

PART IV

SITE OPERATING PLAN

Hawthorn Park Recycling & Disposal Facility

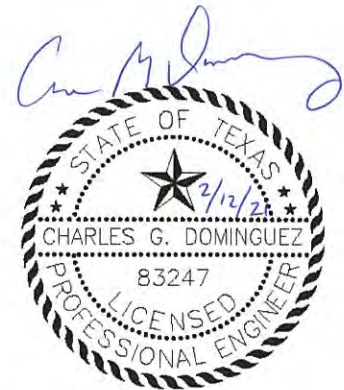
Houston, Harris County, Texas

TCEQ Permit MSW-2185A

Owner/Site Operator/Permittee:



USA Waste of Texas Landfills, Inc.
24275 Katy Freeway, Suite 450
Katy, Texas 77494



Submitted By:



Golder Associates Inc.
14950 Heathrow Forest Pkwy, Suite 280
Houston, TX 77032 USA
Professional Engineering Firm Registration Number F-2578

GOLDER ASSOCIATES INC.
Professional Engineering Firm
Registration Number F-2578

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		Registration Number F-2578
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1.0 INTRODUCTION

1.1 Terms of Reference

The Hawthorn Park Recycling & Disposal Facility (referred to hereinafter as “Hawthorn Park RDF,” or “facility,” “landfill,” or “site”) is a Type IV municipal solid waste (MSW) landfill facility, owned and operated by USA Waste of Texas Landfills, Inc. (USA Waste). This Site Operating Plan (SOP) provides general instructions for site management and personnel to operate the facility in a manner consistent with the design of the facility and with the Texas Commission on Environmental Quality's (TCEQ's) rules to protect human health and the environment. This SOP complies with the requirements of 30 Texas Administrative Code (TAC) Chapter 330, Subchapter D applicable to Type IV MSW landfill facilities.

The specific procedures outlined in this SOP are operational requirements and must be understood, acknowledged, and followed by site personnel. This SOP will be maintained as part of the Site Operating Record (SOR) in an easily accessible location to allow the site operating personnel to review the SOP as needed. This SOP will be retained during the active life of the site and throughout the site's post-closure care maintenance period.

References to the terms “Executive Director” or “TCEQ” used in this SOP shall refer to the Executive Director (ED) of the TCEQ or the designated representative of the TCEQ. References to information in the permit or “permit application” for this facility shall refer to the most current version of these documents, including any amendments, modifications, or revisions as approved.

The Site Manager has overall responsibility for implementation and adherence to this SOP. Wherever this SOP describes procedures or requirements without naming a specific individual or position responsible for those requirements, the Site Manager shall have primary responsibility for those requirements. Where a specific position is responsible for a particular task, that responsibility is described. Otherwise, the Site Manager may assign any qualified personnel to accomplish the requirements of this SOP.

1.2 Facilities Addressed by this SOP

As noted in Section 1.1, this SOP has been prepared to address the 30 TAC Chapter 330, Subchapter D requirements for Type IV landfills. Disposal of waste in landfill units is the primary site activity. Additionally, the following recycling areas will be established on-site: (i) a staging area to collect large/heavy/bulky items (e.g., appliances) for recycling or salvaging; (ii) a wood recycling area; and (iii) a construction and demolition (C&D) waste recycling area. This SOP also addresses the relevant operational requirements and activities associated with these on-site recycling areas, as well as waste disposal operations.

1.3 Sequence of Landfill Operations

The facility is designed to operate as a multi-level, modified aerial fill landfill, with above and below-grade filling. The general sequence of anticipated landfill operations is shown on the figures presented in Part II, Existing Conditions and Character of the Facility of the Permit Amendment Application (see Figures II-7.1 through II-7.5).

2.0 PRE-OPERATION NOTICE §330.123

At least 14 days prior to placement of waste in any newly constructed disposal area, the facility will provide written notice to the TCEQ in the form of a Soils and Liner Evaluation Report (SLER) of the final construction and lining of the new disposal area. Placement of waste in a newly constructed disposal area shall not occur unless either: (i) TCEQ provides its verbal or written approval; or (ii) by the end of the 14th day following submittal of the SLER to TCEQ, no verbal or written comments are received from TCEQ. Following one of these two events, the Site Manager may direct waste placement to begin in the newly constructed cell.

3.0 RECORDKEEPING REQUIREMENTS

The SOR will be maintained to document operating and landfill construction related information as required by the TCEQ. The SOR will be kept either: (i) on-site; (ii) at the Fairbanks Landfill owned and operated by the permittee; (iii) off-site at the USA Waste Area Office; or (iv) at an alternate location approved by the ED. The SOR will include site-specific records in accordance with 30 TAC §330.125 and will be maintained and kept current for the life of the site and during the post-closure care period. A detailed list of required information is provided below.

