



**WASTE MANAGEMENT INC. OF FLORIDA**

Vista Landfill, LLC.  
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April 16, 2014

Tom Lubozynski  
Florida Department of Environmental Protection  
Central District Solid Waste Section  
3319 Maguire Boulevard, Suite 232  
Orlando, FL 32803

Subject: Vista Landfill, Class III  
WACS# 87081  
Operation Plan Update

Dear Mr. Lubozynski:

Enclosed is the updated Operation Plan for the Vista Landfill. This update incorporates the Organic Facility pilot project of recirculating the process liquids back into the composting process. Additionally, we have taken this opportunity to update the facility personnel. Included you will find one copy of the finalized operation plan, as well as copy showing the tracked changes. Please feel free to contact me at (386) 804-4183 or pbermil1@wm.com

Respectfully Submitted,

A handwritten signature in black ink, appearing to read "Paul Bermillo", with a long horizontal flourish extending to the right.

Paul Bermillo  
Environmental Protection Manager  
Waste Management Inc. of Florida

cc: Jay Davoll, City of Apopka

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**DEP Central Dist.**

**OPERATION PLAN  
FOR  
VISTA LANDFILL, CLASS III  
APOPKA, FLORIDA**

*Prepared for:*



**WASTE MANAGEMENT INC. OF FLORIDA**

**Vista Landfill, LLC  
242 West Keene Road  
Apopka, Florida 32703**

*Prepared by:*



**100 East Pine Street, Suite 605  
Orlando, Florida 32801**

Revised April 2014

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James E. Golden,  
P.G.  
FL # PG945  
Date:

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Figure 3	Landfill Phasing Sequence – no change/not submitted
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Figure 4	Environmental Monitoring Plan – no change/not submitted

## ATTACHMENTS

ATTACHMENT A	PERSONNEL LIST
ATTACHMENT B	GAS MONITORING REPORT FORM – no change/not submitted
ATTACHMENT C	LANDFILL INSPECTION AND ODOR SURVEY FORM – no change/not submitted
ATTACHMENT D	ODOR COMPLAINT FORM – no change/not submitted
ATTACHMENT E	ODOR COMPLAINT TRACKING CHART – no change/not submitted
ATTACHMENT F	HURRICANE PLANNING MANUAL – no change/not submitted
ATTACHMENT G	CCA WOOD PLAN – no change/not submitted

## **1. INTRODUCTION**

### **1.1 Purpose and Scope of the Operation Plan**

The Operation Plan provides a detailed description of the daily operations of the Vista Landfill, Class III facility, including contingency operations for emergencies. This Operation Plan complies with the requirements of Chapter 62-701, Florida Administrative Code (FAC) and Chapter 66, City of Apopka Code of Ordinances (a.k.a. Solid Waste Management Ordinance – SWMO).

### **1.2 Facility Location**

Vista Landfill, Class III facility is located in the City of Apopka. The general site location is shown in Figure 1. The site is within Section 21, Township 21 South, Range 28 East in Orange County, Florida. The main entrance of the facility is located at latitude 28°38'24.5"N, longitude 81°80'41.7"W. The currently permitted footprint of the facility is shown in Figure 2.

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## **2. FACILITIES AND PERSONNEL**

### **2.1 Designation of Responsible Persons**

In accordance with Rule 62-701.500(1), FAC, the facility has at least one trained operator at the facility during periods of waste acceptance (operation) during operation and at least one trained spotter at each working face. Note that if the trained operator is at the working face, he/she can also function as a trained spotter.

The District Manager for Vista Landfill, L.L.C. (Vista Landfill) and the Operations Supervisor/Site Manager for the Vista Landfill, Class III facility has responsibility of overall management and operation of the Vista Landfill, Class III facility. The District Manager has the authority to obtain the necessary personnel to operate the site and provide for their training and orientation. The District Manager ascertains the facility's need for equipment, has the authority to replace existing equipment or obtain new equipment, and is responsible for administering the provisions of the site operation plan.

The Compliance and Construction Engineer is responsible for facility compliance, as well as assisting with operational issues, groundwater, leachate and facility gas sampling, submittal of monitoring reports, surveying of disposal area limits, and facility planning. The day-to-day operations of the site are directed by the Operations Supervisor/Site Manager who is responsible for site personnel attendance and performance. As such, he/she routinely directs the daily activities of the operations manager, scale-house attendant, facility operators and spotters, and other support personnel.

Vista Landfill, Class III facility is currently staffed approximately as follows:

- 1 – District Manager
- 1 – Compliance and Construction Engineer
- 1 – Site Manager/Operations Supervisor – Trained Operator and Trained Spotter
- 2 – Scale house Operators – Trained Spotters
- 3 – Trained Operators
- 3 – Trained Spotters
- 2 – Laborers

A list of personnel is attached as Attachment A.

#### **2.1.1 Employee Training**

A trained operator shall be on duty whenever the facility is operating and at least one trained spotter shall be on duty at all times that waste is received at the site to inspect the incoming waste. The operator(s) and spotter(s) of the Class III disposal area at Vista Landfill, Class III facility are trained in accordance with the requirements of Rule 62-701.320(15), FAC. Further, trained personnel are aware of, have access to, and will substantially comply with at all times, this operations plan. The operators shall be properly trained to operate the facility and the spotters shall be trained to identify and properly manage any hazardous or prohibited materials that are inadvertently received at the Class III disposal facility. Any trained operator at Vista

Landfill, Class III facility shall complete 24 hours of initial training, and shall pass an examination as part of that training. Within three years after passing the examination, and every three years thereafter, operators shall complete an additional 16 hours of continued training. A trained spotter at Vista Landfill, Class III facility shall complete 8 hours of initial training. Within three years after attending the initial training, and every three years thereafter, spotters shall complete an additional 4 hours of continued training. The training of the operator and spotter is performed through those courses offered to the public through TREEO training at the University of Florida and other approved sources (see [www.treeo.ufl.edu](http://www.treeo.ufl.edu)).

Vista Landfill, Class III facility will not employ a person to perform, nor may any person perform the duties of an operator or spotter at Vista Landfill, Class III facility unless that person is a trained operator or trained spotter, or an interim operator or interim spotter. A trained operator shall be on duty whenever the facility is operating and at least one trained spotter shall be on duty at all times that waste is received at the site to inspect the incoming waste. An interim operator may perform the duties of an operator or spotter, but only under the supervision of a trained onsite operator. An interim spotter may perform the duties of a spotter, but only under the supervision of a trained onsite operator or trained onsite spotter.

An interim operator is a person who has not completed the required 24-hour initial training course, but has, in the opinion of Vista Landfill, Class III facility Operations Supervisor/Site Manager, shown competency as an operator through a combination of work experience, education and/or training and who has at least one year of experience at Vista Landfill, Class III facility or other similar facility. The determination to grant interim operator status may be made at the time of hiring, based on information provided in the resume or application. Alternatively, the Operations Supervisor/Site Manager may grant interim operator status following work observations.

An interim spotter is a person who has not completed the required 8-hour initial training course, but has, in the opinion of Vista Landfill, Class III facility Operations Supervisor/Site Manager, shown competency as a spotter through a combination of work experience, education and/or training. The determination to grant interim spotter status may be made at the time of hiring, based on information provided in the resume or application. Alternatively, the Operations Supervisor/Site Manager may grant interim spotter status following work observations.

Interim status for operators and spotters is not intended to exceed three months, while the interim status for an operator is not to exceed one year. Additionally, an interim operator should not be used in lieu of a trained operator for more than three consecutive months.

## **2.1.2 Training Records**

The training records are kept at the facility at all times and are available for inspection by Florida Department of Environmental Protection (FDEP), upon request. A list of trained personnel is attached as Attachment A.



