APPLICATION FOR PERMIT RENEWAL AND MODIFICATION
SANDOVAL COUNTY LANDFILL

VOLUME II: LANDFILL MANAGEMENT PLANS
SECTION 11: COMPOSTING PLAN OF OPERATIONS

1.0 INTRODUCTION

The Sandoval County Landfill (SCLF) is an existing solid waste disposal facility operating in compliance with its current Permits, SWM-050304 and SWM-050304 (SP), and the New Mexico Environment Department (NMED) Solid Waste Rules (20.9.2-2.9.10 NMAC). SCLF is located at 2708 Iris Road NE in Rio Rancho, New Mexico (NM), and occupies 178.3 acres ± (**Figure II.11.1**). SCLF is publicly owned and operated by the County of Sandoval, and is currently permitted to accept municipal solid waste (MSW), including construction and demolition debris (C&D) and tires, and two special wastes: petroleum contaminated soils (PCS) and sludge.

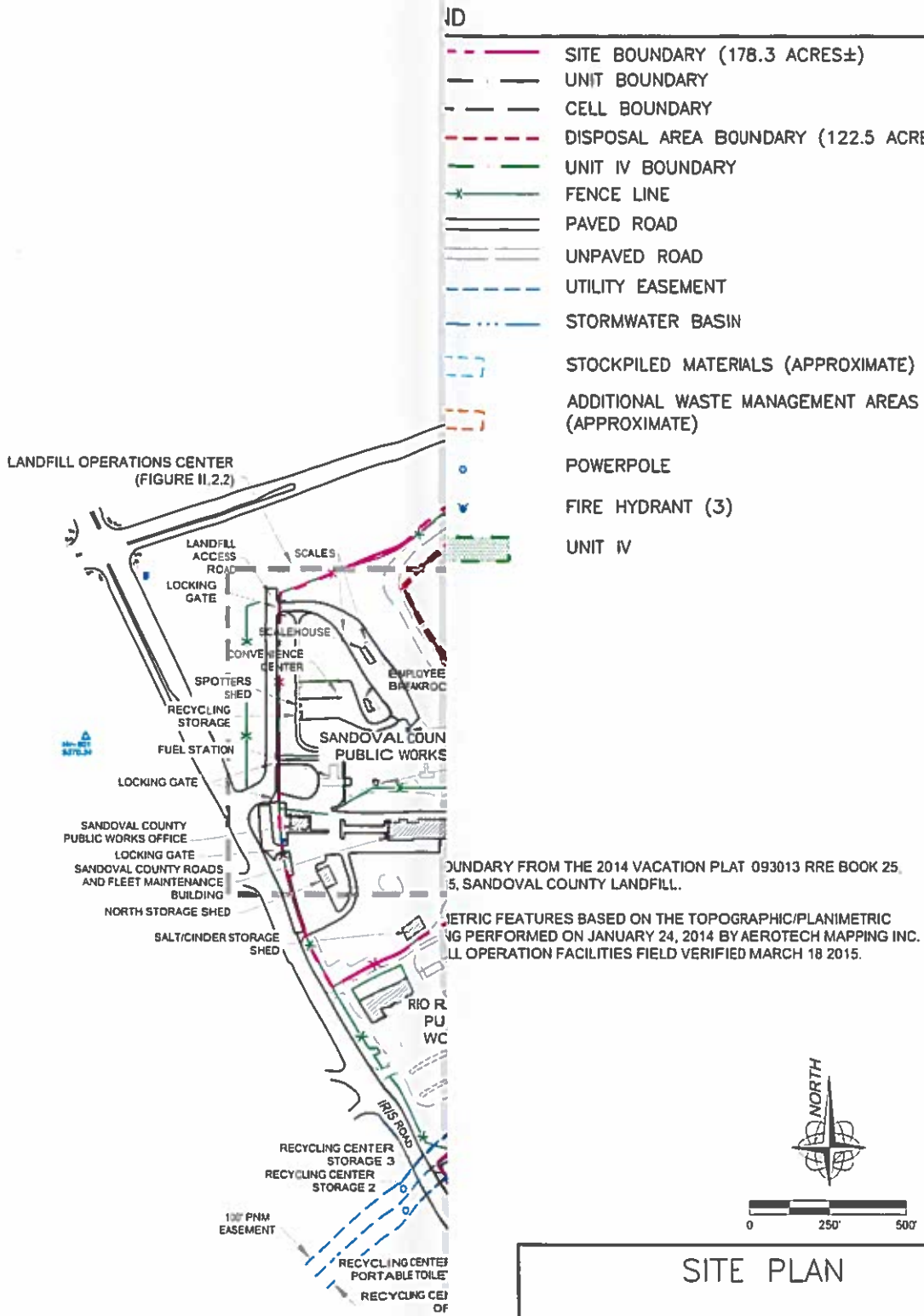
1.1 Purpose

This document presents the updated Composting Plan of Operations (the "Plan") for the SCLF. This Plan has been developed in accordance with the 2007 New Mexico Solid Waste Rules (the "Rules"). The Composting Plan of Operations included in the 2005 Application for Permit (Gordon Environmental, Inc.; GEI) was approved by NMED on July 17, 2005. This Plan is provided to achieve two primary objectives:

- To identify and address the applicable regulatory requirements, and to prescribe proven operating techniques to achieve compliance objectives.
- To provide a functional working Plan that details and memorializes safe, efficient, and orderly operating practices.

