Composting Operation & Maintenance Plan

Southeast County Landfill

Hillsborough County
Florida

September 2015

Table of Contents

List of Figures

List of Tables

Appendices

SECTION 1 PURPOSE

This composting manual was developed for use as a reference tool and guide for the staff of the Hillsborough County Solid Waste Management Division (SWMD). Composting depends on vigilant and conscientious data collection and process monitoring. Determining when to turn a windrow is subjective and depends on many interrelated variables including moisture, temperature, oxygen, and carbon dioxide (CO_2) levels; none of which alone stands as a sole indicator. A copy of the Operations and Maintenance (O&M) Manual will be kept at the facility and will be updated as necessary.

1.1 DEFINITION

Composting is a biological process that converts organic matter into a nutrient rich soil conditioner and amendment. In practice, process management in composting is based on the control of chemical and physical factors such as nutrients, moisture, oxygen concentration, and heat management to control temperature. The composting matrix is comprised of solids and water and air filled void spaces between solid particles. Composting bio-systems are dynamic. Microbial activity can use up all the oxygen, raise the temperature to lethal limits, and evaporate away the moisture, all which can negatively impact your composting process and end product. Micro-bacteria and a suitable environment for them to exist in is critical, as through their consumption of the carbon and nitrogen nutrients found in the feedstock, they build their own protein structures to multiply and create more bacteria to assist in the composting process.

SECTION 2 FACILITY OPERATIONS

The Composting Program is operated at Hillsborough County's Southeast County Landfill located at 15960 County Road 672 Lithia, FL 33547. The landfill's Solid Waste Operating Permit number is 35435-022-SO/01, issued 11/7/2013.

Figure 1 shows the location for the Compost site on an inactive lined area of Sections 7-9 of the Capacity Expansion Area (CEA) of the landfill. This area is covered with 18 inches of compacted interim cover material, and located within the landfill's leachate collection system. The working pad is an approximate 6-inch thick layer of compacted asphalt. The pad is graded so that any leachate and surface run-off from the materials mixing area and active windrow curing processing area will be directed to a sump draining into the underlying landfill leachate collection and removal system (LCRS). The stormwater, over areas where the cured product is stored, will not mix with the runoff from the mixing and initial curing areas will be allowed to sheet flow into the stormwater management system.

Figure 1. Compost Site Location

2.1 EQUIPMENT REQUIREMENTS

Following are key design features and specifications for the equipment to be used:

- **Front-end Loader:** articulated rubber tire loader; 7 cubic yard light material bucket; dumping height of 10 feet measured from bottom of bucket; enclosed air-conditioned cab with air filtration.
- **Windrow Turner:** hydraulic variable-speed rotor, capable of turning 8 foot tall 16 foot wide windrows.
- **Trommel Screen:** 7 ft. diameter and 20 ft. long drum; 5/8 in. punch plate screen, 6.5 cubic yard feed hopper; unders and overs stacking conveyors.

2.2 INCOMING/RECEIVING

All materials will be weighed and managed respectfully as outlined below. Scale records will represent daily tonnages, compiled monthly and maintained at the facility for regulatory review as needed.

The Composting Program will handle dewatered, waste activated sludge (i.e., biosolids) generated by the County's Advanced Wastewater Treatment Facilities (AWWTF). The Composting site will utilize processed (ground) yard waste delivered to the site from commercial and residential customers. Incoming loads of yard trash will be weighed on landfill truck scale and directed to the Bulking Agent Storage Area at the composting site. Loads will be inspected to ensure that they do not contain unacceptable materials such as plastic bags or municipal solid waste.

The yard waste processing contractor grinds the yard waste with a tubgrinder fitted with a 6 inch screen, which will produce a material with a wide variation of particle sizes. These material characteristics are necessary to provide readily available carbon, ensure structure and porosity to maintain aerobic conditions, and help control odors during composting.

After batches of compost have been screened (described in detail below), the screen "overs," which are comprised of undecomposed yard waste are recycled into active composting, thereby reducing the quantity of freshly processed yard waste required.

