications required by Chapter 62-701, F.A.C., all permits and permit modifications, and training records. The operating records are maintained within the filing system at the landfill facility.

Operating records denoting events are maintained by the landfill staff in accordance with the Operational Permit. Some examples of daily operations of the landfill are:

- Operation and maintenance of the facility
- Special wastes monitoring
- Manpower and equipment usage
- Storm water and leachate issues
- Compliance with permits, applicable rules, regulations and laws
- Fill sequence plan adherence



## 4.0 Waste Records

Monthly waste records are kept on site and submitted to the FDEP quarterly. A sample report is included as Figure K-2.

**FIGURE K-2**  
**MANATEE COUNTY CLASS I LANDFILL**  
**WASTE RECORDS**  
**YEAR 2016**

TOTAL WASTE RECEIVED AND WASTE TYPE (SEE NOTES BELOW) *	SOLID WASTE RECEIVED MONTHLY REPORTED IN TONS												TOTAL FOR YEAR
	FIRST QUARTER			SECOND QUARTER			THIRD QUARTER			FOURTH QUARTER			
	January	February	March	April	May	June	July	August	September	October	November	December	
TOTAL WASTE RECEIVED													
Household Waste	18.7	11.7	30.3	10.9	7.1	27.7							
Commercial Waste	12748.40	11254.2	12694.7	12580.78	12188	11889.6							
Ash Residue	0	0	0	0	0	0							
Incinerator by-pass Waste	0	0	0	0	0	0							
Construction & Demolition Debris	818	821.6	1243.6	988.2	724.1	984.7							
Treated Biomedical Waste	0	0	0	0	0	0							
Agricultural Waste	64.8	140	50.8	216.1	32.9	487.6							
Industrial Waste	0	0	0	0	0	0							
Yard Trash	2241.5	2228.9	3278.5	2824.2	2485	2484.8							
Sewage Sludge	228	131.2	176.7	880.8	588.1	430.7							
Industrial Sludge	0	0	0	0	0	0							

The Landfill Operator shall:

- 1) Weigh all solid waste as it is received;
- 2) Record, in tons per day, the amount of solid waste received;
- 3) Estimate the amount received by waste type as listed in this table; and,
- 4) Compile the reports monthly, and send copies to the Department quarterly.
- 5) First line for each waste type represents waste from Manatee County.
- 6) Waste from other counties shall be identified by County of origin and amounts received on the lines below each waste type.

## 5.0 Access Controls

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Access to the landfill is controlled by a six-foot high chain link fence along the west side of the landfill and a barbed-wire and/or field fence around the remainder of the site. The access gates are locked at the close of each business day. Signs indicating hours of operation, operating and permitting authorities, and directions for persons delivering waste are posted at the entrance. Additional signs are used along the site access roads and at the working face to direct traffic to the proper disposal areas. An attendant will be on duty during all periods of public access.

## 6.0 Load Checks

---

The County has a random load inspection program in accordance with F.A.C. Chapter 62.701 and inspects at least three loads per week. Drivers with loads selected for random inspection are instructed to dump their loads at a designated location near the working face but segregated from other waste. The selected load is inspected to determine if the load contains any unauthorized waste. Spot-checking also occurs at the active face. The Load Inspection Form is included as Figure K-3.

If the spotter detects a load of unauthorized waste while the hauler is still present, the waste is reloaded into the vehicle and is removed from the site. If the hauler has left the site, attempts will be made to identify the generator, hauler, or other party responsible for shipping the waste. Identified responsible parties will be contacted and asked to remove the unauthorized waste. If the generator, hauler, or other party responsible for shipping the waste cannot be identified, or if they will not remove the waste, the County will remove the waste from the landfill for proper disposal.

If any regulated hazardous wastes are identified by random load inspection, or are otherwise discovered to be improperly deposited at Lena Road Landfill, the landfill operator shall notify the FDEP, the person responsible for shipping the wastes to the landfill and the generator of the wastes, if known. The area where the wastes are deposited shall be immediately cordoned off from public access. If the generator or hauler cannot be identified, the landfill operator shall assure the cleanup, transportation, and disposal of the waste at a permitted hazardous waste management facility.

A small quantity of unauthorized waste which must be stored on-site while awaiting removal for disposal will be stored in the household hazardous waste collection area until it can be removed by contractor for proper disposal. Waste quantities too large to store in the household hazardous waste collection area, will be isolated at the landfill face with temporary berms constructed around the waste to ensure containment of any surface runoff. The area will be properly marked with signs, and temporary fencing will be used to prevent unauthorized access to the material until it can be shipped off-site for proper disposal.

Sources found or suspected to be previously responsible for shipping regulated hazardous waste will be informed of landfill requirements and referred to FDEP for hazardous waste information. Subsequent shipments from such sources will be scrutinized for unauthorized or hazardous waste. Inspection results, information, and observations resulting from each random inspection will be recorded and retained at the landfill for at least three years.

Supervisors, landfill operators, and spotters are trained to identify unauthorized wastes or potential sources of regulated hazardous wastes. This training emphasizes familiarity with containers and labels typically used for hazardous wastes and hazardous materials. Controlling types of waste received is discussed in Section K.2.e.

## LOAD INSPECTION FORM

DATE: \_\_\_\_\_ TIME: \_\_\_\_\_ INSPECTOR: \_\_\_\_\_

LOCATION: \_\_\_\_\_

DRIVER NAME: \_\_\_\_\_

COMPANY NAME: \_\_\_\_\_ DECAL #: \_\_\_\_\_

TAG #: \_\_\_\_\_ TRUCK DESCRIPTION: \_\_\_\_\_

ORIGIN OF WASTE: \_\_\_\_\_

WASTE COMPOSITION: \_\_\_\_\_

NOTE QUANTITY OF THE FOLLOWING, IF APPLICABLE:

FLUORESCENT LAMPS (10 or more) \_\_\_\_\_

MERCURY CONTAINING DEVICES \_\_\_\_\_  
Thermostats, Thermometers, Bilge Pumps, Manometers, Etc.

BIO-HAZARD MATERIALS FOUND \_\_\_\_\_

OTHER HAZARDOUS MATERIALS FOUND \_\_\_\_\_

TIRES, LEAD ACID BATTERIES \_\_\_\_\_

OIL BASED PAINT \_\_\_\_\_

IF YES, EXPLAIN CIRCUMSTANCES OF COLLECTION: \_\_\_\_\_

IF YES, MANAGEMENT INFORMED: Yes \_\_\_\_\_ No \_\_\_\_\_

NAME AND TITLE: \_\_\_\_\_

## 7.0 Waste Compaction

---

### a. Waste Layer Thickness

Waste is typically dumped at the toe of the working face and is spread over the face in a maximum of two-foot lifts prior to compaction. This procedure continues throughout the day for a typical lift thickness of no more than 10-feet.

### b. First Waste Layer

The area to be filled has been completely covered by waste during previous permit periods. The first layer of waste placed above the leachate collection system in Stage II will be a minimum of four feet in compacted thickness and shall consist of selected wastes containing no large rigid objects that may damage the leachate collection system. Special care shall be exercised when filling around pump stations to prevent damage.

### c. Slopes and Lift Depths

The exterior landfill side slope is constructed at 4:1 (H:V) or slightly steeper because settlement of the side slope causes a lesser slope to result in a final slope of no more than 4:1. Any temporary slopes for such structures as storm water diversion dikes, roads, excavations, etc. are constructed with slopes no steeper than 3:1. The lift depths shall be 10-feet or less. The typical minimum top slopes to promote drainage are generally one percent within the bermed working face, and two percent on the intermediate cover areas.