2.0 PROJECT DESCRIPTION

Sandoval County (the "County") currently operates an approved containerized (i.e., "in-vessel") Composting Facility within the property boundaries of the SCLF to meet the increasing solid waste management needs of the County. As such, the Composting Facility is considered a "registered use" at a permitted facility. Construction and operation of the in-vessel Composting Facility has been conducted in "Phases" since 2005; and from 2006-2014, the SCLF processed approximately 2,017 tons of finished composted material:



SITE PLAN

SANDOVAL COUNTY LANDFILL
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DATE: 07/11/2017	CAD: SITE PLAN.dwg	PROJECT #: 211.00.01
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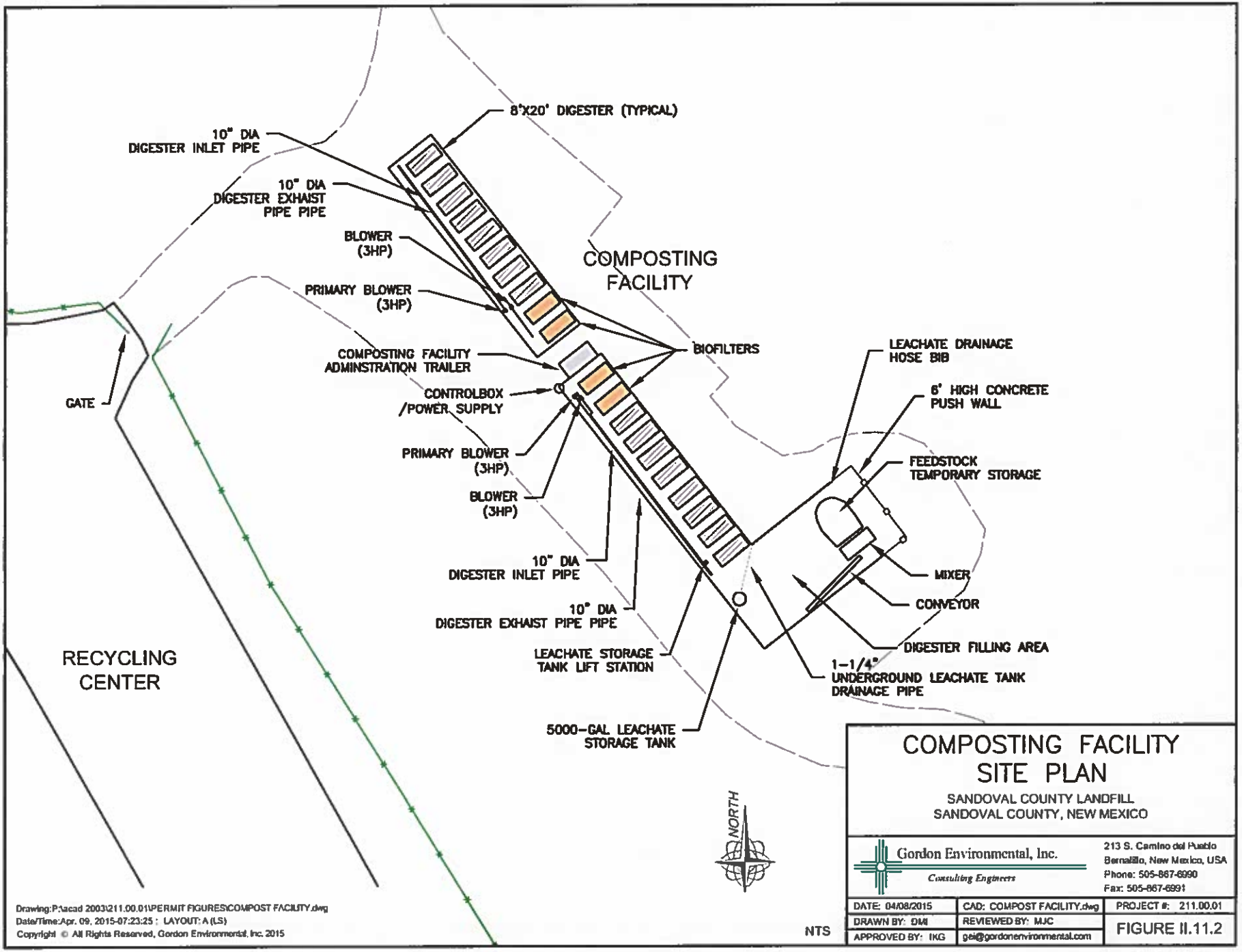
APPROVED BY: IKG	gel@gordonenvironmental.com	

Phase I

1. Prior to mid-2005: Composting operations conducted on-grade within the confines of the Composting Facility area (5 acres ±).
2. Mid-2005 to February 2006: Construction and installation of Facility infrastructure and start-up equipment:
   - site grading
   - concrete pad foundation
   - feedstock push wall
   - 5 digesters and 1 biofilter
   - digester leachate storage tank (5,000-gallons) and leachate lift station
   - ancillary piping/plumbing and system blowers
   - office trailer (equipped with computerized digester monitoring hardware and software)
   - processing equipment (e.g., mobile feedstock mixer, chipper, screen, front end loader)
3. February 2006: Commencement of in-vessel composting of green and woody wastes and animal manure using potable water from on-site fire hydrant and recirculated digester leachate.