The County will ensure that sufficient volumes of prepared yard trash are available at the composting site each day prior to receiving biosolids. Three separate stockpiles of processed yard trash will be prepared for use during mixing and windrow construction:

- **Fresh Ground Yard Trash:** This material tends to have a relatively low moisture content and high porosity ideal for mixing incoming biosolids.
- **Blended Ground Yard Trash and Screen-overs:** Screen-overs are the large fraction of screened raw compost from screening during post-processing. This blend of materials (approximately 50:50) creates an ideal base layer under the active composting windrows to promote passive aeration as well as insulate windrows from the ground.

- **Unscreened Biosolids Compost:** Provides an ideal capping layer to insulate the active compost mixture and act as a biofilter to minimize odors. Alternatively, ground yard trash may be utilized.

2.3 MIXING PROTOCOLS

Windrows for active composting will be constructed directly on the compost pad. All windrows will be constructed in line with the gradient to promote effective drainage between windrows and across the entire site. Prior to receiving incoming biosolids, site staff will utilize a front-end loader to construct a receiving pad for biosolids, which entails the following procedures:

- Spread a 12-inch base layer of blended yard trash and screen-overs in the location where the windrow is to be constructed for that day's biosolids.

- Spread fresh ground yard trash on top of the base layer equivalent to approximately twice the volume of biosolids to be received and build up a berm with extra ground yard trash on the end and two sides to contain biosolids.

Incoming loads of biosolids will be weighed on the landfill truck scale and directed to the Active Composting Area at the Project site. Site staff will document on a form the date, time, biosolids quantity, bulking agent type, and operator's name upon arrival at the Project. A sample form is included in the Appendix A of this plan.

Staff will then direct biosolids to be unloaded directly into the bermed area. The berm restricts the spread of the biosolids and the fresh ground yard trash absorbs free liquids, if present. To avoid potential cross contamination of untreated and treated residuals, equipment used for receiving, managing, and mixing biosolids shall not be used for operations other than those directly related to the active composting area. Any alternate use of the equipment shall require sanitary washing prior to operation.

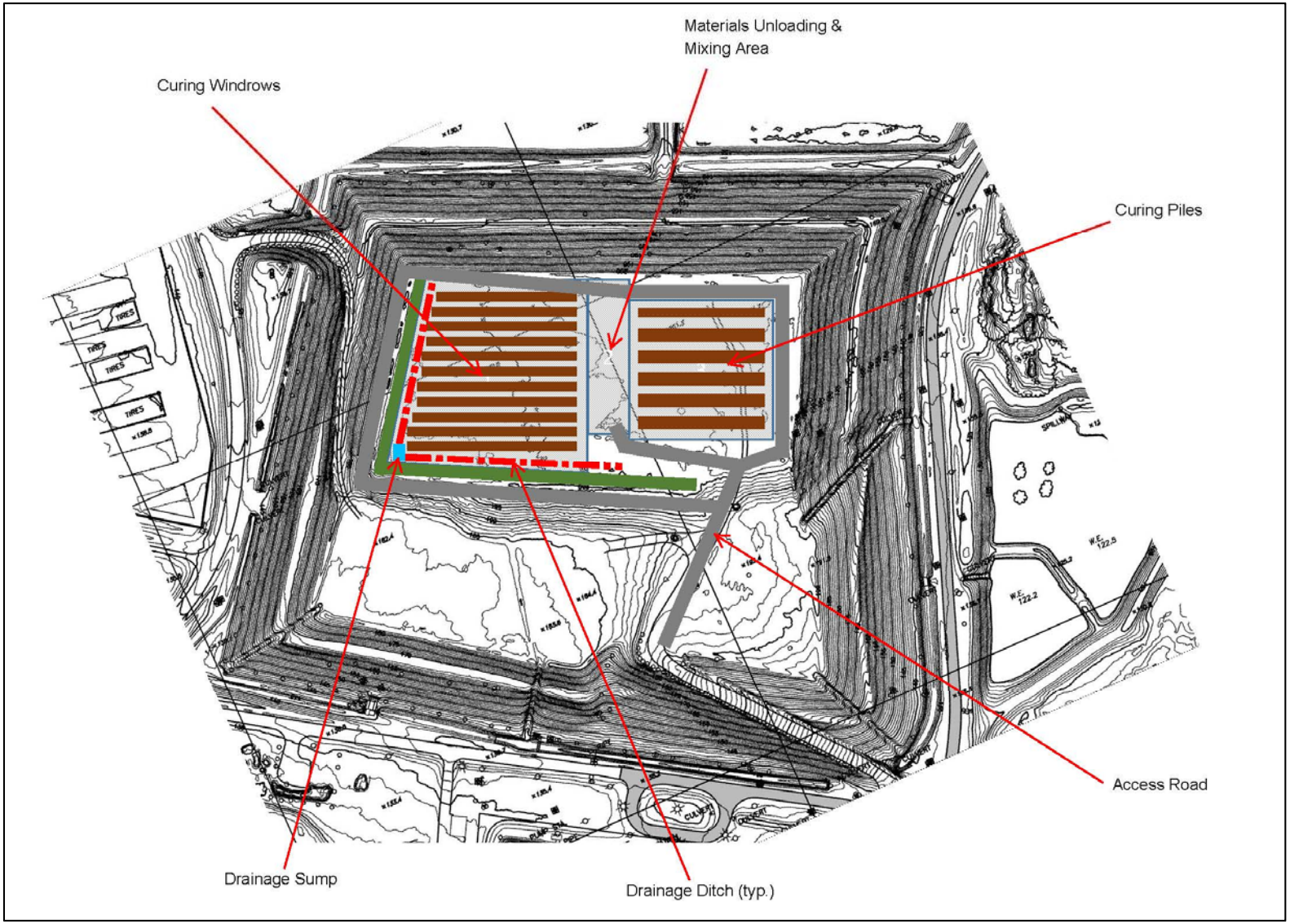
Immediately following unloading, staff will place additional ground yard trash on top of the biosolids to equal an approximate 3:1 volumetric ratio of bulking agent to biosolids. This ratio will be adjusted as necessary depending on the characteristic of materials to obtain optimal balance of moisture content, porosity, and carbon-to-nitrogen ratio.