## **2.2 Onsite Structures**

On-site structures include an administration building, scale house, and maintenance buildings/facilities used for equipment repair. The scale house is located near the entrance to the facility along the north property boundary.

### **2.2.1 Communications**

Communication equipment at Vista Landfill, Class III facility consists of telephone service for outside communications and cellular phones or radios for communications between ground personnel and equipment personnel.

### **3. ENTRANCE PROCEDURES**

#### **3.1 Control of Incoming Waste**

In accordance with Rules 62-701.200(14) and 62-701.300(8)(c), FAC, only Class III waste, defined as *construction and demolition debris, processed tires, asbestos, carpet, cardboard, paper, glass, plastic, furniture other than appliances, or other materials approved by the Department that are not expected to produce leachate which poses a threat to public health or the environment*, is knowingly accepted for disposal at Vista Landfill, a lined Class III facility. Vista Landfill understands that yard trash cannot be disposed in a lined Class III landfill unless the current solid waste management rules of Chapter 62-701, F.A.C. are revised to allow such disposal.

Vista Landfill, Class III facility does not knowingly dispose of hazardous waste, putrescible waste, liquid wastes, brown goods (small appliances, electronic goods, cathode ray tubes, etc...), or any other non-Class III waste material. Unacceptable loads are rejected as described in Section 4.2. Once Class III waste has been accepted and unloaded, if any unacceptable waste is found, spotter(s) will proceed to remove unacceptable wastes to a temporary staging area for placement at the end of the working day into containers destined for other facilities properly permitted to receive such wastes. If the generator or transporter of any unacceptable waste can be identified, they may be requested to remove the unacceptable material from the landfill.

Vista Landfill is committed to being proactive in the management of CCA treated wood. Spotters in the yard waste processing area are required to identify and remove CCA treated wood for disposal in the lined area of the landfill, as stated on the CCA Treated Wood Management Plan (Attachment G).

#### **3.2 Hours and Days of Operation**

Typical hours for acceptance of waste are:

Monday through Friday 7:00 am to 6:00 pm  
Saturday 8:00 am to 12:00 pm

The actual hours of operation are posted at the main entrance to the facility. The facility is closed on Sundays and designated holidays. Access by all vehicles shall be via a single secured site entrance. The entrance allows for safe and orderly traffic flow into and out of the facility. Public access and receipt of waste occurs only when an attendant is on duty.

#### **3.3 Weighing of Incoming Waste**

All solid waste accepted at the facility is weighed. Tare weights of the trucks will be determined as the emptied vehicle leaves the site. Tare weights for waste haulers that regularly visit the site are recorded so that they do not need to be weighed each time they leave the site unless specifically required by contract or to meet facility needs. Invoices are based on the weight of waste disposed.

### **4. TRAFFIC CONTROL AND UNLOADING**

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## **4.1 Facility Access Control and Security**

Traffic into and out of the site is controlled by the use of a single public entry, a complete perimeter 6-ft. chain link fence with a locking gate, and an attendant present during operating hours. There is a sign at the site entrance with an emergency contact name and phone number. Gates at all roadway points are kept locked outside of normal working hours. All refuse traffic is required to pass by the scale house to gain entry to active portions of the landfill. Public access and receipt of wastes occur only when an attendant is on duty. Additionally, signs indicating “no trespassing” are installed on the perimeter fencing and at each fence corner.

Once vehicles delivering wastes have been weighed, they follow signs posted along the access road(s) to the currently active areas of the facility. Trucks then proceed to and deposit trash at the appropriate working face. Signs and Scale house personnel direct small public vehicles to unload their loads in the appropriate disposal area.

The landfill access road and other on-site roads are maintained to allow access to monitoring devices and stormwater controls and for landfill inspections and fire fighting.

### **4.1.1 Access to and Unloading at the Active Face**

Waste haulers are directed from the controlled entrance point to the working face by use of signage and facility personnel directing drivers when and where to enter, unload, and leave. A spotter or interim spotter directs traffic to the proper waste unloading location at the active face. Operator/spotters perform load spotting as the waste is deposited and additional spotting as the waste is spread and compacted.

A spotter is stationed at each working face at all times when the landfill receives waste in order to screen for any unauthorized materials. The equipment operator may serve as the spotter. The operator then spreads the waste and performs additional spotting during each pass while compacting the waste.

## **4.2 Signs, Traffic Flow**

Signs are utilized to inform the public of important information concerning Vista Landfill, Class III facility. Signs are placed near the entrance of the landfill to provide information concerning name of operating authority, traffic flow, operating hours, and restrictions or conditions of disposal.

Traffic control and safety requirement signs are located at and near the entrance and throughout the facility as required.

### **4.3 Random Load Checking Program**

To monitor the waste received at Vista Landfill, Class III facility, a load-checking program to detect and discourage attempts to dispose of unauthorized wastes at the facility is implemented. The load-checking program consists of the following minimum requirements specified in Section 66-177(1)(k), SWMO and Rule 62-701.500(6)(a), FAC., and is described below. The Facility Operations Manager implements the program.

1. Landfill personnel examine at least three random loads of solid waste delivered to the landfill each week. The waste collection vehicle drivers selected by the inspector are directed to discharge their loads at a designated location within the landfill. A detailed inspection of the discharged material is then made for any unauthorized wastes.
2. If unauthorized wastes are found, Vista Landfill will contact the generator, hauler, or other party responsible for shipping the waste to the landfill to determine the identity of the waste sources.

### **4.4 Recording Random Inspection Results**

Information and observations from each random inspection are recorded in writing and retained at the site for at least three years. The recorded information includes, at a minimum, the following information:

1. Date and time of the inspection.
2. Names of the hauling firm and the driver of the vehicle.
3. Vehicle license plate number.
4. Source of waste, as stated by the driver.
5. Observations made by the inspector during the detailed inspection.

The written record is signed by the inspector.

### **4.5 Management of Hazardous Wastes**

If any regulated hazardous wastes are identified by random load-checking, or are otherwise discovered to be improperly deposited at the landfill, the operator will promptly notify the following parties:

1. Florida Department of Environmental Protection: 407-894-7555 / 407-893-3328.
2. Other agencies, as required.
3. The person responsible for shipping the wastes to the landfill.
4. The generator of the wastes, if known.

The area where the wastes are deposited will be immediately restricted from public access. If the generator or hauler cannot be identified, the District Manager (DM) or Operations Supervisor (OS) will assure the cleanup, transportation, and disposal of the waste at a permitted hazardous waste management facility. Subsequent shipments from sources found or suspected to be

previously responsible for shipping regulated hazardous waste will be subject to precautionary measures prior to the facility accepting wastes.

#### **4.6 Management of Special Wastes**

Asbestos-containing materials, non-friable and friable, are accepted and disposed at Vista only under specific conditions. The asbestos waste generator/hauler must notify the DM or OS prior to transporting the asbestos waste. The asbestos is disposed of in designated and recorded areas. The asbestos is then carefully covered in a manner so that neither equipment nor personnel come in contact with the waste.

## 5. WASTE RECORDS

The Scale Attendant records, in tons per day, the amount of solid waste received at the site. Waste reports will be compiled monthly, and copies will be provided to the City of Apopka and FDEP quarterly.