Phase II

1. May 2008 Facility upgrades (**Figure II.11.2**):
   - concrete pad foundation expansion to accommodate 11 additional digesters and 3 additional biofilters
   - additional piping/plumbing and blowers
   - addition of conveyor system adjacent to feedstock mixer
   - mobile feedstock mixer reconfigured to a fixed installation
   - transition from top-loading the digesters with front end loader to top-loading with conveyor system directly from mixer into digester
   - perforated digester floors upgraded from steel to heavy-duty, 1-inch-thick plastic
   - digesters insulated
   - updated computerized digester monitoring hardware and software
2. The 2005 Permit approved the use of non-hazardous wastewater treatment plant sludge (i.e., biosolids) and Landfill leachate as additional feedstocks. To-date, neither of these feedstocks has been utilized.
3. The SCLF currently can conduct Phase II composting at a maximum rate of approximately 19 tons/day (tpd) of feedstock (woody waste, green waste, and animal manure) through the operation of 16 digesters and 4 biofilters. The finished compost product is used in City of Rio Rancho and County Public Works projects, and is also available for purchase by the public.
4. The County plans to install a full build-out of up to 34 digesters and 10 biofilters to accommodate a projected process flow rate of 40 tpd, dependent upon demand.



COMPOSTING FACILITY SITE PLAN

SANDOVAL COUNTY LANDFILL
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DATE: 04/08/2015	CAD: COMPOST FACILITY.dwg	PROJECT #: 211.00.01
DRAWN BY: DMI	REVIEWED BY: MJC	FIGURE II.11.2
APPROVED BY: IKG	gei@gordonenvironmental.com	

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To-date, the use of biosolids has not been implemented at the site, although the current in-vessel system is designed to produce a "finished" compost product using these materials as feedstock. The use of biosolids would be the subject of future County "decision tree" evaluations, which could include the viability/efficacy of biosolids use, availability of on-site/local resources, etc. Therefore, this Plan addresses the operations and management of the current composting operation at the site. In the event that biosolids are selected as a viable feedstock, the County will develop a "stand-alone" supplement to this Plan specific to biosolids for NMED review and approval prior to implementing this variation to the current composting operations.

Future Phases (i.e., III and IV) may include additional stackable digesters/biofilters and anaerobic processes to capture methane for on-site beneficial use (i.e., gas-to-energy, etc.). The County may elect to continue composting operations after closure of the SCLF, and will update this Plan accordingly for NMED review and approval.

The SCLF conducts additional composting operations for the management of dead animals (i.e., mortality composting). The composted material generated by this process is not made available to the public or used in off-site City of Rio Rancho and County Public Works projects; and dead animals are strictly prohibited from use as feedstock materials at the Composting Facility. Mortality composting is performed as a "best management practice" for handling this type of solid waste, and is conducted only over lined areas of the site. The mortality composting operations at SCLF are discussed in detail in Section 7.0 of this Plan.

3.0 IN-VESSEL OPERATIONAL REQUIREMENTS

3.1 Odor and Litter Control and Mitigation

Composting is the controlled microbial decomposition of organic materials into a humus-like material. In-vessel aerobic composting technology is designed to reduce the generation of odors, and to capture potential odors generated by the decomposition process. Five primary factors further reduce the potential for odor impacts:

- Material characteristics
- Operating procedures
- Mode of delivery
- Site location/topography
- Mitigative measures

The primary feedstock diverted for the SCLF in-vessel composting operations consists predominantly of high-carbon (C), low-nitrogen (N) woody and green wastes with low intrinsic potential for odor generation. When available, select animal manures are mixed with chipped green and woody wastes as soon as possible to take advantage of the higher nitrogen content of the manure.

The mixing of these feedstocks increases aeration and microbial activity, and optimizes the moisture content of the manure for composting, thereby minimizing the potential for the generation of malodorous compounds, which may be associated with anaerobic decomposition. The potential for odor generation during digestion is further mitigated by the operation of the air-tight digesters and downstream biofilters.

The air-tight digesters facilitate a controlled airflow entering at the base of the digesters and drawn through the composting materials with negative air pressure applied at the top of the digester doors to capture the exhaust air. This exhaust air is then passed through a biofiltration system, which provides additional odor control and mitigation through sequestration. Biofiltration includes the removal of organic and potentially odorous biologically-produced compounds (e.g., ammonia, sulfur, etc.) from a waste gas stream using solid media (e.g., chipped green and woody wastes) adsorptive beds containing viable microorganisms that metabolize these compounds. The biofilter media is inspected on a monthly basis to determine the need for replacement. If the media is discolored (i.e., dark brown or black), it is replaced with fresh material; and the spent media is placed into the stream of materials to be composted.

Incidental odors and litter potentially generated by loading and unloading of feedstocks and composted materials are further mitigated by the Facility's remoteness from occupied off-site structures. The nearest occupied off-site structure downwind of the Facility is located approximately 2,000 feet to the east-northeast; and separated from the site by earthen berms and in-place waste deposits.