Staff will promptly shape the mixture into uniform windrow dimensions approximately 8 feet high and 16 feet wide utilizing either the front end loader or windrow turning machine. The approximate location of the windrows on the pad are shown in Figure 2.

Target parameters for the mixture of biosolids and bulking agent are:

- C:N ratio: 25:1 to 35:1
- Moisture content: 50% to 60%
- Sufficient porosity provided by large pieces of bulking agent

Figure 2. Compost Pad Layout



2.4 DAILY READINGS

During active composting, site staff will work to maintain optimal conditions in the windrows for high temperature, aerobic composting.

With a proper C:N ratio, moisture content, porosity, and bulk density initially established during mixing, composting will naturally begin and windrows will rapidly heat up. Staff will monitor four key parameters to assess the composting process.

- **Temperature:** Temperatures will be monitored daily during active composting. Sustained temperatures above 131°F (55°C) are required to achieve regulatory requirements for pathogen reduction (process to further reduce pathogens or PFRP).
- **Moisture Content:** Moisture will be assessed on a weekly basis during active composting. Moisture levels of 50% to 60% percent are optimal.
- **Odor:** Odors will be assessed daily upon first arriving at the site and periodically throughout the day.
- **Visual:** The physical conditions and structure of windrows will be observed regularly.

2.5 MODIFIED STATIC AEROBIC PILE (MSAP) COMPOSTING METHOD

The Compost site will utilize the MSAP composting method developed by Harvest Quest International (Harvest Quest). Harvest Quest developed a proprietary inoculant which accelerates and uniquely enhances the natural biological process of composting. The MSAP method is a combination of both Static Pile and Windrow composting methods that has been approved by the FDEP and Environmental Protection Agency (EPA) Region 4 as a method modification to the 40 CFR 503 regulations for achieving regulatory requirements for Class A pathogen reduction and vector attraction reduction. In order to meet these requirements, windrows must meet the following process standard:

- Each windrow is covered with a minimum 12-inch thick layer of unscreened finished compost or fresh ground yard waste.
- Maintain a minimum of 131°F in each windrow for a minimum period of 15 consecutive days at the following depths; 10, 20, 30 and 40 inches into the pile.

Each day after completing windrow construction, staff will apply the Harvest Quest inoculant to the surface of the pile on each end. The inoculant does not need to be mixed throughout the rest of the windrow. After addition of the catalyst, staff will cover (cap) each windrow with a 12-inch layer of unscreened finished compost or ground yard trash. This capping layer provides an biofilter and is a highly effective vector attraction reduction method. The capping layer also

insulates the pile from external influences and allows the windrow to achieve 131°F temperatures to the extreme edges of the composting matrix.