3.1 Required Information

The documents that will be maintained in the SOR are listed below in Table IV-1. The records listed in Table IV-1 will be placed and retained in the SOR within seven (7) working days of the completion of listed activities or the receipt of analytical data. The Executive Director may set alternative schedules for recordkeeping and notification requirements as specified in 30 TAC §330.125 (a) - (f), except for notification requirements contained in 30 TAC §330 Subchapter M of this chapter (relating to Location Restrictions) for any proposed lateral expansion located within a six-mile radius of any airport runway end used by turbojet or piston-type aircraft or notification relating to landowners whose property overlies any part of the plume of contamination, if contaminants have migrated off site as indicated by groundwater sampling.

**Table IV-1
 Recordkeeping Requirements**

Record Needed	Description of Contents	Rule Citation (30 TAC §)	Frequency	For More Information
Permit No. MSW-2185A (including all modifications and amendments)	a. Site Development Plan b. Site Operating Plan c. Closure Plan d. Post-Closure Plan e. Landfill Gas Management Plan	330.121(a) and 330.125(a)	Upon Issuance of Permit, and Approved Modifications and Amendments	None
Location Restriction Demonstrations	Demonstrations that the site is in compliance with the location restriction criteria.	330.125(b)(1)	Submittal of Permit Amendment Application	Part II of Permit Application
Information on Excluding Prohibited Waste	Records to include training, inspections, and notifications relating to excluding the receipt of prohibited waste, including a record of unauthorized material incidents (receipt of prohibited waste and removal/remediation of the incident)	330.125(b)(2) and 330.133(b)	Per Occurrence	SOP Sections 5.6, 8.2

**Table IV-1
 Recordkeeping Requirements**

Record Needed	Description of Contents	Rule Citation (30 TAC §)	Frequency	For More Information
Gas Monitoring Results and Remediation Plans	Required gas monitoring reports and other related submittals required by the Landfill Gas Management Plan, including results from gas monitoring and any notification and remediation plans relating to exceedances of explosive gas concentrations at points of compliance.	330.125(b)(3)	Gas Monitoring - Quarterly; Remediation Plans - Per Occurrence	SOP Sections 16 and 21. Site Development Plan Attachment 6
Groundwater Monitoring and Corrective Action Information	Demonstrations, certifications, findings, monitoring, testing, and analytical data relating to groundwater monitoring and/or corrective action.	330.125(b)(5)	Monitoring - Annual; Corrective Action and Other Documentation - As Required	Site Development Plan Attachment 5
Closure and Post-Closure Care Data	Closure and Post-Closure Plans, and applicable monitoring, testing, or analytical data relating to post-closure requirements.	330.125(b)(6)	Monitoring and Data - Annual	Site Development Plan Attachments 7 and 8
Cost Estimates and Financial Assurance Documentation	Any and all cost estimates and financial assurance documentation relating to financial assurance for closure and post-closure care.	330.125(b)(7)	Annual	Site Development Plan, Attachment 9
Correspondence	Copies of correspondence and responses relating to the operation of the facility, modifications to the permit, approvals and other matters pertaining to technical assistance.	330.125(b)(9)	Per Occurrence	None
Personnel Training Records	Training records for all personnel will be maintained in accordance with 30 TAC §335.586(d) and (e).	330.125(e)	As Needed (Minimum Annually)	SOP Section 5.4
Required Personnel Operator Licenses	Licensing records will be maintained in accordance with 30 TAC Chapter 30, Subchapter F.	330.125(f)	As Needed	None
Waste Acceptance Rate Documentation	Documentation in the form of quarterly and annual solid waste summary reports will be maintained as required by 30 TAC §330.675.	330.125(h)	Quarterly and Annually, As Appropriate	SOP Section 4.2

**Table IV-1
 Recordkeeping Requirements**

Record Needed	Description of Contents	Rule Citation (30 TAC §)	Frequency	For More Information
Landfill Marker Inspections	A record of the landfill marker inspections, findings, and any repairs.	330.143(a)	Monthly	SOP Section 13.3
Cover Inspection Record	A record of the required cover inspections, findings, and any corrective actions (e.g., repairs) taken. Includes inspecting for and remedy of ponded water.	330.165(h)	Active Facility - Weekly and after storm events); Closed Facility - Per Post-Closure Plan (Semi-Annually)	SOP Section 24.5 and 24.6.2
Cover Application Log	A record showing site grid areas where weekly and/or intermediate cover has been placed each week.	330.165(h)	Weekly (when site is in operation)	SOP Section 24.6.1
Access Control	A record of the required access inspections, findings, and any repairs made and notification of breach if applicable.	330.131	Inspect - Monthly; Repair/ Notification - As Needed	SOP Section 7.2
Liner Evaluation Reports, Ballast Evaluation Reports, and Liner Interim Status Reports	Documentation of construction of the liner for a new disposal area, along with evaluation and documentation of ballast (if required), and interim status of liner (if needed).	330.125(b)(12)	Per Occurrence	SOP Section 2; Site Development Plan Attachment III-3D (Liner Quality Control Plan)
Landfill Gas System Inspections	Documentation of inspection of the landfill gas monitoring system indicating the findings and documenting any repairs made.	330.125(b)(12) and 330.159	Inspect Gas Monitoring System - Quarterly	Site Development Plan Attachment 6
Vector Control	A record of instances when the facility uses a professional exterminator to apply pesticides for vector control.	330.125(b)(12)	Per Occurrence	SOP Section 17