Quarterly Waste Quantity Reports are submitted to:

Tom Lubozynski, P.E.  
Solid Waste Section  
Florida DEP  
3319 Maguire Blvd., Suite 232  
Orlando, FL 32803

R. J. "Jay" Davoll, P.E.  
Community Development Dept.  
City of Apopka  
120 E. Main St., 2nd Floor  
Apopka, FL 32704

or via electronic mail to

[Tom.Lubozynski@dep.state.fl.us](mailto:Tom.Lubozynski@dep.state.fl.us)

[jdavoll@apopka.net](mailto:jdavoll@apopka.net)

or via facsimile to

(407) 893-3124

(407) 703-1791

## **6. METHOD AND SEQUENCE OF FILLING WASTE**

### **6.1 Basic Operations**

Generally, waste placement and ongoing operations are screened from view as practical. Solid waste is placed into cells to construct horizontal lifts. The solid waste will continue to be placed in layers and compacted using landfill equipment. Lift depth may vary depending on specific conditions, daily volume of waste, width of working face, and good safety practices. The compacted waste will continue to be graded with slopes not to exceed 3H:1V. Access roads have maximum slopes of 10% in order to readily allow vehicular access to the working face even during inclement weather conditions. The working face is maintained to minimize the amount of exposed waste and initial cover necessary at the end of the week.

The landfill development sequence is illustrated on the Permit Drawings and is shown in Figure 3. Waste disposal activities will continue until the final grade elevations have been reached. The final grades are also illustrated on the permitted plans.

#### **6.1.1 Filling Procedures**

The refuse cell is the basic building block of a landfill. It is composed of several compacted layers of waste and enclosed by cover material. Basic instructions for constructing the refuse cell are outlined below.

#### **6.1.2 Working Face**

The working face is the portion of the uncompleted cell on which additional waste is spread and compacted. The working face is kept as small as practical to minimize equipment movement, cover material requirements, and the area of exposed waste, thus reducing blowing litter, vector problems, and operation costs. The optimal daily working face width varies depending on the number of vehicles bringing waste to the site. The working face is kept wide enough to prevent a large backlog of trucks.

In order to facilitate proper dumping and waste placement operations, multiple working faces may be required to accommodate commercial non-tipper trailers, commercial tipper trailers, other commercial vehicles, and non-commercial vehicles.

The Operations Supervisor/Site Manager has the discretion to utilize multiple working faces on an as-needed basis, depending on site conditions. If separate working faces are used, a spotter or operator/spotter will be present at each.

#### **6.1.3 Dumping**

When top dumping, the waste is dumped as near to the edge of the active working face as safe operations permit. For safety reasons, a minimum 8 to 10 ft separation is maintained between the waste trucks and the landfill equipment.

When bottom dumping, the waste is dumped near the toe of the working face and pushed up the slope. Truck separation, as discussed above, is maintained.

#### **6.1.4 Pushing, Spreading and Compacting**

Proper cell construction involves pushing, spreading, and compacting. These functions are accomplished with a bulldozer and/or a compactor. Solid waste at Vista Landfill, Class III facility is spread in layers approximately three feet thick and compacted using suitable heavy equipment. Bulky materials that are not easily compacted are worked into other materials as much as practical.

#### **6.1.5 Cover**

##### **6.1.5.1 Initial Cover**

The initial cover will be applied and maintained in accordance with Section 66-177(1)t, SWMO, and Rule 62-701.500(7)(e)(2) FAC. A 6-inch thick initial cover is placed on top of the waste at the end of each week's operation in order to mitigate blowing litter and aid in control of odors. An alternative weekly cover in the form of geosynthetic material, tarpaulin, or other approved materials such as 50:50 mix of soil: mulch may be applied to the active face at the conclusion of each working week.

##### **6.1.5.2 Intermediate Cover**

Intermediate cover, consisting of 12 inches of soil, shall be applied and maintained within 7 days of cell completion if additional waste will not be deposited within 180 days of cell completion. In accordance with Rule 62-701.500(7)(f), all or part of the intermediate cover may be removed before placing additional waste or installing the final cover.

##### **6.1.5.3 Final Cover**

Areas of the landfill which have been filled to design dimensions shall receive final cover within 180-days after attaining final elevation or in accordance with the closure plan for the landfill. The final cover will be constructed in accordance with Section 66-177(1)t, SWMO and Rule 62-701.600(5)(g) FAC. The barrier layer to be installed will either be a geosynthetic clay liner (GCL) or 40-mil linear low-density polyethylene (LLDPE). The barrier layer will be installed over a 6-inch, minimum, soil layer, and overlain by 18-inches of cover protective soil, and 6-inches of compost or topsoil capable of sustaining a good stand of grass. A geocomposite drainage layer will be placed above all or parts of the barrier layer, depending on the specific barrier layer selected at the time of closure.

#### **6.2 Scavenging**

Uncontrolled and unauthorized scavenging is not allowed at this facility. However, controlled removal by landfill personnel of recovered material recycling may be permitted.



### **6.3 Storm Water Control during Waste Filling**

During waste placement activities, storm water collected within a landfill cell with waste fill elevations below natural grade is treated as leachate and managed through the leachate collection system for the landfill. Once waste fill elevations are above natural grade and intermediate cover is in-place, storm water run-off is diverted to the storm water perimeter ditch for the landfill. Accumulated storm water within an inactive landfill cell that does not come in contact with waste is pumped to the storm water management system (e.g., storm water perimeter ditch or storm water ponds) for the landfill.

## 7. EQUIPMENT

### 7.1 Heavy Equipment and Support Equipment - Number, Type, Use

Based on the available range of handling capacities and the initial projected waste receipts, the allocation of heavy equipment presented in Table 1 is sufficient to handle the wastes received at the facility. The primary functions of heavy facility equipment are spreading and compacting solid waste, and excavating, hauling, and spreading cover material. Equipment similarities allow different equipment to perform the same function as necessary. For example, when a compactor breaks down, a bulldozer can perform the compacting operation.

Support equipment is present at the site most of the time, but some may be off-site, temporarily out of service, or rented for a specific occasion. An on-site water truck is normally positioned close to the working face for fire protection. This water truck is also equipped with spray bars for dust control. A utility mower is fitted with attachments for mowing grassed areas. A backhoe/loader is available to assist in maintaining drainage courses and ditches, and for other site maintenance duties.

Equipment makes, models, and quantities listed on Table 1 are subject to change as facility needs or requirements change.

**Table 1 – Equipment Inventory.**

Equipment Description	Use
Cat 950G	Loader
Cat D8R	Dozer
Cat D6R	Dozer
Cat 826G	Compactor
Volvo 710A	Grader
Cat 420D	Backhoe
Ford F450	Service truck
Volvo A30D	Dump truck
Kubota M7030 SUDT	Tractor
Street Sweeper	Entrance road cleaning
Ford 1998	3000 Gallon water truck
Cat VC60D	Forklift
Kubota F2100	Mower

### 7.2 Back-Up Equipment

The equipment selection guide indicated in Table 1 is adequate even if one of the pieces of equipment is temporarily out of service. If a piece of equipment is out of service for an extended period or if additional equipment is required on a temporary basis, this equipment is available for rental nearby and can normally be available at the site within 24 hours.

### **7.3 Equipment Care**

Routine preventive maintenance minimizes equipment downtime and increases equipment service life. Preventive maintenance varies with each piece of equipment. Therefore, the appropriate operation and maintenance (owner's) manual should be consulted. However, three applicable maintenance activities implemented at the site are:

- A routine inspection program;
- Routine Lubrication
- Maintenance records upkeep.

### **7.4 Notification in Case of Equipment Failure**

If there is an equipment failure that will disrupt normal operations for more than 24 hours, the Central District office of FDEP must be notified:

Tom Lubozynski, P.E.  
email: Tom.Lubozynski@dep.state.fl.us  
phone: (407) 894-7555 / (407) 893-3328  
facsimile: (407) 893-3124  
address: Florida Department of Environmental Protection  
3319 Maguire Blvd., Suite 232  
Orlando, FL 32803

## **8. ENVIRONMENTAL AND OPERATIONAL CONTROLS**

### **8.1 Stormwater Control**

Stormwater management within the active portion of the landfill is achieved by grading all working face areas so that stormwater will be diverted into a ditch at the landfill base channel or directly into the stormwater basin(s). This facility has no off site discharge of stormwater.