Within several days the whole pile, from just beneath the capping layer through to the core, will typically exceed 131°F (55°C). Staff will continue daily temperature monitoring to ensure it is at least 131°F for at least 15 consecutive days.

If a windrow does not achieve the regulatory standard, it will either be torn down, blended into fresh material and reintroduced to composting or it may be disposed in the active landfill working face.

The windrow remains undisturbed (static) for an initial 30 day period, after which it is turned for the first time. Turning the windrow at this point thoroughly blends the materials, reduces compaction caused by natural settlement, and redistributes moisture providing consistent moisture content. Following a further 14 days of composting the windrow is turned a second time to again blend material at which the windrow will be entering the final phase of composting and is ready to be moved to the curing and storage area.

Windrows remain in active composting to maintain aerobic conditions for approximately 30 to 45 days until temperatures naturally begin to decline as the biological composting process nears completion.

Curing: At the end of active composting, each windrow will be screened with fine mesh to separate the fine particles (finished compost) from the not-yet-decomposed bulking agent (screen-overs).

The screen-overs result from the larger particles of yard trash that were purposely added at the mixing stage to facilitate good airflow through the piles during the composting phase. These larger sized wood residuals are too big to biodegrade in one composting cycle. However, they are now in an advanced stage of degradation and can degrade completely when reused in subsequent composting cycles.

Separated fines will be placed in a cure pile and allowed to mature for a minimum of 14 days. At the conclusion of the curing phase, samples will be collected and shipped for off-site lab analysis. The approximate location of the curing piles on the pad are shown in Figure 2.

2.6 PATHOGEN REDUCTION

The compost will meet pathogen reduction standards for Class AA composting defined by FDEP as follows:

- Windrows shall be covered with a minimum 12 inch capping layer
- Time and temperature for MSAP composting: 15 consecutive days at a minimum of 55°C (131°F) at depths of 10, 20, 30, and 40 inches
- Fecal coliform <1,000 MPN/gram TS
- Salmonella <3 MPN/4 gram TS

2.7 VECTOR ATTRACTION REDUCTION

The compost program will achieve the vector attraction reduction standard for Class AA compost by maintaining an aerobic composting process at greater than 40°C for 14 days or longer (Option 5 in the CFR Part 503 rule). Alternately, the Project may demonstrate compliance with the vector attraction reduction by achieving 38 percent volatile solids reduction during the composting process.

2.8 ODOR CONTROL

The compost site is located at the operating Southeast County Landfill in a sparsely populated area. In general the site is well situated for preventing potential negative odor impacts off site. Prevailing wind blows toward the northwest. The nearest residential dwellings are located to the southeast approximately 6,000 feet from the Project site. A large area of woods and ponds lies in between which would likely attenuate malodors that may emanate from the Project. Towards the northwest, the nearest resident is over 7,000 ft. from the compost site location.

Based on the site's remote location, the industrial land uses, and the adjacent active landfill, it is expected that the Project will not result in negative odor impacts.

Nevertheless, the site will implement an odor monitoring and control program as is considered best practice for biosolids composting.

Site staff will monitor for odors at the property boundary daily. A sample monitoring form is included in Appendix B. The most likely time when malodors may be generated will be during windrow construction and windrow turning during the initial active composting. The possibility of malodors will be controlled at these times as follows:

- **Windrow Construction:** biosolids shall be covered with bulking agent promptly after delivery, and thoroughly mixed to evenly distribute biosolids throughout the bulking agent. When utilizing the MSAP method a capping layer will be placed on the windrows immediately after mixing.

- **Windrow Turning:** windrows will not be turned during early morning hours or thermal inversions when air flow tends to keep odors low to the ground. Instead windrow turning will be scheduled for later morning through midafternoon hours when atmospheric mixing is greater and potential odor dispersion enhanced.

In the unlikely event that odor issues do arise, the following information can be utilized to provide corrective action procedures.

- **Determine the Source of Odor:** Odors may be generated by piles of raw materials, specific windrows, standing water, or another source. Identification of the source of the problem is important because the actions required to remedy each of these problems will differ.