**Table IV-1
 Recordkeeping Requirements**

Record Needed	Description of Contents	Rule Citation (30 TAC §)	Frequency	For More Information
Internal Roadways	Documentation of inspection of internal roadways, and maintenance/re-grading as needed.	330.125(b)(12)	Inspections - Every Two Months; Maintenance & Regrading - As Needed (Minimum Annually)	SOP Section 18.3
Public Road Litter Pickup	A record of inspecting for and pickup of litter on public roads.	330.125(b)(12)	Daily (on days when site is in operation)	SOP Section 14
Fire Occurrence Notices	Written description of waste-related fire that is not extinguished within 10 minutes, including record of required notifications.	330.129	Per Occurrence	SOP Section 6
Ponded Water Inspections	Inspection of the landfill waste fill areas to check for ponded water, and maintenance/repairs to remove ponded water as needed.	330.167	Part of Cover Inspections (see above)	SOP Sections 24 and 25
Other	Any other plans or documents required to be maintained by the approved permit or by the ED.	330.121(a), 330.125(b)(12), and 330.125(a)	As Required by Permit or ED	None

Other recordkeeping items that are identified in 30 TAC §330.125(b) but that are not required at this facility because they are not applicable are: (i) unit design documentation for the placement of leachate or gas condensate in a MSW landfill; (ii) small community exemption information; (iii) special waste documentation (manifests, etc.); and (iv) spray-applied alternate (ADC) material.

3.2 Executive Director Access to Information

The facility will maintain the SOR in an organized format, where information is readily locatable and retrievable. The SOR will be made available to TCEQ upon request and will be accessible to TCEQ for inspection during normal operating hours.

4.0 WASTE ACCEPTANCE RATES

4.1 Estimated Waste Acceptance Rates

The estimated waste acceptance rate over the projected approximately 46.3-year life of the facility ranges from approximately 150,000 tons per year (tpy) to an estimated 342,000 tpy in the final year. The assumptions used to make this forecast are discussed in Part II, Section 2 of the Permit Amendment Application (PAA). The forecast is based on anticipated waste receipts in consideration of population growth of the service area, economic conditions, long-term impacts of recycling and re-use of materials, competition within the marketplace, and available landfill disposal capacity within the area. A detailed estimated year-by-year waste acceptance forecast (and corresponding site life calculation) is provided in Part III, Attachment 3, Appendix III-3A. The listed yearly rates are estimates and were used to determine equipment and manpower needed for landfill operations; they are not intended to be a limiting parameter of the site's permit or to otherwise limit waste acceptance or operations at the site.

This SOP has been prepared to address operating requirements for a wider range of waste receipts than the maximum estimated volume forecasted. This will account for the inherent uncertainties in predicting long-term waste acceptance rates to meet the requirements of 30 TAC §330.125(h) and will allow the facility to self-adjust the SOP provisions, with regard to manpower and equipment, based on actual waste receipt tracking, as discussed below, without having to modify the permit. Specifically, the SOP addresses waste acceptance rates of up to 624,000 tpy. Elements of site operation(s) that are related to the waste acceptance rate (e.g., personnel, equipment, etc.) are shown in this SOP in matrix tables of requirements versus annual waste receipt tonnage.

4.2 Actual Waste Acceptance Rate Tracking

The actual waste acceptance rate will be tracked by quarter, and the actual annual waste acceptance rate will be a rolling average based on the sum of the previous four quarterly summary reports. The quarterly and annual solid waste summary reports for the facility will be maintained in the SOP. If the actual annual waste acceptance rate, as established by the sum of the previous four quarterly summary reports, exceeds the previous rate at which the site was operating, and the exceedance is not due to a temporary occurrence, the facility will adjust operations with regard to personnel and equipment needed to manage the waste as specified in Sections 5.1 and 5.2 of this SOP (see Tables IV-2 and IV-3), without the need for a permit modification, provided that the actual rate is within the range covered by this SOP.