### **8.2 Dust Control**

Dust is controlled in landfilling areas at Vista Landfill, Class III facility by water truck and by establishing vegetative cover on areas within final and intermediate cover. Entrance roads are paved to a point beyond the scale house to minimize dust and sediment from being tracked onto the highway.

### **8.3 Vector Control**

Vector control consists of maintaining a clean site, waste screening, constructing sufficient initial and intermediate cover, and minimizing ponded water in areas of landfill cover. Proper compaction of wastes eliminates many of the breeding areas used by these pests during the work week. Proper implementation of the drainage design inhibits ponding on the site.

### **8.4 Noise Control**

Operational measures, such as construction of temporary berms, may be used to reduce noise generated at the site. Noise will be minimized to the best practical extent; however, some noises will continue to be present such as back-up alarms and other measures which are required by the Occupational Health and Safety Administration (OSHA) for safety.

### **8.5 Litter Control**

A litter control policy is employed to minimize litter from leaving the working face of the landfill. Portable fences may be used, where necessary, to control blowing litter in the active landfilling areas. The litter that escapes the portable fences, or the inbound vehicles, and blows to other areas of the property is picked up on a daily basis.

Litter is policed in the immediate proximity of the landfill, as necessary, to control any problems which may arise from debris blowing from trucks traveling along West Keene Road to the landfill. Vista Landfill, Class III facility employees observe West Keene Road daily, and often several times each working day. The litter along West Keene Road is picked up at least weekly, from Clarcona Road to the facility entrance, or more often if necessary, as evaluated by employee observation. Vista Landfill understands that Vista Landfill, Class III facility is part of a community, and that litter policing is part of being a good neighbor within that community.

## **8.6 Fire Control**

Fire protection procedures include maintaining soil stockpiles in the vicinity of the working face. The cover used in the landfill operation provides an effective firewall.

Should a fire occur at the landfill, the application of soil will be used to cut off the flow of oxygen into the burning areas. The local fire department will be contacted to assist site personnel and equipment. Appropriate fire extinguishers are carried on the equipment at all times and can be used to control any small equipment fire that may occur. Greater detail for dealing with fires is given in Section 9.1 of this plan.

## **8.7 Gas Control**

Vista accepts, and will continue to accept, only Class III materials which generate low levels of methane gas in comparison to generation rates at Class I landfills. The gas monitoring system will consist of 25 permanent gas monitoring probe locations in total build-out, as shown on the site plan presented in Figure 4. The gas probes are monitored on a quarterly basis for explosive gas content. Additionally, on-site structures are monitored quarterly.

Action must be taken whenever the measured methane concentration in soil monitoring probes exceeds the Lower Exposure Limit (LEL) for combustible gases at or beyond the landfill property boundary or exceeds 25% of the LEL in onsite structures. If the results of monitoring show that combustible gas levels exceed these concentrations, either the Site Engineer or the Compliance Manager will:

1. immediately take all necessary steps to ensure protection of human health and notify the Department;
2. submit a gas remediation plan to the Department within 7 days of the exceedance;
3. complete remediation within 60 days of exceedance, unless otherwise approved by the Department.

Quarterly methane monitoring reports, using the form in Attachment B, are reviewed by the Site Engineer or Compliance Manager and submitted to the Department at the following address:

Tom Lubozynski, P.E.  
Solid Waste Section  
Florida Department of Environmental Protection  
3319 Maguire Blvd., Suite 232  
Orlando, FL 32803

or via electronic mail: Tom.Lubozynski@dep.state.fl.us or facsimile: (407) 893-3124.

In the event that a permanent gas probe is not available for sampling, a "bar hole" is created in the vicinity of the damaged or missing probe by hammering a 3-foot long by ½-inch diameter metal "bar" into the ground the full length of the bar (i.e., three feet), and removing it, thus creating a "hole." Methane concentration is measured in this bar hole by inserting the instrument probe into the void and aspirating sample gas through the meter for 20-30 pumps on the aspirator

bulb. If methane is encountered, aspiration continues until a steady-state reading is obtained, typically within 20 pumps and always within 30 pumps. If no methane is encountered, aspiration is concluded after 30 pumps and "0%" is recorded.

Every attempt is made to replace a damaged or missing gas probe within a reasonable time frame, typically before the next quarterly sampling event. Site conditions such as construction may make this time frame impractical to achieve, however. Vista Landfill uses drilling vendors to replace permanent gas probes. One such vendor is listed below; however, other vendors may be used.

The Colinas Group  
509 North Virginia Avenue  
Winter Park, FL 32789  
(407) 622-8176

## **8.8 Odor Control and Monitoring**

Class III waste materials do represent a potential for the generation of odorous gasses. Most commonly, the odors are derived from the anaerobic decomposition of gypsum wallboard, which forms hydrogen sulfide (H<sub>2</sub>S) gas. The following sections address Vista Landfill, Class III facility's routine control, monitoring, and response procedures for odors caused by H<sub>2</sub>S.

### **8.8.1 Landfill Design and Operation**

The primary lines of defense against odor generation are design and operation. The Class III landfill has been designed with base grades that remain above the seasonal high water table and with final grades that help shed stormwater runoff. This design helps to minimize the potential for saturating the waste, which could subsequently lead to odor generation. Operations at Vista Landfill, Class III facility ensure that waste is compacted and graded to remain consistent with the intent of the design. Attention to waste placement, compaction, grading, covering and surveying will help maintain this record. Any poorly drained or ponded areas on top of the waste should be regraded in a timely manner.

### **8.8.2 Weather**

Another important factor that affects odor generation and transport is weather. Understanding seasonal and daily weather patterns can assist the understanding of what may be happening to transport odors once they are generated. Radiation inversions have been identified as an atmospheric condition that can trap odors near the ground, preventing dispersion. These inversions are caused when air near the ground surface is cooled more rapidly than the air above it. So, they are strongest just before daylight and during periods of clear skies and light winds.

The Operations Supervisor/Site Manager or Compliance Engineer record weather data from the on-site weather station on the Odor Survey Form (Attachment C). These daily weather logs are maintained on site and are available for review by FDEP and the City of Apopka upon request.

### **8.8.3 Odor Surveying**

At least once daily, Vista Landfill, Class III facility personnel patrol the property to detect and document odors. Attachment C provides a log for the odor patrol. The log includes information such as odor descriptors and locations. Additionally, staff should perform the patrol as early as possible in the day to document what will likely be the worst-case weather conditions for odors. If a moderate or strong odor is detected near the property line, staff may proceed off site in an effort to document the lateral extent (or off site source) of the odor. Vista Landfill, Class III facility personnel will not enter onto private property for odor studies without the consent of the property owner.

Odor surveying may also be supplemented by use of a hydrogen sulfide meter to quantify hydrogen sulfide concentrations (see section 8.8.4 for discussion of H<sub>2</sub>S meter use).

### **8.8.4 Odor Complaints**

Attachments D and E provide a mechanism to log and track odor complaint calls received by Vista Landfill, Class III facility at its main telephone number: 407-886-2920. Complaints are logged and compared to Vista Landfill, Class III facility's own odor observations and daily odor log. The Vista Landfill, Class III facility Operations Supervisor/Site Manager or Compliance Engineer will acknowledge complaints within one business day and address them within three business days.