### d. Working Face

The active face width is no greater than necessary to accommodate the peak number of disposal vehicles at one time. The wider the active face, the more cover soil is used. The County uses an active face of 150 feet in width. The working area of the active face has a slope of approximately 5 horizontal to 1 vertical. The objective for the dimensions of the active face is to maximize the volume to face surface ratio.

### e. Initial Cover Controls

Materials used as initial cover include street sweepings, ditch cleanings, crushed glass, and/or a tarp as an alternative daily cover (ADC), soil, soil with up to 25% fines from the yard processing area, and recovered screen material (RSM) from FDEP permitted facilities. The tarp, when used, covers the working face with a weighted tarp. Currently, 100' x 40' tarps are used to cover the working face. Initial cover is applied daily at a minimum thickness of six inches. Soil with up to 25% fines (by volume) from yard trash processing, may be used for initial cover.

### f. Initial Cover Applications

The tarp alternative daily cover system is the primary method of daily cover. Soil is used to supplement ADC and when conditions prohibit use of ADC. For those times when conditions prohibit the use of ADC, initial cover will be stockpiled near the active face for use at the end of each day. Dozers used for spreading waste will spread cover soil, when used or authorized equipment for tarp cover application will be utilized to cover the exposed refuse when ADC is used.

g. Intermediate Cover

An additional 12 inches of compacted cover soil (intermediate cover) is placed over six inches of initial cover, within seven days of cell completion, on areas that are not scheduled to receive wastes within 180 days. The top of the intermediate soil cover is graded at a minimum of two percent. These areas have sod to reduce erosion. Prior to placement of additional wastes in these areas, the intermediate cover is removed and stockpiled adjacent to the active face for use as initial cover.

h. Final Cover Timing

Final cover is placed after the landfill is closed.

i. Scavenging

Scavenging is prohibited.

j. Litter Policing

Litter fences are installed near the active face to capture wind-blown litter. Manatee County contracts a temporary labor employer to police the landfill property daily to ensure that litter outside the working area is picked up within 24 hours. Litter fences are also installed along the top of the banks, parallel with interior storm water ditches to minimize litter from entering the storm water management system.

k. Erosion Control

Erosion is controlled with sod and terraces. Manatee County has implemented an aggressive sod plan to protect intermediately covered side slopes from erosion. Temporary piping is used to remove runoff from the sod covered terraces. This temporary piping drains collected runoff for discharge into the perimeter storm water ditch system.

The landfill is inspected daily for signs of erosion and exposed solid waste. Erosion control measures are employed to correct any erosion which exposes waste or causes malfunction of the storm water management system. Such measures are implemented within three days of occurrence. Typically this requires replacing the eroded cover soil with clean cover soil, and covering the soil with sod, or removing debris from the storm water inlets, pipes and outlet

structures. If the erosion cannot be corrected within seven days of occurrence, the landfill operator shall notify the Department and propose a correction schedule.

## 8.0 Leachate Management

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### a. Leachate Level Monitoring

#### Leachate Collection and Removal System Overview

##### Stage I System

The Stage I Leachate Collection and Removal System (LCRS) as shown on Figure K-4 is a perimeter underdrain around Stage I. The underdrain is approximately 10 feet inside the perimeter slurry wall and approximately 12 feet below grade. The underdrain is an 8-inch, perforated pipe surrounded by aggregate. The pipe and aggregate are wrapped in a geotextile. Manholes and cleanouts are constructed to provide access for cleaning and repairs.

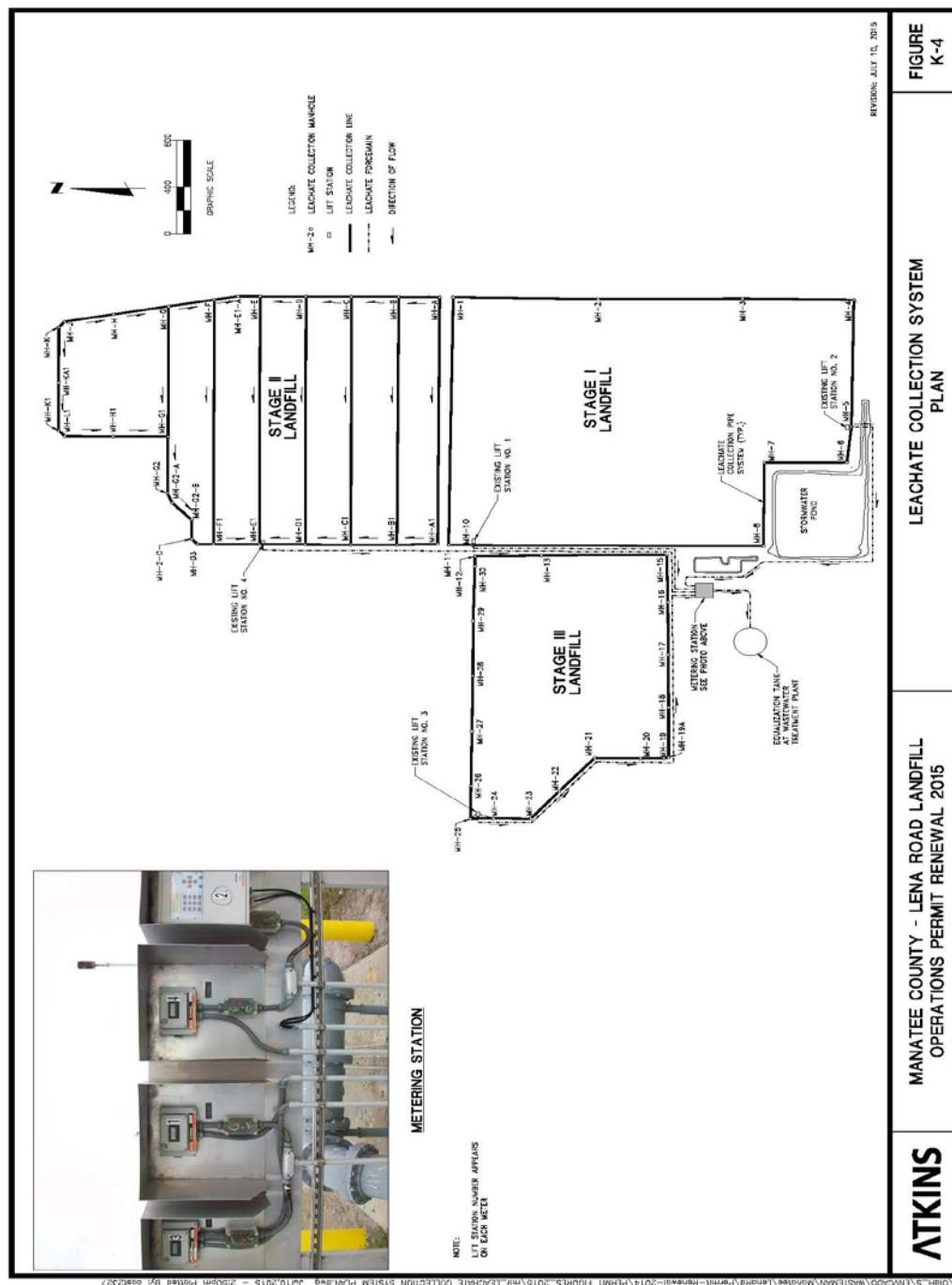
The slurry wall and underlying clay-confining unit is the containment/barrier system designed to prevent leachate movement to the outside surficial aquifer. The slurry wall and LCRS is the FDEP-approved method designed and constructed to minimize impacts, due to landfill operations, to the surrounding environment. The slurry wall is keyed into the underlying natural clay unit. The depth of the slurry wall varies, depending on depth to the clay unit.