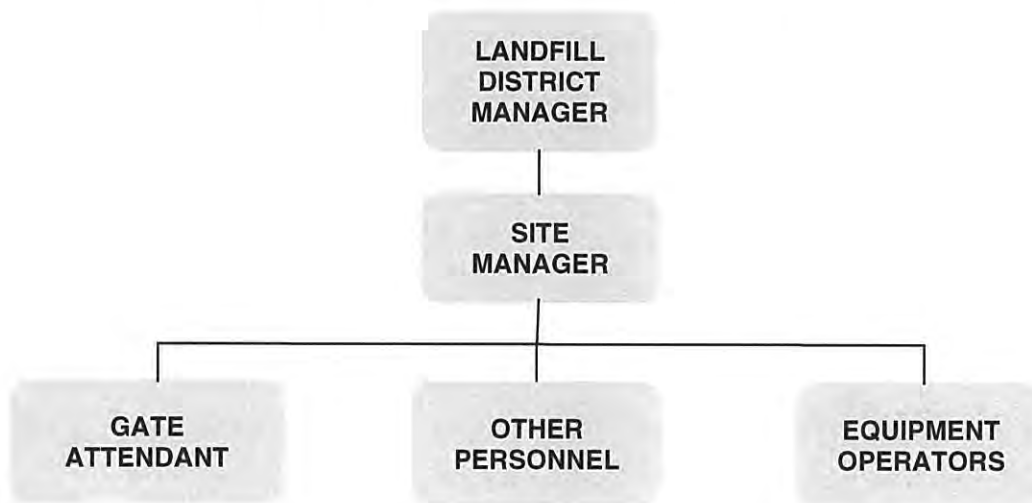
If the waste volume being received is outside that presented in Tables IV-2 and IV-3 based on the sum of the last four quarterly summary reports, the facility will file a permit modification within 90 days of the exceedance. The permit modification will identify any needed changes to the SOP to manage the increased waste acceptance rate to protect human health and the environment.

5.0 GENERAL SITE OPERATING REQUIREMENTS

5.1 Facility Personnel

The general organizational structure for facility personnel will be as shown on the organizational chart shown below as Figure IV-1. The Site Manager will have overall responsibility for day-to-day landfill operations. Individual job titles and personnel are subject to change based on changes in operational conditions and changes in roles and responsibilities. However, the total number of key site personnel will be sufficient to meet the requirements outlined in Table IV-1. In addition, training will be maintained regarding duties and responsibilities to ensure ongoing compliance with the requirements of this SOP.

Figure IV-1. Hawthorn Park RDF Organizational Chart



A detailed description of roles and responsibilities of facility personnel are described in the remainder of this section.

5.1.1 Landfill District Manager

The Landfill District Manager is the designated regulatory point-of-contact person for this facility. This individual has the authority to hire necessary supervisory and operating/administrative personnel for the landfill and to arrange or provide for their training and orientation. This individual also evaluates the facility's equipment needs and initiates requests to replace or obtain additional equipment. The Landfill District Manager may also engage outside contractors, as needed, to provide supplemental equipment, construction, or other services as deemed necessary for site operation. The Landfill District Manager is typically responsible for overall landfill management of one or more landfills in the geographic area, and, therefore, will not necessarily always be physically located (i.e., work full-time on-site) at this facility. At minimum, the Landfill District Manager must be knowledgeable and experienced in aspects of solid waste

disposal operations, including relevant regulations, permit requirements, waste-handling and safe management practices for disposal of MSW, non-hazardous industrial waste, and special waste, and will have at least four (4) years of landfill operations experience with a proven work history in the waste services industry.

5.1.2 Site Manager

The Site Manager will be responsible for day-to-day on-site landfill operations. As such, this individual will be directly responsible for staff and equipment allocation to ensure operation of the facility in accordance with the approved Site Development Plan, SOP, and applicable TCEQ and federal regulations. The Site Manager serves as the emergency contact and coordinator for the facility and will be responsible for maintaining the SOR and required logs. The Site Manager must have a minimum of two (2) years of experience in the solid waste industry with experience in earthmoving and landfill operations management and be familiar with and have the aptitude to manage personnel and implement operational aspects of solid waste disposal operations. This includes having knowledge of relevant regulations and permit requirements; waste-handling and safe management practices for disposal of MSW; health and safety; and waste identification. The Site Manager or designated alternate has the responsibility to reject or have unauthorized wastes removed. The Site Manager will have and maintain a MSW Facility Class A License as a municipal solid waste facility supervisor in accordance with 30 TAC Chapter 30, Subchapter F Note that the Landfill District Manager having a Class A license may also serve as the Site Manager.