Vista Landfill, Class III facility continues to endeavor to be an environmentally conscientious neighbor and take appropriate responses to odor complaints. The initial response is to cover waste. Any eroded cover will be addressed first, followed by the minimization of working face (as much as practical) by the application of initial cover. Other responses include dispersal of granular deodorizer or monitoring and recording H<sub>2</sub>S concentrations around the perimeter of the landfill or at offsite locations using a hydrogen sulfide meter. The Operations Supervisor/Site Manager or Compliance Engineer will determine an appropriate response to any given complaint.

Several levels of analysis are used to determine an appropriate response to a complaint. The first level of analysis is the comparison of complaints to weather data. An analysis of the wind strength and direction during the time of the odor problem may help verify or refute that Vista Landfill, Class III facility is causing odors. Other patterns may be identified to help explain the cause of the odors. For example, odors may be noticed following rain events, or during periods of low pressure. Data gathered during the daily odor monitoring is also evaluated. Data from monitoring and recording H<sub>2</sub>S concentrations around the perimeter of the landfill or at offsite locations using a hydrogen sulfide meter may also be evaluated.

Vista Landfill may conduct monitoring and recording of H<sub>2</sub>S concentrations around the perimeter of the landfill or at offsite locations using a borrowed or rented hydrogen sulfide meter. Hydrogen sulfide meters, such as the Jerome 631-X or other similar meter, are available from the Waste Management Southern Group office located in Atlanta, GA, (770) 805-4130, or a meter may be borrowed or rented from the following companies:

SCS Engineers  
3012 U.S. Hwy 301 N., Suite 700  
Tampa, FL 33619  
Tel: 813-621-0080

Grove Scientific & Engineering  
6140 Edgewater Drive, Suite F  
Orlando, FL 32810  
Tel: 407-298-2282

Alternatively, Vista Landfill may employ the services of a qualified professional to monitor and record H<sub>2</sub>S concentrations around the perimeter of the landfill or at offsite locations.

## **8.9 Water Quality Monitoring**

Groundwater and leachate are monitored in accordance with the requirements of FDEP and City of Apopka Operating Permits and Standard Operating Procedures (SOPs), as applicable. Extensive water quality monitoring is conducted at Vista Landfill, Class III facility on an annual (for leachate) and semi-annual (for groundwater) basis. The water quality monitoring locations are shown on the Permit Drawings. The Water Quality Monitoring Plan for the Vista Landfill, Class III facility provides detailed sampling and collection procedures in accordance with Rule 62-701.510, FAC.

Surface water monitoring is not required for the Vista Landfill, Class III facility in accordance with the current solid waste permit for the site.

## **8.10 Erosion Control**

The landfill is inspected daily using the form in Attachment C. Corrective action to repair areas of erosion where waste is exposed or which cause malfunction of the storm water management system will be implemented within three days of occurrence. If the erosion cannot be corrected within seven days of occurrence the landfill operator will notify FDEP with a proposed correction schedule.

## **8.11 Leachate Containment and Control**

Vista Landfill, Class III facility is equipped with a geomembrane liner system. Any liquid entering the landfill that may have contacted waste is collected in a Leachate Control System (LCS). The LCS drains collected liquid to the cell sump. Leachate in the sump is pumped to an auxiliary leachate storage facility with approximately 160,000 gallons of capacity and conveyed to a municipal sanitary sewer line located on West Keene Road for off-site treatment and disposal at the City of Apopka Waste Water Treatment Plant (WWTP) or an alternative WWTP. Quantities of leachate collected by the LCS are recorded in gallons per day at each cell and maintained as part of the landfill operating record.



## 9. CONTINGENCY OPERATIONS

Contingency operations include emergencies such as fire, natural disasters, and equipment failure. Waste will not normally be delivered to the site during emergency conditions; however, the following procedures will be initiated at the onset of a major event that may cause an emergency.

### Emergency Coordinators

Primary: Sheree Grant and Deborah Perez, District Managers 407-886-2920

Secondary: Daniel Galaza, Operations Supervisor/Site Manager

### 9.1 Fire Control Plan

On-site fire protection facilities consist of soil stockpiles in the vicinity of the working face. The initial cover used in the landfill operation provides an effective firewall. Instructions on fire fighting procedures are routinely provided for site personnel. Should fire occur at Vista Landfill, Class III facility, the application of additional cover will be used to cut off the flow of oxygen into the burning area. The local fire department will be contacted to assist Vista Landfill, Class III facility personnel and equipment, if necessary. Appropriate fire extinguishers are carried on the equipment at all times.

#### 9.1.1 When Fire Occurs

The following procedures are followed in the event of a fire at the facility:

1. Extinguish small fires with fire extinguisher or smother with soil - do not remain near large fires or explosive materials;
2. Determine location, extent, type, and, if possible, cause of fire or explosion;
3. Notify on-site personnel and implement safety and fire control procedures;
4. If the fire cannot be immediately controlled, the following steps should be taken:
  - a) Notify facility emergency coordinator
  - b) Notify City of Apopka Fire Department (911, or 407-703-1756). Clearly state:
    - Location of facility
    - Location of fire or explosion in facility
    - Extent of fire or explosion
    - Type of fire or explosion
    - Actions now being taken
    - Injuries
  - c) Notify rescue squad, if necessary
  - d) Notify health care facility, if necessary
5. Notify Florida Department of Environmental Protection within 24 hours via phone (407-894-7555 / 407-893-3328), e-mail (Tom.Lubozynski@dep.state.fl.us) or fax (407-893-3124). A letter must be submitted to FDEP within five days describing how the fire began, what was done to extinguish it and what will be done to prevent future fires.

### **9.1.2 "Hot Load" Procedures**

In the unlikely event that a "hot load" is not identified before entrance into the facility, the following procedures are implemented:

- The truck carrying the "hot load" is directed to dump the load in the landfill but away from the working face;
- The load is placed on top of intermediate cover which provides sufficient protection from the "hot load" and the underlying waste;
- Soil is then spread over the load to smother the "hot load"; and
- The "hot load" is monitored until there is no evidence of smoldering or high temperatures.

At the end of the day, or at a time when the waste has been well extinguished and cooled, the load is worked into the waste placement working face. The designated area for extinguishing the "hot loads" varies depending on the location of the working face, but is always away from the working face.

### **9.1.3 Fire Extinguishers**

Fire extinguishers are installed in the following locations:

- Onsite buildings
- Heavy equipment.

## **9.2 Hurricane Preparedness**

The following is a general guideline that is to be followed before, during and after any hurricane. Due to the nature of these storms, there may be some deviation from this guide. A Hurricane Planning Manual has been included in Attachment F, which provides key procedures regarding landfill facility shutdown in the days prior to landfall of any storm.

The Emergency Coordinator will oversee all preparations for the incoming storm and remain aware of any pending situation by monitoring weather reports. Other Landfill personnel will report to the Emergency Coordinator as follows:

Landfill Alternate Emergency Coordinator  
Shop Mechanic/Next Senior Operator  
Office Senior Clerk

Adequate cover material soil will be stockpiled. All ditches will be checked and cleaned for adequate flow. All lightweight signs and equipment will be collected and stored in a secure area.

Vista Landfill also has prepared a Hurricane Preparation and Planning Emergency Supplier Response Resource Notebook to be used as a tool to aid Market Area Hurricane Response Managers in their efforts to obtain, manage, and maintain open supply lines for needed goods, materials, and services as part of their hurricane preparation and recovery plan(s). This notebook is available for review by FDEP and the City of Apopka upon request.

## **10. LANDFILL FINAL CLOSURE**

A separate Closure Plan will be prepared for Vista Landfill, Class III facility at the time of closure. This closure plan will contain a closure report, closure design, closure operation plan, closure procedures, and discussions on long-term care and financial assurance.