Two lift stations are used to pump collected leachate to the wastewater treatment plant (WWTP). Lift Station No. 1 is located in the northwest corner of Stage I. Lift Station No. 2 is located at the southeast corner. Collected leachate enters the underdrain system and gravity flows back to either lift station. Both lift stations operate in the similar manner. Two submersible pumps pump collected leachate from the lift station. The first pump is activated when the low-level float senses leachate entering the lift station. The pump will operate until the float sensor deactivates. If leachate enters the lift station at a faster rate than the first pump can draw it down, the high-level float will activate the second pump to turn on. Upon deactivation of the high-level float, the second pump will shut off. Lift stations can operate in the hand or automatic setting. Both lift stations are set to operate in the automatic mode. Both pumps are 10HP 230/60 1735 RPM. From the lift stations, leachate is pumped through a 6-inch pipe to the adjacent WWTP storage tank. The flow in each forcemain will be individually metered. After the meters, the individual forcemains will be manifolded into a single 12-inch forcemain and connected to the waste treatment plant piping.

##### Stage II

The Stage II LCRS has a perimeter leachate collection trench and an underdrain to collect leachate which flows to Lift Station (Pump Station) 34. The location for the leachate collection system and pump station is shown on Figure K-4 and on the Fill Sequence Plan drawings. The slurry wall is keyed into the underlying clay unit to prevent movement of leachate to the outside surficial aquifer. Unlike Stages I and III, Stage II has collection laterals which run the entire





width of Stage II, spaced on 200 foot centers. However, until refuse is buried in Stage II, no leachate is produced so the inward gradient requirement around Stage II is not required or maintained. Ground water and rain water collected in the underdrain system is pumped into the Stage II perimeter storm water ditch. When solid waste is placed in Stage II, the pump station will pump the leachate to the wastewater treatment plant

### Stage III

The Stage III LCRS is similar in design to Stage I and Stage II LCRS. The underdrain runs along the north, south, east, and west sides of Stage III, approximately 10 feet inside the slurry wall. The slurry wall ties into the west side of the Stage I slurry wall. The alignment of the slurry wall defines the footprint for Stage III. Leachate entering the underdrain gravity flows back to the lift station. One lift station, Lift Station 3, is located in the northwest corner of Stage III. Collected leachate is pumped to the WWTP. The lift station is similar in design and operation to the lift stations described for Stage I. Storm water runoff from Stage III drains from the surface through a sand trench into an underdrain. This runoff adds significantly to the total volume of leachate produced from Stage III. When above grade filling begins, top slopes will be graded to drain storm water to the perimeter storm water ditches.

### Operational Performance Objectives

#### Objectives

It is the County's intent to maintain an inward gradient by collection and removal of leachate, with subsequent discharge to the WWTP. Staff will evaluate the following conditions in an effort to maintain water levels lower inside the slurry wall compared to levels outside the slurry wall, or to recover the inward gradient within thirty days.

- Water Levels
- WWTP Availability
- Pumping Rates
- Seasonal Variations
- Unexpected or Scheduled Downtime

### Compliance Monitoring and Evaluation

#### Monitoring Reports

Figure K-5A is the typical Water Balance Report format used for the Lena Road Landfill. This report is used to quantify the volume of leachate generated on a daily and per month basis from Stages I and III and for when the Stage II Landfill becomes the active landfill.

Additional information includes:

- The volume of leachate pumped to the WWTP
- The volume of leachate pumped from Stages I and III
- Rainfall in gallons and inches

The content and format of the report are approved by the FDEP. Figure K-6A (K-6A will be used when the Stage II Landfill is active) is a typical Monthly Leachate Summary Report. This report is used to summarize the following information:

- Total leachate
- Total rainfall
- Total leachate treated by the WWTP

## 8.0 Leachate Management

Figure K-5A

MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY  
LENA ROAD LANDFILL  
MONTHLY WATER BALANCE REPORT  
APRIL, 2010

A	B	C	D	E	F	G	H	
DATE	LEACHATE STAGE I Lift Station 1 (gallons)	LEACHATE STAGE I Lift Station 2 (gallons)	LEACHATE STAGE I TOTAL (gallons)	LEACHATE STAGE II TOTAL (gallons)	LEACHATE STAGE III TOTAL (gallons)	TOTAL LEACHATE PUMPED (gallons)	RAINFALL (inches)	RAINFALL (gallons)
01-Apr-10								
02-Apr-10								
03-Apr-10								
04-Apr-10								
05-Apr-10								
06-Apr-10								
07-Apr-10								
08-Apr-10								
09-Apr-10								
10-Apr-10								
11-Apr-10								
12-Apr-10								
13-Apr-10								
14-Apr-10								
15-Apr-10								
16-Apr-10								
17-Apr-10								
18-Apr-10								
19-Apr-10								
20-Apr-10								
21-Apr-10								
22-Apr-10								
23-Apr-10								
24-Apr-10								
25-Apr-10								
26-Apr-10								
27-Apr-10								
28-Apr-10								
29-Apr-10								
30-Apr-10								
01-May-10								
TOTAL	0	0	0		0	0	0.00	0
Leachate Pumped as Percentage of Rainfall			#DIV/0!		#DIV/0!			

**Column Notes:**

A - Date of reading.  
B - Leachate pumped (gallons) from Stage I by lift station 1.  
C - Leachate pumped (gallons) from Stage I by lift station 2.  
D - Total Stage I leachate pumpage (B+C).  
E - Leachate pumped (gallons) from Stage III.  
F - Total leachate pumped to WWTP storage tank (D+E).  
G - Rainfall (inches) recorded on this date.  
H - Rainfall (gallons) calculated based on open area (G x Area x 27,156 gal/acre-in).

	Stage I (acres)	Stage III (acres)	TOTAL (acres)
Initial Cover	--	66.0	66.0
Intermediate Cover	102.0	--	102.0
Closed	30.0	--	30.0
<b>TOTAL</b>	<b>132.0</b>	<b>66.0</b>	<b>198.0</b>
<b>Open Area</b>	<b>102.0</b>	<b>66.0</b>	<b>168.0</b>

**Comments**

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"0" = no data recorded

Figure K-5A.xls jlm/PBS

FIGURE K-6A

**MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY  
LENA ROAD LANDFILL  
MONTHLY LEACHATE TRACKING SUMMARY -- \_\_\_\_\_ Year**

	B		C	D	E	F	G	H
MONTH	STAGE I LEACHATE (gallons)	STAGE II LEACHATE (gallons)	STAGE III LEACHATE (gallons)	TOTAL LEACHATE (gallons)	RAINFALL (inches)	RAINFALL (gallons)	STAGE I LEACHATE/ RAINFALL (%)	STAGE III LEACHATE/ RAINFALL (%)
JANUARY								
FEBRUARY								
MARCH								
APRIL								
MAY								
JUNE								
JULY								
AUGUST								
SEPTEMBER								
OCTOBER								
NOVEMBER								
DECEMBER								
TOTAL	0		0	0	0.00	0	#DIV/0!	#DIV/0!

Notes:

1. (B) Total leachate pumped from Stage I.
2. (C) Total leachate pumped from Stage III.
3. (D) Total leachate (Column B+C) pumped to the WWTP storage tank.
4. (E) Total rainfall in inches.
5. (F) Total rainfall in gallons (Stage I and III Open Area of 168-acres x Rainfall)
6. (G) Stage I leachate pumped as a percentage of rainfall.
7. (H) Stage III leachate pumped as a percentage of rainfall.