5.1.3 Gate Attendant

The Gate Attendant, stationed at the scale house, has primary responsibility for receiving the incoming vehicles, collecting waste disposal fees, preliminarily screening for prohibited wastes, and visually inspecting select incoming trucks as specified elsewhere in the SOP. The Gate Attendant records specific hauler information, volume estimates or weight, and provides directions to the driver with respect to on-site rules and the current unloading areas. At all times when the facility is open to receive waste, the Gate Attendant will be responsible for waste screening duties as outlined in Section 5.6 of this SOP. Accordingly, the minimum qualifications for the Gate Attendant will be the ability to perform clerical duties and to comprehend in-house training on prohibited waste identification, health and safety response, and recordkeeping.

5.1.4 Equipment Operators

Equipment Operators' primary duties will include safe operation of the landfill-related equipment. Equipment Operators will be trained to identify prohibited/unacceptable waste materials as they are unloaded from incoming trucks at the working face. Equipment Operators will notify the Site Manager or designated alternate should suspect wastes be observed at the working face. Equipment Operators' screening duties are further discussed in Section 5.6 of this SOP.

At all times when the facility is open to receive waste, at least one Equipment Operator will be designated as the Lead Equipment Operator on duty, and will manage the active disposal area and direct the other Equipment Operators in the execution of their duties. At a minimum, all Equipment Operators will be qualified to safely and effectively operate compactors and bulldozers at landfills, have the ability to operate other heavy equipment on-site, and have the ability to comprehend on-the-job training in landfill operations, health and safety, and waste identification.

Equipment operators may also perform maintenance and repair of heavy equipment, support equipment, and vehicles as directed by the Site Manager or designated alternate. Duties may include regular servicing of all light and heavy equipment to maximize equipment performance and eliminate equipment downtime. Tasks may also include fueling equipment, maintaining the equipment maintenance yard and shop, and performing other duties as assigned. Equipment operators may also be responsible for patrolling for and picking up litter and windblown trash as needed.

5.1.5 Other Personnel

Other site personnel, including but not limited to, mechanics and laborers may be employed from time to time at the Hawthorn Park RDF. Minimum qualifications for laborers include the ability to operate support equipment safely and effectively, perform manual labor and the ability to receive and comprehend on-the-job training in landfill operations, health and safety, and waste identification.

5.1.6 Minimum Required Number of Personnel

The list of operations personnel in Table IV-2 represents the minimum staffing levels required to maintain safe and efficient landfill operations for a broad range of waste acceptance rates. The estimated waste acceptance rates are discussed in Section 4.1 of this SOP.

**Table IV-2
 Minimum Facility Staffing Levels**

Landfill Staff Description	Minimum Staffing Based on Waste Disposal Rate:		
	0-68,000 tons/year	68,001-400,000 tons/year	400,001-624,000 tons/year
Site Manager ⁽¹⁾	1	1	1
Gate Attendant ⁽²⁾	1	1	1
Equipment Operator	1	2	3
Other Site Personnel	1	1	2
Total	4	5	7

Notes:

⁽¹⁾ The Site Manager may perform other staff position duties and may designate an alternate to perform Site Manager duties when they are not at the site.

⁽²⁾ A Gate Attendant and an individual performing waste load inspection duties will be on-site at any time the landfill is open and receiving waste.

Required staff will not necessarily be on-site at the same time (e.g., Equipment Operators and other staff may work different shift schedules throughout the day). As changes in waste acceptance rates dictate, hours of operation and staff changes will be made to meet the staffing requirements listed above in Table IV-2. Additional staff will have qualifications commensurate with their duties, and key personnel will meet the minimum qualifications previously presented. The designated level of staffing will be maintained as required by operating conditions to ensure operations will be conducted in compliance with applicable TCEQ rules and the facility's permit provisions.

5.2 Equipment

Equipment requirements at the facility may vary based on actual operational requirements. The list of equipment in Table IV-3 represents the minimum needed to undertake safe and efficient landfill disposal operations for a range of waste acceptance rates. The estimated waste acceptance rates were discussed in Section 4.1 of this SOP. Equipment will be added or removed as needed to meet changes in waste disposal demands and supporting operational requirements.

**Table IV-3
 Minimum Equipment Dedicated to the Facility**

Equipment Description	Disposal Rate			Equipment Size ⁽¹⁾	Function
	0-68,000 tons/year	68,001-400,000 tons/year	400,001-624,000 tons/year		
Landfill Compactor	0	1	1	Minimum weight of 40,000 pounds	Waste compaction and fire protection
Hydraulic Excavator ⁽²⁾	1	1	1	Minimum weight of 20,000 pounds	Cover soil excavation and fire protection
Haul Truck ⁽²⁾	1	1	1	Minimum heaped capacity of 20 cubic yards (yd ³)	Cover soil hauling and fire protection
Pump	1	1	1	6" Pump	Below-grade stormwater removal
Bulldozer	1	1	2	Minimum weight of 40,000 pounds	Waste spreading, waste compaction, cover soil spreading, and fire protection
Water Truck	1	1	1	Minimum 1500-gallon tank capacity	Site maintenance, dust control, and fire protection
Sweeper	1	1	1	Minimum 4-ft broom width	Road maintenance

Notes:

(1) The equipment size is the minimum size to be provided.