### **10.1 Final Cover System**

As shown in the Permit Drawings, the final cover system consists of a geomembrane barrier, a two-foot soil layer, and vegetative cover. The grades of the final cover system are 3H:1V on the side slopes.

### **10.2 Erosion Minimization on Closed Areas**

Erosion of the final cover system is minimized by the establishment of vegetative cover as well as the installation of final cover swales, downchutes, and other surface water management systems. The swales intercept sheet flow from the final cover system and direct the water via downchutes to perimeter storm water ponds.

A vegetative cover is placed on the final cover slopes of the landfill to minimize erosion and reduce soil loss from the surface of the final cover system. Any substantial erosion damage or vegetative stress will be repaired before significant erosion has a chance to develop. Ruts or rills which are six (6) inches or greater in depth are considered substantial.

Corrective action to repair areas of erosion will be implemented within three (3) days of occurrence, weather permitting. If the erosion cannot be corrected within seven (7) days of occurrence the landfill operator will notify FDEP with a proposed correction schedule.

### **10.3 Inspections of Closed Area**

The final cover system will be inspected quarterly using the form in Attachment C. The inspection will include observations for erosion, vegetative stress, obvious differential settlement, and ponding of water. The surface water control structures will be inspected and cleaned if they become obstructed.

## 11. FINANCIAL RESPONSIBILITY

Proof of financial responsibility is prepared in accordance with FDEP requirements. The final closure cost estimates will be updated annually between January 1 and March 1 by the Site Engineer and/or the Compliance Manager and sent for review and approval to:

Tom Lubozynski, P.E.  
Florida Department of Environmental Protection  
3319 Maguire Blvd., Suite 232  
Orlando, FL 32803

Upon receipt of approval of the updated estimate, a revised mechanism in the form of a bond, insurance certificate, or other acceptable financial assurance mechanism to demonstrate financial responsibility will be provided by Vista Landfill.

The revised mechanism is sent to:

Frank Hornbrook  
Florida Department of Environmental Protection  
2600 Blair Stone Road, MS 4565  
Tallahassee, FL 32399

with a copy to:

City of Apopka:  
R. Jay Duvall, P.E., City Engineer  
City of Apopka  
120 East Main Street - 2nd Floor  
Apopka, Florida 32703

## 12. OPERATING RECORD

In accordance with Rule 62-701.500(3), FAC, an operating record shall be maintained at the site including all records, reports, analytical results and notification required by Chapter 62-701, FAC, as well as the training verifications required by Chapter 62-701, FAC. This record is kept at the facility and is available for inspection by the FDEP and the City of Apopka.

As part of the operating record, waste records are maintained in accordance with Rule 62-701.500(4), FAC. These waste records indicate the amount of each type of waste received each day. Waste reports, summarizing the waste records, are compiled monthly and copies are provided to FDEP annually. The waste records are kept at the facility and are available for inspection by the FDEP and the City of Apopka.

The operating record also includes the information and observations resulting from each random inspection of a waste load conducted as part of the load-checking program in accordance with Rule 62-701.500(6), FAC.

In addition, to satisfy the requirements of Rule 62-701.500(3), FAC, the operating record also includes the following:

- Records of all information used to develop or support the permit applications and any supplemental information required
- Records of all monthly information, including calibration and maintenance records, and water quality records
- An annual estimate of the remaining life and capacity in cubic yards of the existing, constructed facility and remaining life and capacity of other permitted areas not yet constructed (this estimate is reported annually to FDEP).

The operating records are maintained at the facility throughout the design life of the facility.

## **13. OPERATIONS OF THE YARD TRASH AND ORGANIC PROCESSING AND RECYCLING FACILITY**

### **13.1 Overview**

Vista Landfill, Class III will include the operation of an organic processing and recycling facility (ORF). Organic material consisting of yard trash, manure, animal byproducts, pre-consumer vegetative waste, and other vegetative wastes as defined by 62-709, F.A.C will be accepted at this facility. Organic material received at Vista Landfill, Class III will be unloaded in designated delivery areas as shown on Figure 3A. The yard trash will be processed mechanically to reduce the particle size in preparation for mixing with organic material for composting, used by landfill operations for erosion control, or shipped off site for use as fuel. The organic material will be mixed with the processed yard trash and moved to the active compost area. After the organic material/processed yard trash mixture is composted, it is moved to the curing area. Upon completion of the curing cycle, the compost is moved to the finishing area where it is transported off site to market. The remainder of this section provides a detailed description of the daily operations of the ORF in accordance with the general requirements of Rule 62-709.320 of the F.A.C..

### **13.2 Description of the Yard Trash and Organic Processing and Recycling Facility**

#### **13.2.1 Description of Yard Trash and Organic Waste**

Yard trash will be collected from landscapers, tree service companies, and clearing contractors, as well as yard trash materials collected under curbside collection programs. Also included are clean lumber and pallets. Yard trash as defined in Rule 62-709, F.A.C.:

Yard trash means vegetative matter resulting from landscaping maintenance or land clearing operations and includes materials such as tree and shrub trimmings, grass clippings, palm fronds, trees and tree stumps, and associated rocks and soils. For purposes of this chapter, it also includes clean wood.

Yard trash accepted for processing will not contain significant amounts of rock or soil. Painted, treated, or chemically altered wood or lumber along with other prohibited wastes are specifically excluded.

The pre-consumer vegetative waste will be collected from grocery markets and other produce venues. As defined in Rule 62-709, F.A.C.:

Pre-consumer vegetative waste means source-separated vegetative solid waste from commercial, institutional, industrial or agricultural operations that is not considered yard trash, and has not come in contact with animal products or byproducts or with the end user. This term includes material generated by grocery stores, packinghouses, and canning operations, as well as products that have been removed from their packaging, such as out-of-date juice, vegetables, condiments, and bread. This term also includes associated packaging that is vegetative in origin such as paper or cornstarch based products, but does not include packaging that has come in contact with

other materials such as meat. Plate scrapings are specifically excluded from this definition. These wastes are putrescible waste as defined in Rule 62-709 F.A.C..

PVW accepted at the ORF includes, but is not limited to, the following:

- Vegetative material from retail produce not suitable for sale
- Produce damaged during transport
- Unsold or spoiled produce

Manure will be collected as defined in Rule 62-709, F.A.C:

Manure means a solid waste composed of excreta of animals, and residual materials that have been used for bedding, sanitary or feeding purposes for such animals. For purposes of this chapter, manure does not include such material generated and managed by normal farming operations, but does include "paunch manure," which is the undigested stomach content of cattle.

Animal byproducts will be collected as defined in Rule 62-709, FAC:

Animal byproducts means source-separated organic solid waste that is animal in origin, such as meat, fat, dairy, or eggs, and is generated by commercial, institutional, agricultural, or industrial operations. This term includes waste generated by prison facilities, grocery stores, manufacturing or packaging plants, butcher shops, restaurants and abattoirs. This term also includes packaging that has come into contact with animal byproducts. These wastes will be viewed as putrescible waste in this chapter.

Animal byproducts accepted at the ORF includes, but is not limited to, the following:

- Meat, dairy and eggs from pre and post consumer sources.
- Meat, dairy and eggs from retail not suitable for sale.

Vegetative waste will be collected as defined in Rule 62-709, F.A.C:

Vegetative waste means source-separated organic solid waste that is vegetative in origin, and is generated by commercial, institutional, agricultural or industrial operations that is not considered yard trash. This term includes waste generated by grocery stores, prisons, restaurants, packing houses, and canning operations, as well as products that have been removed from their packaging, such as out-of-date juice, vegetables, condiments, and bread. This term also includes packaging that is vegetative in origin such as paper or corn-starch based products. These wastes are putrescible waste as defined in this chapter. Where the term is not used in conjunction with the term pre-consumer, it included vegetative waste that may have come in contact with the end user.