**Landfill Stage Land Areas**

	Stage I (acres)	Stage III (acres)	TOTAL (acres)
Initial Cover	--	66.0	66.0
Intermediate Cov.	102.0	--	102.0
Closed	30.0	--	30.0
TOTAL	132.0	66.0	198.0
Open Area	102.0	66.0	168.0

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Figure K-6A.xls:jlm/PBS

Figure K-7A (K-7A will be used when the Stage II Landfill is active.) is a typical Ground Water Gradient Monitoring Report. Seventeen ground water monitoring wells are installed around the perimeter of the landfill, outside the slurry wall to monitor the shallow aquifer. Seventeen piezometers are installed around the perimeter of the landfill inside the slurry wall to measure depth to ground water of the shallow aquifer only. No ground water samples are collected from the piezometers. This report presents ground water elevations recorded at selected monitoring wells and compares them to the ground water elevations recorded at the piezometers. These locations are shown on Figure 1 in Attachment L-1, the Water Quality Monitoring Plan. The monitoring wells are located outside the slurry wall. The piezometers are located inside the slurry wall. An inward gradient is maintained when water elevations outside the slurry wall are higher than elevations recorded inside the slurry wall.

b. Operation and Maintenance of Leachate Collection System

Quantities from Lift Station Nos. 1, 2 and 3 are recorded and submitted to FDEP on a monthly basis using the forms on Figures K-5A and K-6A. When the Stage II Landfill becomes active, Pump Station 4 will be included. Flow rates are checked and confirmed semi-annually and kept at the Lena Road Landfill. If a failure in the underdrain system is suspected, the system is videoed. Every five years, or if a problem is suspected, the underdrain is cleaned by hydro jetting. Manholes are visually inspected on a monthly basis. When necessary, the manholes are cleaned to promote drainage towards the lift station.

c. Leachate as Hazardous Waste

Based on years of analysis, leachate from the landfill is not a hazardous waste. If at any time the leachate is determined to be hazardous, it will be managed in accordance with Rule 62-730, F.A.C. If the leachate analysis indicates a contaminate listed in 40 CFR Part 261.24 exceeds the regulatory level, a monthly sampling of leachate will begin and FDEP notified. If in any three consecutive months no listed contaminant is found to exceed the regulatory limit, the monthly sampling will be discontinued and the routine sampling schedule implemented.

d. Off-Site Discharge Agreements

All collected leachate is pumped to an equalization tank at the WWTP for treatment and disposal. Due to the common ownership of the landfill and the WWTP, the Utilities Department Director has issued a letter stating leachate will be accepted at this facility or at another off-site treatment plant as required.

e. Leachate Management Contingency Plan

In the event of short duration system failure, the landfill can store leachate. The County intends to maintain a one-foot inward gradient across the slurry wall so leachate would have to rise a foot before the facility was out of compliance with the permit condition to maintain an inward

FIGURE K-7A

Manatee County Lena Road Landfill

## Monthly Groundwater Gradient Report

Month and Year:

Piezometers Inside Slurry Wall			Gradient Flow	Groundwater Monitoring Wells Outside Slurry Wall		
Piezometer	Riser Elevation	Leachate Elevation		Monitoring Well	Riser Elevation	Groundwater Elevation
P-3	40.36	26.46	inward	GW-3	39.40	34.10
P-4	40.78	22.08	inward	GW-4	40.53	32.82
P-5	40.73	20.82	inward	GW-5	39.90	32.08
P-6	40.74	19.78	inward	GW-6	38.95	31.30
P-7	40.60	18.82	inward	GW-7	39.49	29.38
P-8	40.21	18.59	inward	GW-8	39.75	28.45
P-9	39.97	19.36	inward	GW-9	39.65	28.95
P-10	39.86	19.25	inward	GW-10	38.34	29.25
P-11	40.52	22.39	inward	GW-11	38.26	30.29
P-12	43.28	29.37	inward	GW-12	42.09	31.64
P-13	44.78	30.35	inward	GW-13	44.79	32.46
P-14	45.09	29.79	inward	GW-14	39.63	33.86
P-15	45.57	30.89	inward	GW-15	42.33	35.17
P-16	44.67	24.67	inward	GW-16	44.41	41.41
P-17	44.28	29.60	inward	GW-17	42.19	35.03
P-18				GW-18		
P-19				GW-19		
P-20				GW-20		
P-21				GW-21		
P-22				GW-22		
P-23				GW-23		
P-24				GW-24		
P-25				GW-25		
P-26				GW-26		
P-27				GW-27		
P-28				GW-28		

Comments:

Date Data Collected:

Form Revised December 6, 2004

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Fig K-7A.xls/jm#BS

gradient. In the event of an extended power outage at the landfill (i.e., more than 7 days), the County will rent a portable generator to provide power to the lift stations.

Any treatment plant operational or power problems will be addressed by the treatment plant as a part of its permitting procedures. Generators are available to provide emergency power at the treatment plant.

Leachate will be trucked to the County's Southwest Treatment Plant or North Wastewater Treatment Plant, if necessary.

f. Leachate Generation Recording

Leachate generation records are reported on the forms in Figures K-6A and K-7A.

g. Precipitation/Leachate Comparison

Precipitation is compared to leachate collected using the form in Figures K-6A and K-7A.

h. Procedures for Water Pressure Cleaning or Video Inspecting Leachate Collection System

Every five years, or if a problem is suspected, the leachate collection pipes are pressure cleaned. Video inspection is not used unless there is a suspected problem or blockage.



## 9.0 Gas Monitoring

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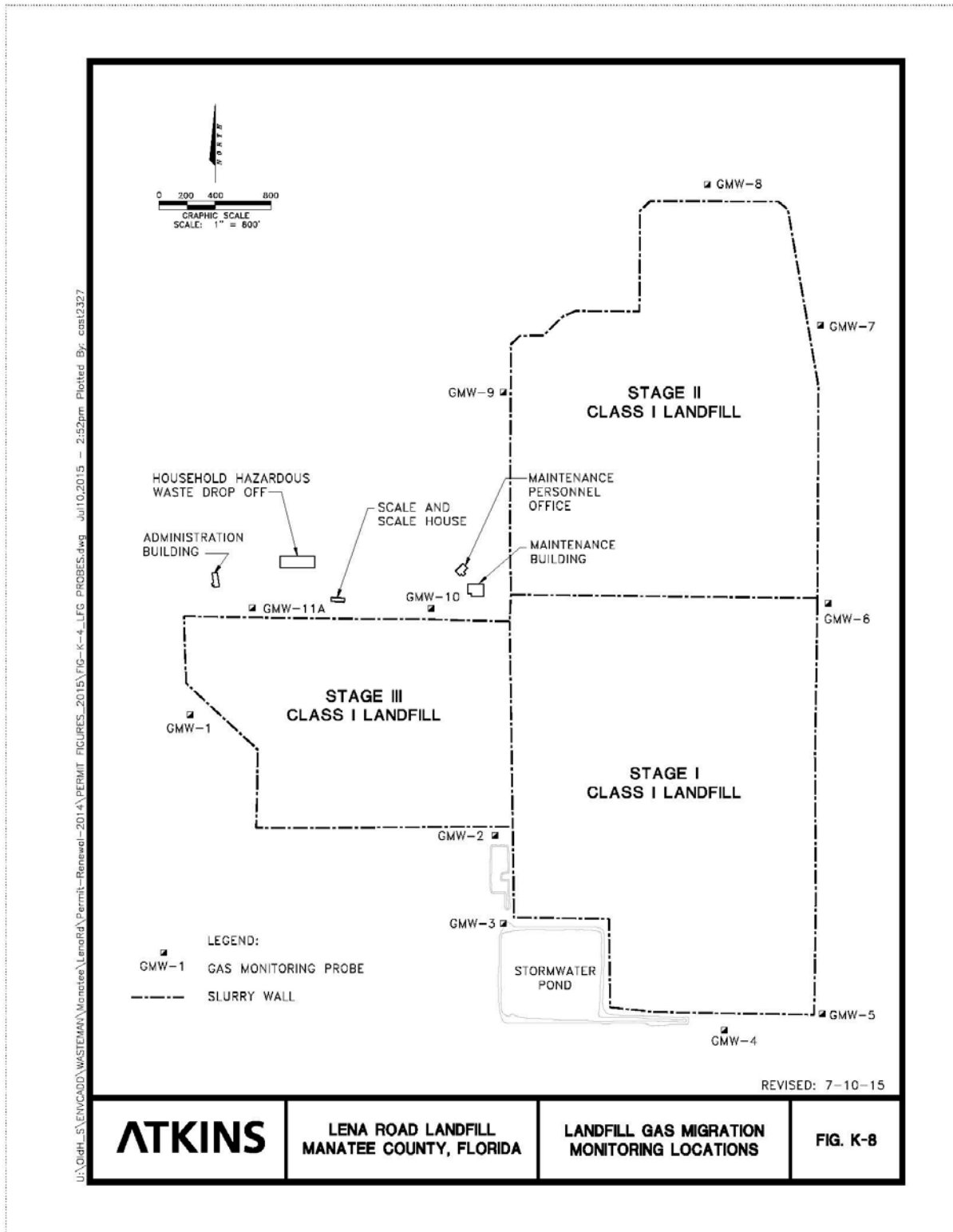
Gas monitoring is performed on a monthly and quarterly basis by a qualified solid waste engineer or consultant. The gas monitoring at the site is divided into three separate tasks: Quarterly monitoring of the gas well and points; quarterly monitoring of surface emissions on the closed portions of the landfill; and monthly monitoring of the landfill gas extraction system. Each task will be discussed in detail below.