(2) The equivalent function of an excavator and haul truck(s) working in tandem to excavate and transport soil may be met by a scraper. Thus, at the facility's discretion, the excavator and haul truck(s) may be replaced by a scraper(s) that provides equivalent production rates.

(3) In the event of equipment breakdown or maintenance, backup equipment will be provided from other landfills, or from independent contractors or local rental companies, to avoid interruption of waste services and required facility operations.

The above list identifies the minimum number and size of equipment that will be utilized based on changes in the actual waste acceptance rate. Additional equipment may be used to meet operational needs beyond that specified in the above table. Changes in equipment required for temporary increases or decreases in waste acceptance rates will be left to the discretion of the Site Manager. In addition to the equipment listed above, miscellaneous pickup trucks, vans, various pumps, portable lighting, litter fences, instruments, and safety and training equipment may also be on-site as necessary to support operations.

Equipment will be routinely maintained, repaired, replaced, or supplemented with additional equipment as required to maintain uninterrupted operations. The equipment fleet at the facility is sized to meet current operating requirements, practices, and experience to account for periodic scheduled maintenance or short-term breakdowns. If additional equipment is needed within 24 hours of primary equipment breakdown, the facility has access to back-up waste spreading, compaction, and earthmoving equipment with equivalent performance capabilities from other landfills in the area owned and/or operated by USA Waste or its parent company (Waste Management of Texas, Inc. (WMTX)), or from local equipment dealers or contractors. Emergency back-up equipment will be rented or made available from other landfills owned/operated by USA Waste or WMTX in the area. Additional equipment may also be added as necessary to adequately perform all required operations. Construction may be performed by an outside contractor that will provide the additional construction equipment required, including earthwork equipment such as excavators, trucks, and soil compactors.

The following is a brief description of the function of the equipment used for site operations:

- Landfill Compactor – used to spread and compact the volume of waste received at the working face. Also used to spread soil for fire protection and fire-fighting.
- Bulldozer – used to spread waste in conjunction with compactors, place and remove intermediate cover, prepare turnaround areas, aid in preparation and construction of liners, and spread intermediate cover. Other tasks involving the placement and movement of soil will also be completed with bulldozers, including fire protection and fire-fighting. The number and type of bulldozers will be a function of the tasks performed.
- Scraper – If used in place of an excavator and dump truck(s), a scraper is used for excavation and hauling of soil for construction of liners, hauling soil for cover operations, for fire protection and fire-fighting, and for associated soil needs.
- Hydraulic Excavator – used to excavate soil and load dump trucks for use as weekly, intermediate, or final cover. Also used for fire protection and fire-fighting.
- Haul Truck – utilized to haul soil for construction of liners, cover operations, for fire protection and fire-fighting, and for associated soil needs.
- Water Truck - used to control dust on site roads, to haul water for irrigation of vegetation at the facility, to supply construction water, and as fire control equipment. Site water trucks may be used to haul contaminated water in emergencies.
- Motorized Power Broom – used to clean paved roads throughout the site.
- Portable Litter Fencing – used to control windblown litter as discussed subsequently in Section 11. The size, number of pieces, and type of fencing varies.

As stated above, this list is subject to change as necessary to maintain effective site operations including compliance with permit provisions and regulatory requirements. The minimum number and types of equipment specified in Table IV-3 will be maintained.

5.3 General Instructions for Operating Personnel

This SOP contains the procedures necessary for daily operations of the facility and instructions for compliance with applicable regulations, including:

- Personnel training requirements;
- Wastes authorized for receipt and disposal;
- Detection and prevention of disposal of prohibited waste, hazardous waste, and PCBs;
- Fire protection;
- Access control;
- Unloading waste;
- Facility operating hours;
- Site signage;
- Control of windblown waste and litter;
- Easements and buffer zones;
- Landfill markers and benchmark;
- Materials along the route to the site;
- Disposal of large items;
- Air criteria;
- Disease vector control;
- Site access roads;
- Salvaging and scavenging;
- Endangered species protection;
- Landfill gas control;
- Oil, gas, and water wells;
- Compaction;
- Landfill cover;
- Ponded water;
- Disposal of special wastes;
- Disposal of industrial wastes;
- Visual screening of deposited waste; and
- Contaminated water management and discharge.

The procedures and instructions are included in the subsequent sections of this SOP.

5.4 Personnel Training

5.4.1 Overview of Training Program

Training of facility personnel will consist of classroom instruction and/or on-the-job training that instructs site personnel in the performance of their duties and compliance with this SOP, the facility's permits, and applicable regulations. Training will be directed by employees, supervisors, or other individuals experienced in waste management procedures and operations, health and safety, and related subjects needed for satisfactory job performance. Training will include instruction in the solid waste management and related procedures relevant to each position. The training program will also ensure that personnel are familiar with emergency response procedures, emergency equipment, and emergency systems.