3.2 Composting Equipment

The following list of equipment applies to current operations (e.g., 19 tpd ±) up to full development at 40 tpd ±:

TABLE II.11.1
In-Vessel Composting Equipment
Sandoval County Landfill

Equipment (On-Site)	Number	Capacity
Composting Digesters	5-34	25 ton ±
Biofilters	1-10	40 yd^3 ±
Computerized Process Control System	1	2-4
Front End Loader	1	1.5-4 yd^3
Auger-type Mixer with Built-in Scale	1	10-20 yd^3/cycle
Roll-Off Container	1	Variable
Roll-off Tilt Frame	1	30-ton (typical)
Morbark® Wood Chipper	1	75-300 yd^3/hr
Doppstadt® Shredder	1	40 tons/hr
Conveyor Systems	1	100 yd^3/hr
Green Waste Collection Containers	5-10	10-40 yd^3
Fecon® Screen	1	½-inch mesh

3.3 Material Characteristics

Loads of materials suitable for composting are separated from the waste stream typically delivered to the SCLF. Incoming waste loads identified as containing compostable material are directed by SCLF staff at the Scalehouse to the appropriate drop-off area. The waste streams originate from Sandoval, Bernalillo, Santa Fe, and Torrance Counties; as well as several Pueblos.

The compostable material stream is comprised of green waste, woody C&D waste, and animal manure. Green waste consists of yard trimmings such as grass clippings, leaves, brush prunings, tree trimmings, and chipped woody materials. The County continues to collaborate with BLM, the State Land Office, and the U.S. Forest Services to manage organic site clean-up wastes; vegetation decimated by infestation; and Bosque restoration debris. Woody C&D waste is comprised mainly of wood products such as pallets and construction lumber free of other wastes. The green waste and woody C &D waste are used as feedstocks and bulking agents in the composting process.

Currently, animal manure comprises the majority of the nitrogen-containing feedstock in the composting process. These feedstock materials originate primarily from livestock at the Sandoval County Fairgrounds, Corrales and Rio Rancho residents, and the Sandoval County Sheriff's Posse. Potential future sources of manure may be from local racetracks.

Incoming bulky feedstock agents from off-site sources are quantified as to volume or weight, and identified by generator for recordkeeping purposes. The designated Composting Facility Operator (the "Operator") has the responsibility to reject any load that contains > 50% non-compostable materials. A container provided at the SCLF public Convenience Center may be utilized by the general public for temporary bulky feedstock placement. Collected materials are subject to employee screening prior to delivery to the "Green Waste Stockpile" areas shown on **Figure II.11.1**, where woody feedstock may be stockpiled until there is sufficient quantity to conduct chipping operations.

3.4 Operating Hours

Operating hours for the Composting Facility are Monday through Saturday (7:00 AM to 4:00 PM); and the Facility is closed on Sundays and 10 holidays/year. Actual operations at the Composting Facility (e.g., chipping, digester maintenance, windrowing, etc.) may be extended beyond normal hours to match demand.

3.5 Composting System

The modular, computerized composting system has the capability for optimization of environmental conditions to promote rapid and sanitary composting. The system is designed to convert raw organic materials into a more stable and usable product in a manner that meets regulatory standards for temperature monitoring, sampling, and reporting.

The composting system includes a personal computer networked to a process controller. Inputs into the process controller are listed according to each digester (with the exception of the overall static pressure), which can be monitored individually or globally for all digesters. Data logging and status monitoring devices record and report temperature, manifold and differential air pressure, variable speed drive efficiency, damper status, and airflow rates for the system and/or each digester.

The composting system is constructed with a positive blower and a negative blower, both of which are controlled by variable frequency drives (VFDs) that are modulated to maintain a differential pressure on the system. For each digester, one pair of dampers controls the airflow direction and rate. Positive air (i.e., supply air) flows through the lower airline, while negative

air (i.e., return air) flows through the upper airline. Airlines are attached to each digester with quick-connect couplers on flexible hoses.

Digesters are typically 40-50 cubic yards (yd^3) in capacity and are configured for top-loading. The digesters are equipped with removable, heavy-duty plastic (i.e., 1-inch-thick) perforated floors that allow air to permeate through the composting mass. Each digester is also equipped with a door sealed with a watertight gasket, which is manually opened for discharging the material with the use of a tilt-frame truck. The digesters are fitted with an appropriate coupling mechanism for gravity-unloading via a roll-off truck or other similar tipping device. A fluid removal port is installed in each digester. The digesters are lined with a non-reactive polymer coating on the interior and exterior. One access port for inserting a temperature probe is located on one side of each digester.

3.6 Material Processing Capacity

Under normal operations (i.e., 6 days/week), the design capacity of the composting system is approximately 400 cubic yards/week of organic material feedstocks. The feedstock includes green waste and woody debris such as brush, pallets, crates, trees, stumps, and limbs; as well as nitrogen-rich manure. Feedstock is stored in the Green Waste Stockpile areas shown on **Figure II.11.1** until sufficient quantities are collected (i.e., typically for 1-6 weeks, dependent on material). The green waste and woody debris are used as bulking agents in the composting process, and are primarily diverted from MSW deliveries. The target volume ratio of carbon-rich bulking agent to nitrogen-rich feedstocks will vary from 1:1 to 3:2, depending upon the moisture content of the bulking agents and the availability and nitrogen content of the feedstocks.

3.7 Disposal Alternatives

The Composting Facility (**Figure II.11.2**) is an integral part of the SCLF, which has proven to be an effective all-weather facility under foreseeable conditions. In the event of a temporary disruption to composting capabilities, the following alternatives are available:

- In the event of equipment shut-downs, bulking materials may be stockpiled in waste receipt areas for no more than one year. Manure may be stored inside an empty digester, roll-off container, transfer trailer, or atop a lined portion of the Landfill.
- In the event that the volume of incoming feedstock materials becomes excessive, these material streams can be diverted directly to the SCLF for disposal at the active fill face.