- **Identify the Type of Odor and its Cause and Remediate the Cause:** Odors occur at compost facilities for several reasons. Identifying the type of odor can give an indication of the root cause of the problem.

  - **Ammonia:** Usually generated in a compost windrow that contains too much nitrogen-rich material (i.e. a low C:N ratio). An ammonia odor can also sometimes indicate a pH level that is too high.

    - ***Remediation:*** Incorporation of more bulking agent can provide necessary carbon and pH buffering to alleviate this problem.

  - **Hydrogen Sulfide and Reduced Sulfur Compounds:** Usually indicates that anaerobic conditions are present. Anaerobic conditions form if there are not enough air spaces through which air can flow, either due to insufficient porosity or too high a moisture content. It may also be caused by rapidly degrading feedstock that have consumed all available oxygen.

    - ***Remediation:*** Windrow turning and/or incorporation of more bulking agent can provide necessary porosity, air, and/or dry matter to alleviate this problem.

  - **Volatile Fatty Acids (VFAs):** Like sulfur odors, VFA odors are generated by anaerobic microbial decomposition caused by similar factors such as insufficient air space due to low porosity or high moisture content.

    - ***Remediation:*** Windrow turning and/or incorporation of more bulking agent can provide necessary porosity, air, and/or dry matter to alleviate this problem.

2.9 STORMWATER MANAGEMENT

All biosolids handling and active compost windrows will occur within the boundaries of the Project area. The active composting pad is constructed with a 1 percent gradient/slope. All windrows will be constructed in line with the gradient to promote effective drainage between windrows and across the entire site. Leachate or run-off from these areas will flow towards a perimeter berm and sump that drains into the underlying landfill LCRS. The curing, screening and storage area is sloped to promote drainage and will be allowed to sheet flow away from this area into the stormwater management system. The site has been designed to handle a 25-year 24-hour storm event. If excessive run-off occurs the sump may also be pumped into tanker trucks and treated according the landfill's current leachate management protocols.

SECTION 3 MONITORING, TESTING AND RECORDS KEEPING

Successful composting requires careful and consistent monitoring using temperature, moisture, odor, and visual observations supported by analytical procedures as needed. These observations

are then combined and determinations can be made regarding the status of active composting and whether to turn, add water, wait, or move material out of active composting to curing. It is the intent of the County to seek the United States Composting Counsel (USCC) Certification for the composting operation.

3.1 WINDROW IDENTIFICATION

Site staff will assign a unique identification number to the windrow or windrow section constructed each day (e.g. yy-mm-dd-#, where yy = year, mm = month, dd = day, and # = the sequential number for windrows constructed that day). Staff will maintain a record book for each windrow including the identification number, date constructed, quantity of biosolids, quantity of bulking agent, and equipment operator that constructed the windrow. A copy of this form is included in the Appendix C of this plan.

3.2 TEMPERATURE MONITORING

Temperature is one of the primary means by which Project staff will monitor the composting process. Staff will maintain a temperature logbook (both manual and electronic) for each windrow including the identification number, date, and individual temperate measurements. A sample temperature log is provided in Appendix C of this plan.

The temperature of active windrows will be monitored once daily, six days per week by site staff. Temperatures of curing windrows will be monitored three times weekly. Proper procedures for temperature monitoring are as follows:

- **Tools Required:** A Reotemp model bimetal dial or digital four-foot composting thermometer, temperature monitoring form, and pen.
    - Start approximately 20 feet in from the end of a windrow, measure and record temperatures at the following depths, 10, 20, 30 and 40 inches into the windrow.
    - Care must be taken to direct the tip of the thermometer towards the center of the windrow, not the bottom or top.
    - Record temperature data on the monitoring form.
    - Proceed to a point 100 feet down the windrow and repeat the temperature reading and recording procedure. At least one temperature reading is taken for every 100 feet of windrow, or fraction thereof.

The optimum temperature range is from 131°F to 165°F; this ensures a PFRP minimum temperature of 131°F is maintained for a minimum period of 15 consecutive days.