### a. Gas Well and Point Monitoring

On a quarterly basis, the solid waste engineer monitors landfill gas emissions at eleven gas wells located on the site as shown on Figure K-8. The gas monitoring wells are located along the perimeter of the landfill, and are constructed of 1¼ to 2-inch diameter PVC, encased in locking aluminum stand-boxes.

The monitoring is performed using the CES Landtec Gas Extraction Monitor Model 2000 (GEM 2000). According to Chapter 62-701.530(1) of the Florida Administrative Code, methane gas levels are required to be less than the maximum level of 25% of the Lower Explosive Limit (LEL) for the interior of structures (gas points) and less than 100% of the LEL for points at or beyond the landfill property boundary.

The gas well samples are collected by removing the PVC cap of the well and inserting the intake tube of the GEM 2000 into the casing, or attaching it to the sampling port on the top of the well cap. The sample points are monitored by walking the area of interest while exposing the GEM 2000 intake tube to the atmosphere. The monitoring event typically takes one workday. The results are reported using a typical form as shown on Figure K-9.



**MANATEE COUNTY LENA ROAD LANDFILL**  
**GAS MONITORING REPORT**  
**3<sup>RD</sup> QUARTER 2009**  
**JULY 2009 – SEPTEMBER 2009**  
**METHANE GAS READINGS**

**Date of Readings:** \_\_\_\_\_

Gas Well	Reading % LEL	NOTES
Well 1	0.0	
Well 2	0.0	
Well 3	0.0	
Well 4	0.0	
Well 5	0.0	
Well 6	0.0	
Well 7	0.0	
Well 8	0.0	
Well 9A	0.0	
Well 10	0.0	
Well 11A	0.0	

**FIGURE K-9**

**b. Surface Emission Monitoring**

The solid waste engineer performs surface-emission monitoring event on a quarterly basis on the Stage I and III Landfills in compliance with Section 60.753 of the Title V Permit No. 0810055-004-AV. Quarterly monitoring will begin at the Stage II Landfill five years after solid waste is placed in the Stage II Landfill. During this event, the solid waste engineer performs surface gas sampling with Thermo Environmental Instruments Model 680 Hydrocarbon Vapormeter (HVM). The monitoring path followed the same grid system as in previous events as approved for the permit. The sensor of the HVM was maintained at approximately 5 centimeters above the Landfill surface during monitoring. The perimeter of the Landfill was checked. All landfill penetrations for gas wells, pipes, etc., areas with distressed vegetation and cracks in the soil cover were also checked for landfill gas emissions.

Locations at which a methane concentration of 500 parts per million (ppm) or greater as observed will be noted on a site map and the appropriate changes to the landfill gas system will be made. The location of interest should be rechecked within a week to verify that the problem has been rectified. This event takes approximately one day to perform. However, depending on the number of locations (if any) that are observed to be in violation, additional monitoring time may be necessary.

**c. Landfill Gas Extraction System Monitoring**

The solid waste engineer performs monthly monitoring of the landfill gas extraction system. There are currently 231 wells and 15 sample points in the system. The sample points include locations in the extraction system pipes leading into the flare and a point at the flare itself. The gas composition, static pressure, differential pressure, flow and temperatures at each of the well locations and points are recorded using the GEM 2000. The flare temperature and total gas flow at the flare reported by the flare computer are recorded by hand. In order to minimize the amount of air pulled into the system, it may be necessary to close some of the extraction wells. As a result, not all of the wells will be sampled on a monthly basis.

The data recorded using the GEM 2000 is reported in tabular form on a monthly basis. A sample data table is shown on Figure K-10. The table indicates which wells or point locations that are not in compliance with the landfill's Title V Air Operation Permit. Compliance at a gas well or point is achieved when the concentration of oxygen is less than 5%, the concentration of nitrogen or balance gas is less than 20%, the static pressure is less than 0 inches of water (i.e., the well is under vacuum) and the temperature is less than 131° F. Shaded boxes on the data table indicate out-of-compliance parameters.