5.4.2 Training Frequencies and Position-Specific Training

Training will include both introductory and continuing training. Facility personnel must successfully complete initial training on topics relevant to their position within six (6) months after the date of their employment or assignment to the facility. When an existing employee is transferred or promoted to a new position at the facility with training requirements that differ from the previous position, that employee will receive the additional training required. Additional supervision will be provided to personnel during the training period, and personnel activities will be limited during the training period.

Facility personnel will take part in an annual review of the initial training topics relevant to their position.

Table IV-4 presented below summarizes the position-specific training topics for facility personnel.

**Table IV-4
 Position-Specific Training Topics**

Position	Required Training Topics										
	Site Orientation	Site Operations	Health and Safety	Regulated Hazardous Waste & Prohibited PCBs, and Other Prohibited Wastes	Fire Prevention and Protection	Landfill Gas Management	Emergency Response	Spill Control	Litter Control	Random Inspections	Storm-water Inspections
Site Manager	X	X	X	X	X	X	X	X	X	X	X
Gate Attendants	X	X	X	X	X		X		X	X	
Equipment Operators	X	X	X	X	X	X	X	X	X	X	X
Other Site Personnel	X	X	X		X		X	X	X		

5.4.3 Training Recordkeeping

Documentation of training will be maintained in the SOR. Training records on current personnel must be kept until closure of the facility, and training records of former employees must be kept for at least three years from the date the employee last worked at the facility. Personnel training records will be transferred with an employee if the employee is transferred to a different facility.

With regard to training on the topics of the program for detection and prevention of regulated hazardous waste and prohibited PCB wastes, those training records will be retained for the operating life of the facility and the post-closure care period.

5.5 Wastes Authorized for Receipt and Disposal

The Hawthorn Park RDF is a Type IV MSW landfill facility, and waste that has and will continue to be disposed of at the landfill consists of, but is not limited to, the following materials, as defined in 30 TAC §§330.3 and 330.5(a)(2):

Allowable Wastes: The facility may accept the following wastes:

- Construction or demolition waste [30 TAC §330.3(33)]
- Brush [30 TAC §330.3(18)]
- Rubbish [30 TAC §330.3(136)]
- Tires that have been processed (such as by splitting, shredding, quartering or sidewall removal) in a manner acceptable to the executive director. [30 TAC §330.3(142); 30 TAC §330.15(e)(4) (prohibiting disposal of whole used or scrap tires)]
- Class 2 industrial solid waste that is construction or demolition waste, brush, or rubbish resulting from or incidental to any process of industry or manufacturing, or mining or agricultural operations. [30 TAC §330.3(22); 30 TAC §330.173(i)]
- Class 3 industrial solid waste. [30 TAC §330.3(23); 30 TAC §330.173(j)]
- Non-regulated asbestos-containing material (non-RACM). [30 TAC §330.3(95); 40 CFR §61.141; 30 TAC §330.171(c)(4)]
- Other special waste that is construction or demolition waste, brush, or rubbish. [30 TAC §330.3(154); 30 TAC §330.171(a)]

Prohibited Wastes: The facility may not accept the following wastes:

- Wastes that are not construction or demolition waste, brush, or rubbish. [30 TAC §330.5(a)(2)]
- Putrescible waste. [30 TAC §330.3(122)]
- Untreated medical waste. Please note that this prohibition may be superseded by the executive director in writing when a situation exists that requires disposal of untreated medical waste to protect human health and the environment from the effects of a natural or man-made disaster. [30 TAC §330.171(c)(1)]
- Lead-acid storage batteries. [30 TAC §330.15(e)(1)]