Vegetative wastes accepted at the ORF includes, but is not limited to, the following:

- Pre and post consumer sources to include fruits, vegetables, breads and juices

### **13.2.2 Organic Material and Yard Trash Delivery Areas**

The organic material delivery area will be approximately up to 13,000 square feet and includes an area for mixing with processed yard trash. Upon delivery, organic material is mixed with processed yard trash and constructed into an active compost pile. Operations do not include the storage of organic material or organic material mixed with processed yard trash.

The yard trash delivery and processing area will be approximately up to 75,000 square feet and includes a section for deliveries, processing, and storage. Processed yard will be moved to the organic material mixing area as necessary. Any surplus processed will be used as erosion control at Vista Landfill LLC.

Although not expected to occur, at a maximum, any yard trash received at the facility not utilized for mixing with organic material shall be removed within 18 months.

### **13.2.3 Compost Area Storage Capacity**

The active composting area will be up to 165,000 square feet and includes the organic material delivery and mixing area and yard waste delivery and processing areas. The active composting will consist of discrete piles of organic material and processed yard trash moving directly from mixing to a compost pile. Upon completion of the active composting cycle, the product is moved to the curing area where it further stabilizes prior to shipment.

Once completely built out, the target rate of incoming organic material targeted for use in composting is expected to be on average 86 tons per day, five days per week. In addition, it is also expected that an average of 86 tons per day, five days per week average of yard trash will be used in the composting process.

### **13.2.4 Curing and Finishing Area Storage Capacity**

The curing area will be up to 58,000 square feet. Upon completion of the active composting cycle, the organic material/yard compost product is constructed into curing piles. Once cured, compost is moved to finished compost storage area (up to 50,000 square feet). Prompt arrangements are made to transport product off site as dictated by the market.

### **13.2.5 Active Composting Operation**

The active compost area (including the organic material delivery and mixing areas) is constructed with a foundation and surface pavement to support the composting equipment and facilitate proper site cleanup. This pavement surface is included in the ERP No 48-0187635-008-EM issued on June 10, 2011. Once organic materials are delivered, they are mixed using a recipe designed to balance the nutrients necessary for aerobic decomposition. Mixing will be performed by front-end loaders and/or conventional mixing equipment at the designated mixing area. The blended material will be placed into an active composting system designed per selected Vendor. The entire system will be capable of processing 45,000 tons of incoming organic material per year or 173 tons per day of compostable organics when fully built.



The engineered system uses the aerated static pile method of composting with negative aeration and biofiltration. Retention time for the active composting phase is approximately 45 days. During the active composting process, the piles are turned over and reformed up to three times. The piles are covered between turns. This turning process serves to re-establish good pile porosity and expose new surface area for the microorganisms. A computer-controlled system regulates temperature and airflow to ensure an aerobic environment in the composting mass and ensure thermophillic decomposition. During the active composting process, it is essential to maintain the moisture content of the compost material. This action is completed by introducing liquids into the material through a series of sprinklers. The type of liquid used may be fresh water, or the facility may also recirculate process liquids that have been collected and stored within the onsite tank.

After the active composting phase of approximately 45 days, the compost product is put into curing piles where it continues to compost, cools down, and further stabilizes for about 60 days. Once cured, the finished product will be shipped to landscapers, and horticultural and agricultural users.

The engineered active composting system will use both synthetic and natural covers as part of the composting process during the active composting phase. The synthetic covers are made of a waterproof and UV resistant fabric, designed to provide process control during active composting operations. The covers also provide a barrier to vectors and precipitation, and reduce pile drying.

Organic materials shall be processed and incorporated into the composting material, or removed from the facility as necessary. Organic material, yard trash, or organic material/processed yard trash mixture (i.e., compost) shall not be stored or processed in piles that exceed 12 feet in height. All compostable material accepted by the facility will be processed promptly. It is not expected to store compost for long periods; however, compost will be removed within 18 months. Vista Landfill, Class III is authorized under a solid waste landfill permit. As such, FDEP shall authorize on-site storage of compost for longer than 18 months if the owner or operator demonstrates that there is quantifiable use for such material for cover, erosion control, closure, or other similar activities at the permitted facility.

### **13.3 ORF Stormwater Control**

Stormwater management within the ORF is achieved by grading all areas so that stormwater will be diverted into a conveyance system discharging directly into the stormwater basin. This facility has no offsite discharge of stormwater.

Process liquids are collected by floor drains in the process bunkers and stored within the onsite tank. This design ensures process liquids are contained within the bunkers and not allowed to enter the stormwater system. Additional BMPs, such as berms or booms, may be used to ensure that process liquids are segregated from the stormwater system.

### **13.4 Effective Barrier**

The yard trash mulching area and vegetative composting area are located within Vista Landfill, Class III. Access to Vista Landfill by all vehicles shall be via a single secured site entrance. The entrance will allow for safe and orderly traffic flow into and out of the facility. Signs will be posted at the site entrance indicating the name of the facility, name of the operating authority, hours and days of operation. Once vehicles delivering wastes have been weighed or measured, they will follow signs posted along the access road(s). Traffic control and safety requirement signs will be located near the entrance to the facility as required.

### **13.5 Dust Control Methods**

Dust control at Vista Landfill, Class III and the Yard Trash Processing Area/vegetative compost area will be performed with the use of a water truck. The water truck is listed in Section 7.1 as standard equipment designated for operation of the Vista Landfill, Class III. The access roads and other areas utilized for the handling, processing and storage of yard trash will be watered on an as-needed basis to control dust.

### **13.6 Fire Protection**

Fire control at Vista Landfill, Class III is addressed in Part 8.6 of this Operation Plan. In addition, the water truck that will be used for dust control is also equipped with a pump and hose to assist with fire control. Activities involving an open flame shall not be allowed in the vicinity of this operation and, in no case, closer than 50 feet to any stored or processed yard trash or compost. The area would be designated as smoke free, and processing equipment would be fitted with mufflers and appropriate spark arresters.

On-site fire protection facilities consist of soil stockpiles in the vicinity of the yard trash and compost processing area. The initial cover used in the landfill operation provides an effective firewall. Instructions on fire fighting procedures are routinely provided for site personnel. Should fire occur at Vista Landfill, Class III facility, the application of soil cover will be used to cut off the flow of oxygen into the burning area. The local fire department will be contacted to assist Vista Landfill, Class III facility personnel and equipment, if necessary. Appropriate fire extinguishers are carried on the equipment at all times.

The area around any stored materials (processed or unprocessed) will be maintained for access by firefighting equipment. An all-weather access road will be maintained from the facility entrance to the compost area.

### **13.7 Odor and Vector Control**

The ORF will be operated to control odors and vectors. Odor and vector control will be accomplished by following sound management procedures. Incoming feedstocks will be managed to minimize odors and vectors by covering and incorporating material into the process in a timely manner. Once incorporated, a well designed, nutrient-balanced compost mix creates composting conditions which are generally inhospitable to vectors. During active composting, the active composting system will use a computer controlled negative aeration system and

biofiltration to manage and treat process air. Biofiltration is a standard industry method to ensure sound odor management during the active composting process. Air is drawn through the natural and/or synthetic covers, providing oxygen to encourage aerobic composting conditions. The process air then passes into the biofilter where the air is physically and biologically scrubbed to remove any odorous compounds. This technology has been demonstrated to sufficiently control odors and allow a sustainable environmentally-friendly composting process. Additional odor controls may be provided, if warranted. Vectors will also be controlled by maintaining the temperature over 40 C for 15 days with an average temperature of 45 C or greater over that time period.