FIGURE K-10

MANATEE COUNTY -- LENA ROAD LANDFILL								
GAS EXTRACTION WELL -- MONTHLY MONITORING								
FEBRUARY 2007								
Well ID	Date and Time	CH <sub>4</sub> (%)	O <sub>2</sub> (%)	Bal (%)	Temp. (° F)	Static Pressure (inches H <sub>2</sub> O)	Corrective Action	Comments / Damage
1								Well Closed.
2								Well Closed.
3								Well Closed.
4								Well Closed.
5								Well Closed.
6								Well Closed.
7								Well Closed.
8								Well Closed.
9								Well Closed.
10								Well Closed.
11								Well Closed.
12								Well Closed.
13								Well Closed.
14								Well Closed.
15								Well Closed.
16								Well Closed.
17								Well Closed.
18								Well Closed.
19								Well Closed.
20								Well Closed.
21								Well Closed.
22								Well Closed.
23								Well Closed.
24								Well Closed.
25								Well Closed.
26								Well Closed.
27								Well Closed.
28								Well Closed.
29								Well Closed.
30								Well Closed.
31								Well Closed.
32								Well Closed.
33	2/17/2007 8:34	51.6	0.3	10.5	86	-3.5	50	
34	2/17/2007 8:38	53.1	0.1	8.5	86	-14	50	
35	2/17/2007 8:43	52.5	0.8	7.6	48	-17	100	
37	2/17/2007 8:47	41.8	5.2	25.3	78	-1.9	50	
38	2/17/2007 8:51	50.2	0.4	12.5	60	-7.1	50	
39	2/17/2007 8:55	53.6	0.8	8.2	80	-9.3	50	
40	2/17/2007 8:58	54.3	0.9	9.5	82	-7.3	35	
41								Well Closed.
42								Well Closed.
43	2/17/2007 9:02	56.7	0.4	6.9	88	-4.4	50	
44								Well Closed.
45								Well Closed.
46	2/17/2007 9:06	56	0	7.5	92	-16.5	100	
47								Well Closed.
48	2/17/2007 9:18	55.8	0.8	2.6	108	-13.8	50	
49	2/17/2007 11:29	55.6	1.1	2.4	98	-13.9	100	
50	2/17/2007 11:33	56.4	0.7	0.8	93	-14.6	100	
51	2/17/2007 11:36	55.5	0.7	1.2	102	-14.1	50	
52	2/17/2007 11:39	55.4	0.6	1.4	110	-14.5	100	
53	2/17/2007 11:44	57.1	0.7	1.2	72	3	35	
54	2/17/2007 11:47	56.3	0.5	0.6	97	-3.9	50	
55	2/17/2007 12:02	56.4	0.6	0.2	90	-13.7	100	
56	2/17/2007 12:05	56.1	0.6	0.2	112	-4.2	50	
57	2/17/2007 12:11	55.5	0.9	0.1	104	-4.5	50	
58	2/17/2007 12:18	56.4	0.9	0.5	72	-9.6	50	
59	2/17/2007 12:27	55.2	0.7	0.3	78	-11.3	100	
60	2/17/2007 12:31	55.7	0.8	0.5	77	-14.6	50	
61								Well Closed.
62								Well Closed.
63								Well Closed.
64	2/17/2007 12:35	57.3	0.6	1.4	53	-14.8	100	
65								Well Closed.
66	2/17/2007 12:25	53.5	2.9	4.8	96	-12.3	50	
67	2/17/2007 12:21	54.6	0.7	0.2	65	-9.8	100	
68								Well Closed.
69	2/17/2007 12:07	56.4	0.5	0.4	116	-11.8	50	
70	2/17/2007 11:59	56.2	0.9	0.1	98	-7.5	50	
71	2/17/2007 11:51	56.8	0.6	0.8	95	-10.8	50	
72								Well Closed.
73	2/17/2007 11:55	56.6	0.7	0.7	84	-13.9	50	
74								Well Closed.
75								Well Closed-Water in Well
80								Not sampled. Values 80 to 89 closed.
81								Not sampled. Values 80 to 89 closed.
82								Not sampled. Values 80 to 89 closed.
83								Not sampled. Values 80 to 89 closed.
84								Not sampled. Values 80 to 89 closed.
85								Not sampled. Values 80 to 89 closed.
86								Not sampled. Values 80 to 89 closed.
87								Not sampled. Values 80 to 89 closed.
88								Not sampled. Values 80 to 89 closed.
89								Not sampled. Values 80 to 89 closed.
00000V1A	2/17/2007 12:43	52.2	1.9	7.8	0	-0.1		
00000V1B	2/17/2007 12:45	52.2	2.1	7.4	0	-15.8		
00000V2A								
00000V2B								
0000FLAR	2/17/2007 12:50	49.6	4.1	11.5	129	0.5		
<b>Comments</b>								
Well ID's 80 through 89, V1A, V1B, V2A, V2B, FLAR are sample ports. No pressure, flow or temperature data available.								
Shaded box indicates well not in acceptable range.								
Acceptable Range : O <sub>2</sub> < 5% , Balance Gases (typically Nitrogen) > 20% , Well under vacuum (i.e. Static Pressure < 0)								
and Temperature < 131 °C								

When wells are encountered with out-of-compliance parameters, changes can be made to the valve setting that may improve or eliminate the problem. If the gas composition indicates high levels of oxygen or nitrogen in the gas, the valve should be turned down. This would lower the flow at the well and lessen the amount of air that may be drawn into the system. If the static pressure at the well is positive, then the valve setting should be turned up, effectively increasing the flow at the well. The valve settings should be adjusted in small increments in order to decrease the possibility of improving gas composition while causing the pressure to become positive, or vice versa.

This task typically takes between two and three days to perform, depending on the number of valve setting adjustments. A site map displaying the locations of the landfill gas collection wells is included as Attachment K-1.

# 10.0 Storm Water Management

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## 10.0 Storm Water Management

### a. Introduction

The purpose of this Storm Water Management Plan (SWMP) is to describe the system, operation and maintenance of the Storm Water Management System (SWMS) for the Lena Road Landfill.

The Manatee County Lena Road Landfill is located in Bradenton Florida on approximately 1,200 acres owned by Manatee County. 316 acres are designated for landfill. The rest of the property is used for wetlands mitigation, buffer, administration facilities, storm water management and the Manatee County regional wastewater treatment plant.

The Lena Road Landfill is divided into three stages which are listed below with the acreage and status for each stage:

- Stage I – 131 acres – filled and inactive
- Stage II – 110 acres – empty and inactive
- Stage III – 75 acres – partly filled and active

Figure K-11 is a site map of the Lena Road Landfill Storm Water Management System. The map shows the landfill stages, storm water swales, storm water pond and outfall structures. The landfill waste areas have a storm water drainage system. The details for the drainage system on the Stage I, II and III Landfills are shown on the Fill Sequence Plan drawings

### b. Storm Water Management System Overview

The purpose of the storm water management system is to collect clean storm water run-off from the landfill in terrace swales located on the landfill side slopes and convey the storm water to the detention areas for treatment and disposal to Cypress Strand Creek or Gates Creek. Any storm water that comes in contact with solid waste or is contaminated by leachate makes the storm water leachate, and requires discharge of the storm water to the leachate collection system for treatment at the wastewater treatment plant.

There are four permits that relate to storm water.

#### **1. Environmental Resource Standard General Permit #41-0224996 and #41-0177559**

Permit 41-0224996 was issued on February 25, 2005 and remains in the operational phase. There are 26 specific conditions. The most important specific conditions are:

20. For retention and dry detention ponds only: The retention and/or dry detention pond is intended to become dry within 72 hours after a rainfall event. A system that is regularly wet will be considered as not in compliance with this permit and possible modification to the system may be required.







24. The Operation and Maintenance Facility shall submit inspection reports in the form required by the Department, FDEP Form #62-343.900(6), Inspection Certification, for effluent filtration or exfiltration: 18 months after operation is authorized and every 18 months thereafter.

Permit 41-0177559 was recently modified to allow for construction of modifications to the Stage II area storm water management system. Upon completion of construction this permit will remain in the operational phase.

## **2. NPDES Multi-Sector Generic Permit (MSGP)**

This permit was effective December 22, 2013 with an expiration date of December 21, 2018. The facility ID is FLR05F797-003. The requirements for this permit are included in the “Storm Water Pollution Prevention Plan for the Lena Road Landfill” which is periodically updated, with the most recent update dated January 21, 2015.

## **3. Lena Road Class I Landfill Operation Permit #39884-018-SO/01**

This permit was issued January 5, 2011 with an expiration date of January 5, 2016. Specific Condition 9 of the permit describes the surface water sampling requirement.

### **Stage I System**

The Stage I storm water perimeter swale was created by constructing two berms. The inner berm, called the landfill berm, is constructed around the area filled with solid waste, and the outer berm, called the storm water berm, was constructed around the inner berm to hold storm water runoff from the landfill in the swale until the storm water could be filtered and discharge to Cypress Strand. The storm water swale drains to an 8 acre, 40 acre-feet storm water detention pond. The pond is located at the southwest corner of the Stage I Landfill. Storm water enters the perimeter swale via direct rainfall, sheet flow down the outside slopes of the landfill, and from storm water discharge structures. Storm water collected in terrace swales on the landfill is diverted to inlets on the terrace swales which are connected to storm water pipes. The storm water pipes discharge storm water at the bottom of the landfill into the perimeter swale through the discharge structures. The Stage I system consists of a channel-wet pond detention system with in-line turbo disk sand effluent filtration system. The filter system was manufactured by Miller Leaman and consists of two skid units (Model 2SV) with 22 pods on each unit with a capacity of 500 gallons per minute, or 1000 gallons per minute total. The channel-wet pond detention system is designed to provide for the first one inch of runoff over the 154-acre contributing project area. The water quality treatment volume for Stage I is 558,875 cubic feet (12.83 ac-ft), and the system provides for 975,105 cubic feet (22.39 ac-ft). Two pumps located at the northwest corner of the pond provide the treatment volume for the wet pond in Stage I. The water quality treatment is provided between the lead pump (elevation 32.77 feet) and the all pumps off elevation of 30.77 feet. The pumps discharge through a 12” ductile iron pipe to parallel filtration system. The treated water leaves the filtration system through a 12” HDPE pipe to a junction manhole. A 24” HDPE pipe leaves the manhole and discharges via a mitered end

section in the southwest corner of Stage III, to the Outfall 001/Cypress Strand. Attenuation for the 100-year/24 hour storm event is provided by a weir housed in the pump station. When the water in the pond reaches elevation 34.3 feet, the water will discharge through the 24-inch HDPE pipe that is connected to the junction manhole.