- In the event that the volume of stockpiled green or woody feedstock materials becomes excessive, these material streams can be reduced in size and sold to the public or used in City of Rio Rancho and County Public Works projects as mulch, or utilized on-site as alternative daily cover (ADC).
- There are plans to use the processed organic material for Landfill sideslope stabilization and erosion control (see **Attachments II.2.L** and **II.5.H**).

3.8 Protection of Public Health, Welfare, and the Environment

The primary objective of this Plan is to ensure the protection of public health, welfare, and the environment. Modern composting technology, as conducted specific to this operation, is designed to reduce or eliminate potentially negative impacts resulting from operations. The Composting Facility is located entirely within the property boundaries of the SCLF, which has operated since the early 1970s in a manner that does not cause a public nuisance or create a potential hazard to public health, welfare, or the environment. The County specifically selected in-vessel composting as the preferred technology due to its controlled environment. Using leak-proof containers for the composting process, along with tight controls on ventilation and fluids, minimizes the potential for human exposure, environmental impacts, odors, etc.

The existing in-vessel composting system (**Figure II.11.3**) is demonstrated to be protective of public health, welfare, and the environment by complying with applicable pathogen, vector, and odor reduction standards. During the composting process, the system's heat exchange cycle is activated automatically at temperatures of 137 °F (58° C) and 141 °F (60° C) to produce an adequately stabilized product for an in-vessel processing time of up to 21 days. The automated process control system monitors these temperatures, as well as the air intake, within each digester to maintain optimal composting conditions. The existing in-vessel system is also designed to operate consistent with the following standards required by 40 CFR 503 (i.e., Standards for the Use or Disposal of Sewage Sludge):

1. In-vessel Class A pathogen reduction standard of 72 continuous hours at a temperature above 55 °C (131 °F).
2. In-vessel Class A vector attraction reduction standard of 14 days above 40 °C (104 °F), averaging at least 45 °C (113 °F). The system is configured to meet and maintain these temperatures and record them in the computer's database such that each batch of compost can be monitored for compliance with these standards.

IN–VESSEL COMPOSTING SYSTEM LAYOUT

SANDOVAL COUNTY LANDFILL
RIO RANCHO, NEW MEXICO

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DATE: 01/29/2016	CAD: DWG NAME.dwg	PROJECT #: 211.00.01
DRAWN BY: DMI	REVIEWED BY: MJC	FIGURE II.11.3
APPROVED BY: IKG	gei@gordonenvironmental.com	

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3.9 Operator Certification

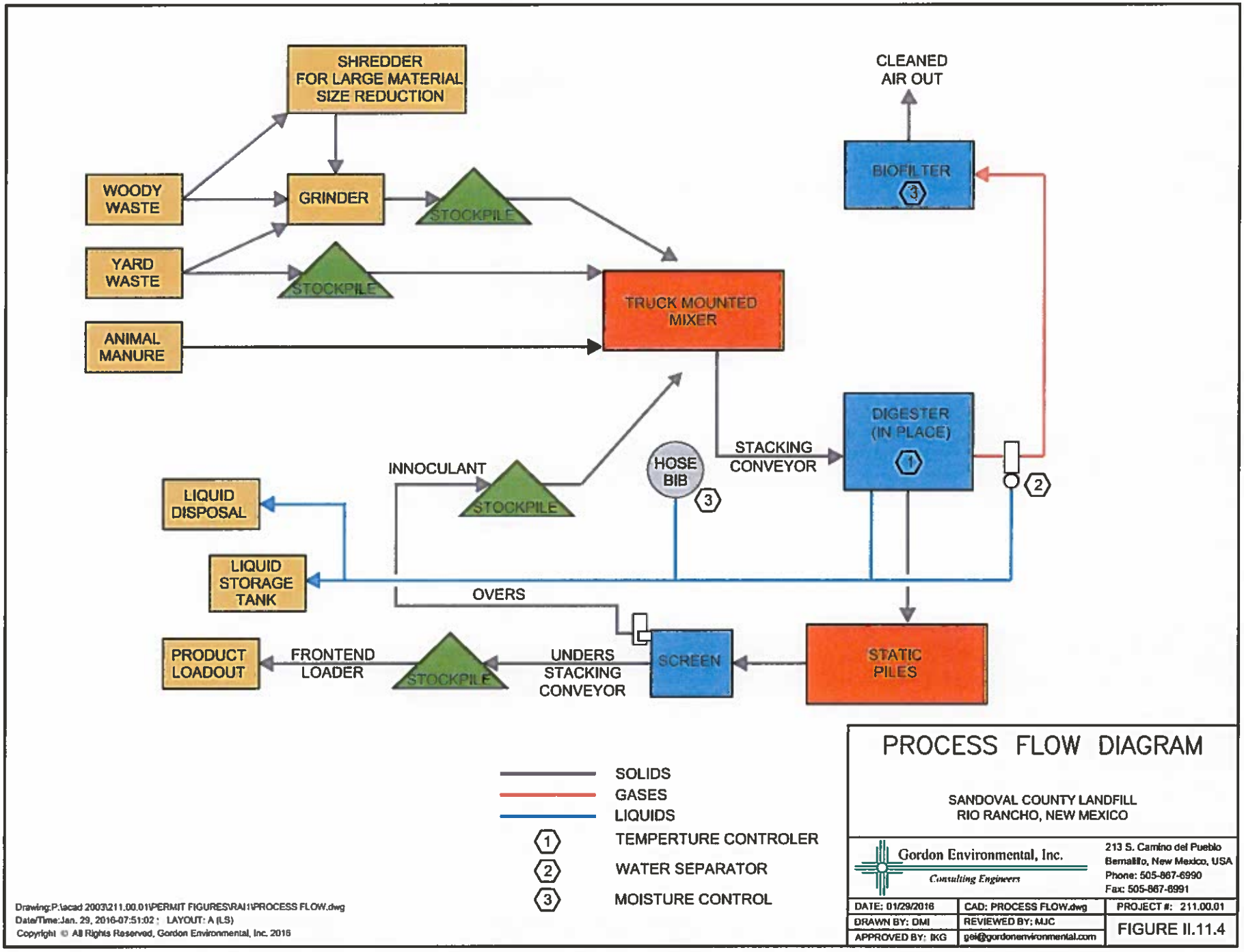
Full-time supervisory personnel employed at the Composting Facility are certified as required by 20.9.7.9 NMAC. These individuals are knowledgeable in composting operations, and are required to demonstrate familiarity with this Plan. Documentation regarding each current employee's Operator Certification status is maintained and updated in the SCLF Facility Operating Record. The supervisory and operations staff at the Composting Facility are encouraged to take pertinent training and become Certified Operators. Following completion of Certification Training, information documenting Operator Certification is placed in the Facility Operating Record. Current Operator Certification status for SCLF supervisory staff is listed below; and the applicable Certificates are provided as **Attachment II.11.A**:

Name	Title	Type of Certification	Date
Robert M. Sanchez	Assistant Solid Waste Director	Composting Operator	02/07/2017
Michael F. Anderson	Composting Supervisor	Composting Operator	11/01/2016
Christopher Perea	Composting Foreman	Composting Operator	11/10/2017

Access to the composting equipment is limited to trained SCLF personnel, the composting equipment supply and maintenance contractor (Renewable Carbon Management, LLC; RCM), and the Engineer (GEI). The County has assigned a Certified Operator to the Composting Facility, and GEI has a Certified Operator on-staff as well. In addition to training specific to the Composting Facility, operators are also trained in other waste management, screening, and contingency operations.

4.0 IN-VESSEL COMPOSTING PROCEDURES

Figure II.11.4 provides the process flow diagram for the in-vessel composting operation, and **Table II.11.2** outlines the general operations approach pursued by SCLF:



PROCESS FLOW DIAGRAM

SANDOVAL COUNTY LANDFILL
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DATE: 01/29/2016	CAD: PROCESS FLOW.dwg	PROJECT #: 211.00.01
DRAWN BY: DMI	REVIEWED BY: MJC	FIGURE II.11.4
APPROVED BY: IKG	gei@gordonenvironmental.com	

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TABLE II.11.2
In-Vessel Composting Procedures
Sandoval County Landfill

1. **Material Receipt** – Incoming waste materials delivered to SCLF are inspected and screened at the Scalehouse for waste classification. Materials deemed suitable for composting are directed by SCLF personnel to the Green Waste Stockpile areas shown on **Figure II.11.1**. Materials deemed unacceptable for composting are directed to either the Convenience Center or the active fill face for disposal.

2. **Material Screening and Waste Exclusion** – At the Green Waste Stockpile areas, the Composting Facility Operator ("Operator") visually inspects incoming loads daily to ensure material compatibility with the composting operation. Materials deemed unacceptable for composting are placed in a roll-off container positioned adjacent to the Green Waste Stockpile areas shown on **Figure II.11.1**. The roll-off container is transferred to the Landfill when filled to capacity (typically 3 times/week) for disposal at the active fill face.

   Figure II.11.5 is an example of a Load Inspection Form that may be used to record the disposition of materials deemed incompatible with composting operations. Incompatible materials include, but are not limited to, plastic bags, water bottles, cans, processed wood (i.e., plywood, particle board, and outdoor decking), landscaping cloth, garden hoses, other materials deemed by the Operator to be incompatible with composting operations, etc.

3. **Size Reduction** - When stockpiles of compostable materials reach a quantity that can be processed within one week (typically 300 – 400 yd^3), processing is initiated to reduce the material size. Large size carbon-rich materials (e.g., woody debris, stumps, pallets, etc.) are reduced in size using the Doppstadt® shedder; and further size reduction is performed using the site's Morbark® chipper/shredder. The reduced material is then staged within the Green Waste Stockpile areas shown on **Figure II.11.1** until an adequate volume (typically 300 – 400 yd^3) has been accumulated for composting.

4. **Material Mixing** - When the Operator determines that sufficient material volumes are available for composting, the size-reduced carbon-rich materials (i.e., wood chips) are mixed with nitrogen-rich materials (typically manure) with a truck-mounted mixer (equipped with scale) and/or front-end loader. To achieve the 1:1 carbon-to-nitrogen (C:N) ratio, 3,500 lbs of carbon-rich materials are typically mixed with 3,500 lbs of nitrogen-rich materials and 60% water at 1,600 rpm within the mixer. The C:N ratio and water content can be adjusted based on Operator experience with the quality/quantity of materials at the time of mixing.