Odors will also be monitored should the facility choose to recirculate process liquids. During the recirculation process, onsite personnel will monitor for objectionable offsite odors. This process will be ceased if any objectionable odors are detected.

### **13.8 Pathogen Reduction and Disinfection**

As required by 62-709.300(8)(a)1, the facility will ensure disinfection by the following methods: The density of fecal coliform is less than 1000 Most Probable Number per gram of total solids, or the density of *Salmonella* sp. bacteria is less than three Most Probable Number per four grams of total solids; and maintain 55 degrees Celsius or higher for three consecutive days in an aerated, insulated static pile. Temperature probes are designed to monitor temperature at a two foot depth within the pile.

### **13.9 Yard Trash Removal**

All yard trash received at the Yard Trash Processing Area is planned to be processed into compost. Any surplus processed will be used as erosion control at Vista Landfill LLC or shipped off site for use as fuel.

Although not expected to occur, any yard trash received at the facility, not utilized for mixing with organic materials shall be removed within 18 months. Logs with a diameter of 6 inches or greater will be separated and stored apart from the other materials. The logs may be stored for up to 18 months prior to removal.

The Yard Trash Processing Area will accept only yard trash and bags used to collect yard trash. Any other materials discovered within the yard trash shall be placed in containers and removed in accordance with this Operation Plan. All Class I material, other than incidental content and other prohibited wastes will be removed and managed as approved by FDEP.

### **13.10 Registration**

The yard trash processing area is permitted as part of Vista Landfill, Class III per the FDEP Permit No. SC48-0165969-014 and SO48-0165969-015 letter dated July 8, 2009. Therefore, in accordance with Rule 62-709.320(1)(c), F.A.C., Vista Landfill, Class III does not need to register the yard trash processing area with FDEP. However, the organic material/processed yard trash composting area will be registered in accordance with Rule 62-709.320(1)(a) F.A.C. This registration will be renewed annually (by July 1) until the next solid waste permit renewal or

modification, at which time, the composting operation would be incorporated into the solid waste permit.

### **13.11 Record Keeping and Reporting**

As required by 62-709.460(9), Vista Landfill, Class III will keep monthly records of the incoming and outgoing yard trash, PVW, and compost material for a period of three years. The records will be maintained on-site. The same units (i.e., either yardage or tonnage) will be used to record the incoming and outgoing material. Vista Landfill, Class III will submit an annual report that will summarize the monthly records, based on the preceding calendar year. The annual report, based on the preceeding calendar year, will summarize the monthly records and be submitted to FDEP By July 1 using Form 62-709.320(7)(b).

Also, records shall be kept for any temperature monitoring performed and for any demonstration that disinfection has been achieved for at least the duration of the project, or until all material has been removed from the facility site, whichever is greatest. These records shall be made available to the Department upon request, and shall be summarized in the progress and final reports.

## VISTA CLASS III LANDFILL FACILITY PERSONNEL LISTING

Name	Position	Certification
Deborah Perez	District Manager	SWANA Certified Landfill Manager
Sheree Grant	District Engineer	
Daniel Galarza	Operations Supervisor	FDEP Operator/Spotter
Dana Allison	Operator	FDEP Operator
Jason Hall	Operator	FDEP Operator
Debra Mangold	Scale Operator	FDEP Spotter
Leslie Holmes, Jr.	Operator	FDEP Operator
Eric Proctor	Operator	FDEP Operator
Michael Johnson	Operator	
Ray Stamper	Organics Operations Manager	Certified Compost Manager

**OPERATION PLAN  
FOR  
VISTA LANDFILL, CLASS III  
APOPKA, FLORIDA**

*Prepared for:*



**WASTE MANAGEMENT INC. OF FLORIDA**

**Vista Landfill, LLC  
242 West Keene Road  
Apopka, Florida 32703**

*Prepared by:*



**100 East Pine Street, Suite 605  
Orlando, Florida 32801**

Revised ~~June 2012~~ April 2014

\_\_\_\_\_  
James E. Golden,  
P.G.  
FL # PG945  
Date:

The engineered system uses the aerated static pile method of composting with negative aeration and biofiltration. Retention time for the active composting phase is approximately 45 days. During the active composting process, the piles are turned over and reformed up to three times. The piles are covered between turns. This turning process serves to re-establish good pile porosity and expose new surface area for the microorganisms. A computer-controlled system regulates temperature and airflow to ensure an aerobic environment in the composting mass and ensure thermophillic decomposition. During the active composting process, it is essential to maintain the moisture content of the compost material. This action is completed by introducing liquids into the material through a series of sprinklers. The type of liquid used may be fresh water, or the facility may also recirculate process liquids that have been collected and stored within the onsite tank.

After the active composting phase of approximately 45 days, the compost product is put into curing piles where it continues to compost, cools down, and further stabilizes for about 60 days. Once cured, the finished product will be shipped to landscapers, and horticultural and agricultural users.

The engineered active composting system will use both synthetic and natural covers as part of the composting process during the active composting phase. The synthetic covers are made of a waterproof and UV resistant fabric, designed to provide process control during active composting operations. The covers also provide a barrier to vectors and precipitation, and reduce pile drying.

Organic materials shall be processed and incorporated into the composting material, or removed from the facility as necessary. Organic material, yard trash, or organic material/processed yard trash mixture (i.e., compost) shall not be stored or processed in piles that exceed 12 feet in height. All compostable material accepted by the facility will be processed promptly. It is not expected to store compost for long periods; however, compost will be removed within 18 months. Vista Landfill, Class III is authorized under a solid waste landfill permit. As such, FDEP shall authorize on-site storage of compost for longer than 18 months if the owner or operator demonstrates that there is quantifiable use for such material for cover, erosion control, closure, or other similar activities at the permitted facility.

### **13.3 ORF Stormwater Control**

Stormwater management within the ORF is achieved by grading all areas so that stormwater will be diverted into a conveyance system discharging directly into the stormwater basin. This facility has no offsite discharge of stormwater.

Process liquids are collected by floor drains in the process bunkers and stored within the onsite tank. This design ensures process liquids are contained within the bunkers and not allowed to enter the stormwater system. Additional BMPs, such as berms or booms, may be used to ensure that process liquids are segregated from the stormwater system.

biofiltration to manage and treat process air. Biofiltration is a standard industry method to ensure sound odor management during the active composting process. Air is drawn through the natural and/or synthetic covers, providing oxygen to encourage aerobic composting conditions. The process air then passes into the biofilter where the air is physically and biologically scrubbed to remove any odorous compounds. This technology has been demonstrated to sufficiently control odors and allow a sustainable environmentally-friendly composting process. Additional odor controls may be provided, if warranted. Vectors will also be controlled by maintaining the temperature over 40 C for 15 days with an average temperature of 45 C or greater over that time period.

Odors will also be monitored should the facility choose to recirculate process liquids. During the recirculation process, onsite personnel will monitor for objectionable offsite odors. This process will be ceased if any objectionable odors are detected.

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Leslie Holmes, Jr.	Operator	FDEP Operator
<del>Diana Chenault</del>	<del>Spotter</del>	<del>FDEP Spotter</del>
Eric Proctor	Operator	FDEP Operator
<del>Brian Tschantre</del>	<del>Operator</del>	<del>FDEP Operator</del>
<u>Michael Johnson</u>	<u>Operator</u>	
<u>Ray Stamper</u>	<u>Organics Operations Manager</u>	<u>Certified Compost Manager</u>