### **Stage II System**

The Stage II storm water management system is independent of Stages I and III. The system consists of a perimeter swale constructed with under drains and drop inlets for the discharge of storm water from the swale. Emergency Outfall Weirs 005 and 006 discharge storm water from the Stage II storm water swale to Gates Creek. The storm water swale was created by constructing two berms. The inner berm, called the landfill berm, is constructed around the area designated to be filled with solid waste, and the outer berm, called the storm water berm, was constructed around the inner berm to hold storm water runoff from the landfill in the swale until the storm water could be filter by the under drain and discharged to Gates Creek.

Because the Stage II Landfill is currently inactive and there is no solid waste, all runoff from the Stage II area is directed into the perimeter swale. The Stage II area is graded to allow runoff until the Stage II Landfill is filled with solid waste. If the storm water does not run off or evaporate fast enough, Manatee County pumps the storm water over the landfill berm into the storm water swale. Storm water entering the storm water swale due to direct rainfall, run off or from pumping accumulated storm water inside the Stage II landfill, is filter through the under drain system and discharged to Gates Creek.

When filling begins in the Stage II Landfill, the Phase areas waste disposal will be excavated prior to waste placement. All rainfall that falls within the excavated area will be contained and treated as leachate and pumped to the wastewater plant for treatment and disposal. As with the Stage I and III Landfills, as the fill increases in height, the outer slopes that are covered with intermediate soil cover will be drained to the perimeter storm water swale. Storm water that comes in contact with solid waste will be treated as leachate. Other areas of Stage II will be allowed to drain storm water runoff to the storm water management system. Details of the filling sequence and storm water drainage are shown on the Fill Sequence Plans included in Appendix B to the permit application package.

### **Stage III System**

The Stage III system consists of a perimeter channel-pond dry detention with effluent filtration system, which will receive runoff from 74 acres of project area. The pond is designed to provide for the first one-half inch of runoff over the contributing area. The water quality treatment volume required for Stage III is 134,310 cubic feet (3.08 ac-ft) and the system provides for 146,573 cubic feet (3.36 ac-ft). The water quality treatment is provided between the pond bottom (elevation 31.0 feet) and the weir elevation of 32.4 feet. The water will drain through an under drain located in the northwest corner of Stage III and will recover in 72 hours. Attenuation for the 100-year, 24 hour storm event is provided by three outfall structures, D-001, D-004 and D-004A. D-001 consists of two identical modified FDOT Type “E” inlets. Two sides of the inlets have weirs set at elevation 32.4 feet and the front of the structure has a weir set at elevation 33.4 feet. The inlets discharge through two 42” RCPs to a double mitered end section at the southwest corner of Stage III. Outfall

D-004 consists of two FDOT Type “E” inlets in the northwest corner of Stage III and has the same weir set up as Outfall D-001. The inlets discharge through two 27” x 42” HERCP to Outfall D-004. Outfall D-004A is an existing inlet structure with the gate constructed at elevation 35.5. D-004A discharges through a 24” RCP to Outfall D-004. The existing storm water pond in the southeast corner of Stage III was excavated to elevation 31.0 feet. The top of bank was constructed to elevation 41.0 feet. The weir at the east end of the southern east-west ditch (southeast corner of Stage III) was modified and the top of the bank constructed to elevation 40.0 feet to disconnect Stage I and Stage III storm water. Forty-five linear feet of 54” inch RCP at the southwest corner of Stage III connects the north and west ditch to the south ditch.

### c. Maintenance Plan

This maintenance plan applies to the storm water management system for the Stage I, II and III Landfills. The storm water management system consists of a series of swales, inlets and pipes that divert storm water from the non-working areas of the landfill to the storm water pond. The swales discharge into pipes and/or other swales, or directly into the storm water pond. Runoff from the detention pond ultimately discharges into the Cypress Strand Creek or the Gates Creek via the on-site wetlands.

Storm water perimeter ditches and the filter facility are inspected daily for sediment, wash outs, litter, vegetation and non-performance. In the event of a side-slope wash out, the slope is repaired within 3 working days. Litter fences are installed along the top bank of each swale around the active landfill to minimize litter. Excessive vegetation is removed from the swale system and storm water pond. Sediment is removed from the swale and hauled to the working face.

Storm water runoff from the areas that have at least a 6-inch compacted soil cover (free of waste) over the waste materials can be directed to flow into the storm water management system. Storm water runoff that has been in contact with waste materials is classified as leachate and cannot be diverted into the storm water management system. Storm water runoff from the upper portion of the landfill travels via sheet flow into collection terraces located along the side slopes of the landfill. Storm water runoff flows within the collection terraces and is conveyed, via storm water structures, and as shown on the Fill Sequence Drawings, down the landfill and into swales that are located along the perimeter of the landfill. The perimeter swales convey storm water runoff to a storm water management pond. Storm water runoff collected in the pond is allowed to percolate. As the water in the pond rises, it is pumped to the automatic disc filter system.

The following procedures have been implemented at the landfill to minimize maintenance requirements and to ensure efficient performance of the storm water system operation:

- No excavated cover material is stockpiled in such a manner as to direct sediment-laden runoff outside the project site property limits or into any adjacent storm water collection facility.
- All drainage ditches are inspected periodically for erosion and reshaped and re-sodded as required.
- Erosion and siltation control devices are cleaned and repaired when clogged or damaged.

## 10.0 Storm Water Management

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- Temporary erosion control features such as silt fencing or hay bales are removed after installation of permanent erosion controls have been completed and any permanent erosion control features damaged by such removal are repaired.
- After vegetation has been established, all swales, channels, and detention ponds are mowed regularly; minimum-mowing frequency is once per year.
- The plant types in the littoral zone are checked periodically and any intruding vegetation is removed if required.
- Drainage sumps are cleaned out at least once per year and the storm sewer lines checked for plugging.
- The area in front of the control structure is checked at least quarterly to remove any excess plants or debris that could cause the structure to plug.

## 11.0 Equipment/Operation Features

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### a. Sufficient Equipment

The County has sufficient equipment to provide flexible landfill operations. Attachment K-3 provides a list of the current landfill heavy equipment for daily operations.

All landfill equipment that will be in operation on that day is serviced with special attention to any maintenance or minor repair needs. If the repair work required is more than minor in nature, it is sent to the landfill garage. The equipment is primarily serviced by Manatee County Fleet Services that operates a repair center at the Landfill Facility.

The following procedures are used in fueling equipment each day:

1. Check the following fluids to ensure they are at the manufacturer's recommended level:
  - pivot shaft oil
  - engine oil
  - hydraulic oil
  - fuel
  - transmission oil
  - radiator water
  - battery water level
2. Check and clean the following filters:
  - air cleaner
  - interior/exterior air conditioner filters
3. Pressure wash with water and/or air:
  - radiator core
  - transmission oil coolers
  - hydraulic oil coolers
4. Clean all air intake openings such as door panels, steps, hood, and air-breather intake.
5. Visually check for water, fuel and oil leaks in the final drive, radiator hoses, hydraulic hoses, fuel lines, injector pumps, fuel filters, etc.
6. Check tire inflation and/or track adjustment, chain tension and alignment on scrapers.
7. Grease all fittings at recommended intervals.