   Once a proportionate batch is processed, the blended material is then subjected to Operator sampling procedures to ensure the viability of the product. When the material reaches the proper consistency based on the judgement of the Operator, it is then removed from the mixer and placed into the digester via the conveyor system. Facility personnel screen the material being discharged from the mixer for evidence of foreign materials (e.g., rocks) prior to discharge into the digester. Once a digester is full, it is placed at a numbered position in the digester aeration area (**Figure II.11.2**) specific to that container.

5. **Vessel Operation** - Filled digesters are connected to the positive pressure air flow manifold system (i.e., supply air) and the negative pressure air flow manifold system (i.e., return air) controlled by computerized pressure sensors and temperature probes, as well as manual-control valves. A temperature probe is then inserted completely into the port on the side of the digester. A hose is connected to the fluid removal port such that fluids generated during the in-vessel composting process can be pumped directly to the 5,000-gallon liquid storage tank. These processes are repeated for each digester.

6. **Schedule** - The automated control system adjusts air to maintain the required temperatures to address the public health standards for pathogen and vector reduction. The standard for pathogen reduction is 72 continuous hours at a temperature above 55 °C (131 °F). The vector attraction reduction standard is 14 days above 40 °C (104 °F), averaging at least 45 °C (113 °F).

   Filled digesters are allowed to compost in the controlled air environment for a period of 17 to 21 days. During that timeframe, temperatures between 55 °C (130 °F) and 71 °C (160 °F) are maintained for 14 days to achieve the Process to Further Reduce Pathogens (PFRP). Temperatures are manually recorded twice daily (i.e., Facility opening and closing).

   The Operator also monitors the computerized data logging and status monitoring devices that record and report temperature, manifold and differential air pressure, variable speed drive efficiency, damper status, and airflow rates for the system and/or each digester to ensure these standards are met.

7. **Output** - Depending on the temperatures recorded for each digester during the composting process, filled digesters are either re-mixed if the PFRP was not achieved during the 14-day timeframe, or unloaded into windrows (i.e., static piles) for curing. Unloading the digester for compost curing is performed only when the material inside the digester has met the regulatory and final product requirements, or requires re-mixing.

8. **Product Curing** - Curing is the process of maturing the compost material into a finished product. When the composting process within the digesters has been completed, the material is considered "stable". This stability indicates that the compost has met regulatory specifications for pathogen and vector reduction, and is weed-free. The final temperature of the stable digester product is then recorded and used as the "benchmark" value to determine when the cured compost material is considered to be mature.

   For the curing process, the compost is spread in windrows on a pad comprised of native soil, wood chips or a lined portion of the Landfill that maintains a minimum 2% slope to facilitate drainage away from the curing area. Each windrow is approximately 9 ft high, 18 ft wide at the base, 200 ft (maximum) in length, and contains up to approximately 600 yd^3 of compost. Currently, the windrows are staged atop Cells 4A and 6A (**Figure II.11.1**); however, this location may be adjusted in the future based on operational requirements and fill progression.

   In this "passive" curing process, a front-end loader is used to turn the windrow as determined by the Operator for aeration and homogenization (i.e., typically once/week minimum), and allowed to cure from 30 (minimum) to 180 days. On a weekly basis, a portable temperature probe is inserted into the center of the windrow and compared to the benchmark temperature. When a consistent windrow temperature below the benchmark temperature is maintained between 50 °F and 105 °F for a period of two weeks, the material is considered to be mature.

9. **Finished Product Handling** - Upon completion of the passive curing process, the mature compost may be screened in preparation for final delivery. Screening is currently performed with a ½-inch mesh installed in a mobile Fecon® Satellite Dish Screen. The material passing through the screen is considered to be the final product. Oversized materials are re-circulated into new batches of feedstock material as a bulking agent.

   Screening also removes remaining small particles of undesirable inert materials such as plastics, glass, metals, etc. from the finished compost. The inert materials are placed into a front-end loader and transported to the roll-off container positioned adjacent to the Green Waste Stockpile areas shown on **Figure II.11.1**. The container is then transported to the Landfill for disposal at the active fill face.

   The final product is transferred to trucks with a front-end loader for ultimate disposition (i.e., customer pick-up) at the location shown on **Figure II.11.1**, approximately 300 ft south of the Scalehouse. The final compost product is currently staged at this location, which may be adjusted in the future based on operational considerations.

   SCLF staff assist customers with loading of the materials using the front-end loader or other suitable equipment depending on the customer vehicle. The finished compost product may be used on various City of Rio Rancho and County Public Works projects; used as SCLF cover material or as an amendment to the cover material; or made available to the public for private use.

5.0 IN-VESSEL SYSTEM INSPECTION AND MAINTENANCE PROCEDURES

In addition to the Operating Procedures outlined above in Section 4.0, the designated Operator is responsible for inspecting the composting operations area periodically for items requiring maintenance. Remedial maintenance actions include, but are not limited to, removal and replacement of hard surface materials (e.g., concrete, asphalt) when damage is observed. The digester doors and top-loading lids, as well as wheel rollers on the digesters and biofilters, are lubricated every three months at the appropriate Zerk® fittings. Gaskets and seals on the doors and lids of the digesters and biofilters are inspected for wear and proper seal each time these containers are loaded and unloaded. Debris such as wood chips or compost are scraped off the seal before the lid or door is tightened.