3.3 MOISTURE MONITORING

During active composting, moisture content shall be maintained in the range of 50% to 60%. Site staff will assess moisture levels in the field using the following simple procedure:

- **Tools Required:** Shovel and rubber gloves.
  - Perform the moisture assessment once weekly for each constructed windrow.
  - Assess moisture content in proximity to the same locations where temperature is monitored.
  - Dig a small hole approximately two feet deep in the side of the compost pile.
    - Using a rubber-gloved hand, grab a handful of compost material and squeeze it.
    - If a small amount of water can be squeezed out of the material, then there is sufficient moisture and no corrective measures are needed.
    - If the material is water logged and water flows freely out of it, then there is too much moisture and the pile should be turned to release excess moisture and/or additional dry yard trash should be mixed into the pile.
    - If no water can be squeezed out of the material, then it is too dry; add water/leachate to the pile.

Moisture content may also be monitored and verified using standard laboratory procedures.

3.4 ANALYTICAL SAMPLING AND ANALYSIS

In line with the facility's design capacity and volumes of incoming materials, the Project staff will perform sampling and analysis on a monthly basis at a minimum. Sampling and analysis shall be conducted in accordance with CFR Part 503, section 503.8 and the EPA publication - POTW Sludge Sampling and Analysis Guidance Document, 1989. In accordance with requirements for Class AA compost certification, microbiological and heavy metal concentration testing is performed. Grab samples will be used for pathogen reduction and vector attraction reduction analysis and composite samples will be used for metals.

Compost Sampling Procedure

Procedures for collecting composite samples for lab analysis are as follows:

- **Tools Required:** Safety gloves, clean shovel, clean trowel, clean five-gallon bucket, clean tarp, new one-gallon zip-lock plastic bags, and permanent marker.

- Each batch of compost will have 12 sampling locations distributed evenly around the surface (sides and top of the pile).
- Prior to sample collection, clean, scrub, and decontaminate sample collection equipment (shovel, trowel, and five-gallon bucket) with a hot, sudsy bleach and water solution, and then thoroughly rinse them with fresh water.
- Proceed to the Sampling Point #1 and collect two quarts from approximately two-feet below the pile surface.
- Place all grab samples in the five-gallon bucket.
- Repeat this sampling procedure at four sampling points.
- Thoroughly mix the material in the bucket, being careful to avoid stratification of different particle sizes. If necessary, place the material on a clean plastic tarp and mix it.
- Collect one composite sample from the well-mixed material and double-bag it in zip- lock plastic bags. The sample size should be at least one gallon, depending on the analyses being performed.
- Once samples are cooled to the required temperature using wet ice, samples may be shipped with frozen ice packs in an insulated container.
- Samples shall be packaged and delivered to the laboratory within 24 hours of their collection time.

3.5 COMPOST ANALYSIS

On a monthly basis, site staff will collect composite samples of finished compost for laboratory analysis to ensure levels are within Part 503 and Florida regulatory requirements for Class AA compost certification. If finished compost is stored for more than 45 days after analysis for pathogens before being transported offsite for use, staff shall re-sample and analyze compost prior to distribution and marketing of that compost.

Samples will be shipped to a certified laboratory for analysis of the parameters listed in Table 1 below. All samples will be tested in accordance with the Test Methods for the Examination of Composting and Compost (TMECC) endorsed by the USCC.

Table 1. Analysis Parameters – Finished Compost

Parameter	Units	Parameter	Units
Bulk Density	Weight/volume	Boron	mg/kg dw
Sieve Analysis	%	Calcium	mg/kg dw
Inert (man-made) Material	%	Chloride	mg/kg dw
Moisture	%	Iron	mg/kg dw

Parameter	Units	Parameter	Units
pH	Standard units	Magnesium	mg/kg dw
Total Volatile Solids	mg/kg	Manganese	mg/kg dw
Total Nitrogen (TKN)	% dw	Sodium	mg/kg dw
Ammonia Nitrogen	mg/kg dw	Sulfur	mg/kg dw
Nitrate Nitrogen	mg/kg dw	Arsenic	mg/kg dw
Total Phosphorus	% dw	Cadmium	mg/kg dw
Water-soluble Phosphorus	% dw	Chromium	mg/kg dw
Total Potassium	% dw	Copper	mg/kg dw
Total Organic Carbon	mg/kg	Lead	mg/kg dw
C:N Ratio	X:1	Mercury	mg/kg dw
Organic Matter	%	Molybdenum	mg/kg dw
Conductivity/Soluble Salts	uS/cm	Nickel	mg/kg dw
Stability Index	mg CO2/g OM/day	Selenium	mg/kg dw
Germination (7 days)	%	Zinc	mg/kg dw
Vigor (14 days)	%	Fecal Coliform	MPN/gram TS
		Salmonella	MPN/4 gram TS