8. Complete the Daily Equipment Maintenance Report.

Fuel for the landfill equipment is pumped from a fuel tank, located as shown on Figure E-5. The tank is an above ground, double walled, steel tank with a total capacity of 20,000 gallons, and is split into two compartments. One 5,000-gallon compartment is for gasoline, and a 15,000-gallon compartment for diesel fuel. The tank is on a concrete slab, and protected by bollards. The tank is inspected weekly. Fuel and fluids (engine oil, transmission oil, hydraulic oil, or radiator fluid) are added to the equipment in the maintenance building as needed. If repairs on the equipment are necessary, the equipment is sent to the County's central maintenance shop, located off-site, or to the dealer's authorized maintenance facility.

b. Reserve Equipment

Attachment K-3 indicates the County possesses sufficient equipment to operate the landfill. In the event the dozer is out of service, the compactors can be used to spread refuse over the active face. In addition, the County can rent backup equipment from its approved Bid List or from County sources within 24 hours if necessary.

c. Communication Equipment

All equipment operators and traffic controllers are equipped with hand-held radios. This radio transmission service links the field personnel to the office and management. Telephones are available in the office, maintenance garage and Scalehouse.

d. Dust Control

Internal access roads are sprayed with water to control dust. Vegetation on filled areas assists in controlling dust from this area.

e. Fire Protection

Further details regarding the fire protection can be found in Section K.2.b.

f. Litter Control Devices

See Section K.7.i.

g. Signs

Signs are used around the site to direct traffic to the active face, white goods area, tire area, lead-acid battery drop-off, clean debris, yard waste, mulch site, speed limits, disposal rates and hours of operation, and prohibitions.

### h. Shelter/Sanitation/First Aid Features

Shelter and sanitation facilities for the landfill staff are provided at the scale house and landfill office. First aid kits are provided in the cab of all heavy equipment vehicles.

First aid kits are located in the Landfill Administration Office and are maintained and inspected regularly. The kits will contain, at a minimum, the following:

sterile gauze pads	band aids (regular and non-stick)	eye wash
rolls of gauze bandage	adhesive tape	
bandage scissors	peroxide	
roll of sterile cotton gauze	safety pins	
tweezers	rubbing alcohol	
CPR mouth barrier	gloves	

In the case of accidental poisoning:

Step 1: Carefully remove poison from contact with person.

Eyes: Flush with lukewarm water, NOT HOT WATER, in a gentle stream for 10-15 minutes with eyelids open. Pour water from a container held 2-4 inches above the eye. **DO NOT RUB THE EYES.**

Skin: REMOVE any clothing that has come in contact with the poison. Flush poison off with large amounts of water poured from a container held 2-4 inches above the affected skin area for 10-15 minutes.

Mouth: REMOVE any poison from the mouth. Rinse the mouth out with water. If unable to rinse, gently rub out mouth with a clean cloth. Check mouth for any burns, cuts, unusual coloring, swelling or irritations.

Lungs: Get to fresh air as soon as possible. Loosen clothing if exposed to gases or fumes. Initiate mouth-to-mouth resuscitation if necessary.

Step 2: Give water when potential poisons have been swallowed. DO NOT give water if the person is unconscious, having convulsions or cannot swallow.

Step 3: **NEVER** make the person vomit **unless** the poison center or a physician directs you to do so.

Step 4: KEEP CALM. **DO NOT DELAY IN SEEKING HELP!**

## 12.0 All-Weather Access Roads

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The main haul road in the landfill is paved. Vehicles leaving the main haul road in route to the working face travel across an interior road. The interior road base is constructed of construction and demolition (C&D) material and covered with a sand-shell mixture. The road is routinely maintained to provide waste hauler access to the work face. As discussed in K.2.b., during severe wet weather, small vehicles are directed to the wet weather disposal area for tipping.



## 13.0 Additional Record Keeping

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Required landfill records are reported to the Department on a monthly, quarterly, semi-annually, annual, biennial basis. All records are maintained at the landfill for a minimum of ten years or for the design period as specified below. The design period is projected to end in the year 2071 (unless long-term care is decreased).

### a. Permit Application Development

All reports used to develop permit applications and operation records will be maintained for the design period. Records such as geotechnical investigations, foundation analyses, demonstration reports, and previous permits and regulations are examples of records to be maintained.

### b. Monitoring Records

All water quality, gas, and leachate monitoring records are required to be maintained for at least ten years.

In accordance with various Environmental Protection Agency (EPA), Southwest Florida Water Management District (SWFWMD), and the Florida Department of Environmental Protection (FDEP) rules, regulations and permits, the Landfill must conduct various field monitoring /maintenance activities and submit reports on a scheduled basis. The following information is intended as an overview of required activities and reports and is also addressed in individual sub-sections regarding the activity or program.

### Groundwater

The County contracted laboratory inspects and samples 18 groundwater monitoring wells (GW-1 through GW-18) for the Stage I and III Landfills. The results are submitted semi-annually to the Department. The wells consist of seventeen monitoring wells and one background monitoring well. When the Stage II Landfill becomes active, the County's contracted laboratory will inspect and sample eleven additional monitoring wells (GW-18 through GW-28). The County will continue to inspect and sample GW-1 and GW-2, which are in the foot print of the Stage II Landfill until the wells are abandoned.

A review of the analyses, comparisons of the data, and comments on any substantial differences in parameters is to be submitted to the FDEP every two and one-half years or as required in the permit.

### Leachate

Flow meters which record leachate directed to the Southeast Waste Water Treatment Plant are inspected daily. The leachate quantity is reported monthly.

### Department of Environmental Protection Reports

Prepare monthly groundwater report.

Prepare annual compaction and fill volumes.

Prepare groundwater report semi-annually.

Prepare leachate analysis report annual.

Prepare monthly water balance reports.

Prepare monthly report on the landfill gas readings taken at each landfill gas wellhead and flare

Prepare quarterly report of the landfill gas readings at gas monitoring probes and ambient points

Prepare quarterly report of the landfill gas surface emissions monitoring

### c. Annual Estimate of the Remaining Life of Constructed Landfill

Manatee County will annually estimate the remaining solid waste disposal capacity in cubic yards and the remaining landfill life in years. The estimate will be based on the geometry of the filled landfill, final contours, scale house records for waste received and the filling rate of the landfill. The estimate will be submitted annually to FDEP by the date specified in the permit.

### d. Archiving and Retrieving Records

All records pertaining to the operation of the facility will be retained throughout the design life of the landfill. All monitoring records, calibration and maintenance records and reports required by the landfill operation permit will be retained for at least ten years.

## 14.0 Special Waste Handling

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### a. Motor Vehicles

Motor vehicles are not presently accepted for disposal or temporary storage at the Lena Road Landfill.

### b. Shredded Waste

Shredded municipal waste is not accepted for disposal at the Lend Road Landfill. Shredded tires may be accepted if not recycled.

### c. Asbestos

Asbestos containing materials from sources covered under the National Emission Standards for Asbestos, 40 CFR Part 61, Subpart M are accepted at the Lena Road Landfill, with prior approval of the County. These materials will be placed in the landfill by appointment only, covered with a minimum of one foot of non-asbestos containing material, and the location will be recorded in accordance with 40 CFR Part 61.154. A record of the location of asbestos-containing waste will be maintained.

### d. Contaminated Soil

Soils contaminated with non-hazardous waste and petroleum-contaminated soil, which has been treated pursuant to Chapter 62-713, F.A.C., will be accepted at the discretion of the County.

### e. Biological Waste

Biological waste is not accepted.

### f. Oily Waste

Materials as defined in Chapter 62-701.300 (11)(b), F.A.C., may be accepted for disposal at the discretion of the County.