The digester polymer coating is periodically inspected for damage due to bubbling, peeling, scraping, or contact. Damaged areas are ground smooth and wire brushed down to the bare steel. The affected area is primed and then re-coated with a compatible polymer coating. **Table II.11.3** is the Maintenance Checklist followed by the Operator for the digesters and other composting equipment components:

TABLE II.11.3
In-Vessel Maintenance Checklist
Sandoval County Landfill

Component	Action	Frequency
Digester	Check door and lid seals for obstruction, wear, and proper seal	D
Digester	Grease fittings on door, lid hinges, and wheels	Q
Digester	Check hand-crank and safety pin for safe and correct operation	M
Digester	Check interior coating for bubbles, cracks, scrapes, and wear	M
Biofilter	Check door seal, leachate line, and air hoses for leakage	M
Biofilter	Check media for moisture content, compaction, and porosity	S
Biofilter	Grease fittings on door, lid hinges, and wheels	Q
Temp. Probe	Remove and inspect for bends, breaks, and proper connection	M
Air Sensor	Inspect for dust or dirt	A
Flex Hose	Inspect for moisture build-up	W
Flex Hose	Inspect for wear and proper connection	M
Manifold	Inspect for cracks, air leakage, water leakage	W
Actuators	Inspect box to ensure that they are secured and sealed	W
Leachate	Inspect lines for leakage and proper drainage	D
Condensate	Inspect lines for leakage and proper drainage	D
Fans & VFD	See Manufacturer's Specifications	MS
Mixer	See Manufacturer's Specifications	MS

Notes:
D = Daily
W = Weekly
M = Monthly
Q = Quarterly
S = Semi-Annually
A = Annually
MS = per Manufacturer's Specifications

FIGURE II.11.5
Compost Waste Screening Form
Sandoval County Landfill

DATE: _____ TIME: _____

FACILITY NAME: SANDOVAL COUNTY LANDFILL COMPOSTING FACILITY

SCREENING PERSONNEL: Print: _____

Signature: _____

****

COMPANY NAME: _____

COMPANY NAME: _____

DRIVER'S NAME: Print: _____

Signature: _____

VEHICLE LICENSE OR #: _____

VEHICLE DESCRIPTION: _____

SOURCE OF WASTE: _____

UNAUTHORIZED WASTE DETECTED: YES _____ NO _____

IF YES, DATE & TIME NMED WAS NOTIFIED: (CALL 505.827.0197)_____

_____

_____

OBSERVATIONS AND/OR ACTION TAKEN: _____

_____

_____

_____

FINAL DISPOSITION: _____

_____

_____

_____

6.0 IN-VESSEL COMPOSTING FACILITY CLOSURE

Closure costs have been developed for the Composting Facility, and are provided in **Volumes VI.1** and **II.5**. The potential closure activities and associated costs relate primarily to the removal of the infrastructure, concrete pad, and managing any accumulated material. No post-closure monitoring is anticipated as the Composting Facility is within the monitored Landfill footprint, and inspection/surface maintenance of the 5-acre ± area will be conducted as part of SCLF's routine post-closure care.

7.0 MORTALITY COMPOSTING OPERATIONS

SCLF currently conducts mortality composting to manage a difficult solid waste on-site. Medium and large animal carcasses are composted that would otherwise be managed in a similar manner to MSW burial at the active fill face. Although equipment and compost materials from the SCLF Composting Facility may be utilized in the management of these wastes, mortality composting is not considered a part of the In-Vessel Composting Facility operations.

Construction

The mortality composting area is currently situated atop lined Cell 4B (**Figure II.2.1**). Each mortality composting static pile is constructed in similar fashion, and may be adjusted as necessary to maintain an efficient and sanitary management process. Typically, an 18- to 24-inch-thick base layer of chipped material (i.e., bulking agent) is spread over an area approximately 10 feet in diameter. The primary bulking agent consists of shredded green and woody waste, and may include other organic compostable materials such as leaves, manure, stable bedding, shredded paper and cardboard, etc. Finished compost from the Composting Facility, or oversize material screened from finished compost may also be included to provide active microbial populations suitable for composting.

Animal carcasses are deposited on top of the base layer and overlain with a minimum 18 inches of additional chipped material. Static pile moisture content may be supplemented by water supplied by the on-site water truck if additional moisture is necessary to promote decomposition. The finished pile is allowed to remain undisturbed until the decomposition process is considered

complete (typically 4-6 months). Static piles are monitored weekly for issues such as ponding, odor, etc.

Contingency Plan

Should the mortality compost operation be interrupted due to equipment or staffing issues, a carcass may be received and temporarily stored next to the pile; and is typically incorporated into the pile by the end of the working day. If the carcass cannot be added to the compost pile, it is disposed of in the active fill face. In order to prevent the spread of potential fires, at least 20-foot-wide aisles are maintained between the piles. If a fire is suspected, the bulking material is removed to uncover the problem area, and either re-composted or disposed in the Landfill. The SCLF Contingency Plan (**Volume II.3**) will be implemented should there be a significant fire.

Product

Once a static pile has matured, remaining bones are removed and either re-composted or disposed of at the active fill face. The finished compost may be used to enhance the final cover of closed Landfill cells, as an inoculant for composting future mortalities, or re-used as a bulking agent for routine mortality composting.

Recordkeeping

Mortality composting records include the volume and type of carbon sources, the type and number of carcasses composted, and the date(s) processed. The disposition of finished compost (e.g., landfilled, used for inoculation of additional piles, etc.) is also recorded.