Note: *Carbon-nitrogen ratio determined by analysis for total organic carbon divided by total nitrogen analysis result.*

3.6 REGULATORY COMPLIANCE STANDARDS

The pathogen reduction standards for Class AA compost to be achieved by the Project are:

- Time and temperature:
  - MSAP composting: 15 consecutive days at 55°C (131°F).
- Fecal coliform < 1,000 MPN/gram TS
- Salmonella < 3 MPN/4 gram TS

The vector attraction reduction standard to be achieved will be:

- Maintaining an aerobic composting process at greater than 40°C for 14 days or longer. The metals standards for Class AA compost to be achieved by the Project are shown in Table 2.

Table 2. Metals and Other parameter Standards

Parameter	Ceiling Concentrations (Single Sample)	Class AA Parameter Concentrations (Bimonthly Average)
Arsenic	75 mg/kg dw	41 mg/kg dw
Cadmium	85 mg/kg dw	39 mg/kg dw
Copper	4,300 mg/kg dw	1,500 mg/kg dw
Lead	840 mg/kg dw	300 mg/kg dw
Mercury	57 mg/kg dw	17 mg/kg dw
Molybdenum	75 mg/kg dw	Not applicable
Nickel	420 mg/kg dw	420 mg/kg dw
Selenium	100 mg/kg dw	100 mg/kg dw

Parameter	Ceiling Concentrations (Single Sample)	Class AA Parameter Concentrations (Bimonthly Average)
Zinc	7,500 mg/kg dw	2,800 mg/kg dw
Total Nitrogen (TKN)	(Report only) % dw	(Report only) % dw
Total Phosphorus	(Report only) % dw	(Report only) % dw
Total Potassium	(Report only) % dw	(Report only) % dw
pH	(Report only) standard units	(Report only) standard units
Total Solids	(Report only) %	(Report only) %

SECTION 4 RECORDS RETENTION AND REPORTING

The County will retain records of the quantities of biosolids received, composted, distributed, and marketed for a minimum of five years. The final composted product will be distributed as a soil amendment to farmers in the region and the general public. The County will retain records of all compost analyses conducted for a minimum of five years and will be available for FDEP inspection.

APPENDICES

Appendix A
Hillsborough County Composting - Incoming Biosolids Monitoring Log

Date	Source of Biosolids	Name of Hauler	Quantity Biosolids (tons)	Volume of Biosolids (yards)	Your Name

Appendix B
Hillsborough Composting – Odor Monitoring Sheet

Date	Your Name	Source of Odor	Intensity	Character	Tone	Action Taken

Intensity: Slight, Moderate, Strong, Very Strong
Character: eg: rotten egg, garbage, ammonia, fishy, rotten cabbage, earthy, musty, peat-like
Tone: Very Offensive, Offensive, Pleasant, Very Pleasant

Appendix C
Hillsborough Composting - Monitoring Sheet (MSAP Method)

WINDROW # _____

Windrow Construction: **Date Commenced: _____** **Date Completed: _____**

Date	Operator Name	Biosolids (tons)	Biosolids (yards)	Yard Waste (yards)	Overs (yards)	Cover (yards)
TOTAL						

Temperature:

Days	Date	Point 1				Point 2				Point 3				Point 4				Point 5				Turned
		10	20	30	40	10	20	30	40	10	20	30	40	10	20	30	40	10	20	30	40	
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2																						◯
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Appendix C
Hillsborough Composting - Monitoring Sheet (MSAP Method)

WINDROW # _____

Days	Date	Point 1				Point 2				Point 3				Point 4				Point 5				Turned
		10	20	30	40	10	20	30	40	10	20	30	40	10	20	30	40	10	20	30	40	
13																						◯
14																						◯
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Appendix C
Hillsborough Composting - Monitoring Sheet (MSAP Method)

WINDROW # _____

Days	Date	Point 1				Point 2				Point 3				Point 4				Point 5				Turned
		10	20	30	40	10	20	30	40	10	20	30	40	10	20	30	40	10	20	30	40	
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