- Do-it-yourself used motor vehicle oil. [30 TAC §330.15(e)(2)]
- Used oil filters from internal combustion engines. [30 TAC §330.15(e)(3)]
- Whole used or scrap tires. [30 TAC §330.15(e)(4)]
- Items containing chlorinated fluorocarbon (CFC) that have not been handled in accordance with 40 CFR §82.156(f). [30 TAC §330.15(e)(5)] *Note: Items that have been handled in accordance with these rules will be accepted for storage in the bulky items storage/recycling area
- Waste material that contains free liquids by the Paint Filter Test, EPA Method 9095. [30 TAC §330.15(e)(6)]
- Regulated hazardous waste. [30 TAC §330.15(e)(7), 40 CFR §261.3]
- Waste that exhibits the characteristics for hazardous waste [40 CFR §261.3] from oil, gas, and geothermal activities subject to regulation by the Railroad Commission of Texas. [30TAC §330.15(e)(7)]
- Polychlorinated biphenyl wastes (PCBs). [30 TAC §330.15(e)(8), 40 CFR §761]
- Radioactive materials [30 TAC Chapter 336], except as authorized in Chapter 336 or that are subject to an exemption of the Department of State Health Services. [30 TAC§330.15(e)(9)]
- Pesticide (insecticide, herbicide, fungicide, or rodenticide) containers that have been triple-rinsed before receipt at the landfill, are rendered unusable before receipt or on arrival, and are covered by the end of the same working day they are received. [30 TAC §330.171(c)(5)]
- Waste from oil, gas, and geothermal activities subject to regulation by the Railroad Commission of Texas that is construction or demolition waste, brush, or rubbish. [30 TAC §330.171(b), 30 TAC §330.3(154)(P)]
- Industrial waste or waste from oil, gas, and geothermal activities that were generated outside the boundaries of Texas that is construction or demolition waste, brush, or rubbish. [30 TAC §330.171(b), 30 TAC §330.3(154)(Q)]

5.6 Methods for Detection and Prevention of Disposal of Prohibited Waste

This section describes the program that the facility will implement to detect and prevent the disposal of prohibited wastes. A list of prohibited wastes is presented in Section 5.5. above.

5.6.1 Overview of Methods

The following control methods are used to minimize the potential for accepting prohibited waste at the facility, and to detect and prevent the unauthorized disposal of prohibited waste at the facility:

- Signage. Signs posted near the facility entrance inform potential customers of wastes that are not allowed and state the landfill's requirements for transporters.
- Screening at the Gate. The Gate Attendant answers customer inquiries and informs customers of the types of prohibited wastes. The Gate attendant is trained to observe incoming loads for unauthorized waste material and will reject loads containing unauthorized waste.

- Program for Enclosed Containers and Enclosed Vehicles. Special procedures will apply to waste received in enclosed containers or enclosed vehicles, as discussed in Section 26 of this SOP.
- Program for Detection and Prevention of Regulated Hazardous Wastes and Prohibited PCBs. This program is discussed below in Section 5.6.3.
- Random Load Inspections. Random inspections of incoming loads are performed as discussed below in Section 5.6.3.
- Working Face Observations. Equipment Operators at the working face observe each load as it is unloaded and disposed of, and are trained to identify prohibited/unacceptable wastes, and will reject loads containing unauthorized waste. Further details are provided below in Section 5.6.2.

5.6.2 Description of Procedures

This section describes the procedures that will be implemented during all periods of landfill operation to screen incoming waste and take appropriate actions. As noted, the facility may accept rubbish, but cannot accept putrescible waste, and applicable requirements specific to these wastes are included below. These procedures are also part of the program for detection and prevention of disposal of regulated hazardous waste and prohibited PCB wastes. These procedures will be made available for review by the TCEQ. The procedures will be followed and will be modified as necessary to accomplish their purpose.

1. As each transportation vehicle arrives at the gate, the Gate Attendant will observe it for indications that putrescible waste, or any other type of prohibited waste, may be present. The Gate Attendant will obtain load documentation from transporters of enclosed vehicles or delivering stationary compactors to the landfill. Transporters without proper load documentation, route permits, or transportation certificates, as required by 30 TAC §330.7(c), on file with the landfill, will not be allowed to unload at the landfill.
2. Incoming loads will be subject to random inspections to check for prohibited wastes, as described in Section 5.6.3.
3. Incoming loads will be visually inspected by appropriately trained Equipment Operators at the working face. The Equipment Operators will have the authority and responsibility to reject unauthorized loads, have unauthorized material removed by the transporter, and/or assess appropriate surcharges and have the unauthorized material removed by on-site personnel.
4. Should indications of prohibited wastes be detected, appropriate landfill personnel will be summoned to conduct a thorough evaluation of the load, and the generator may be contacted for further information. The driver will be directed to a lined area located near the working face, where the load will be discharged from the vehicle. The landfill personnel inspecting the load will spread out and break up the waste pile and inspect the material for putrescible or other prohibited waste.
5. Unauthorized waste will be placed back into the transporter's vehicle and the driver will be instructed to depart the site. Or, if this is not possible, the facility will isolate and secure this waste (e.g., place it in an appropriate container) to prevent its disposal in the landfill. The Site Manager will be notified to determine the appropriate procedures to be implemented to properly manage the prohibited waste and transport it off-site for proper disposal or return to the transporter or generator.
6. If putrescible wastes are identified, the putrescible waste will be segregated, loaded into a transporter's vehicle or into suitable collection bins, and removed from the site within 24 hours for disposal at a permitted Type I landfill.

7. A record of unauthorized waste removal and management will be maintained in the SOR.
8. The TCEQ will be notified of any incident involving the confirmed receipt or disposal of regulated hazardous waste or prohibited PCB waste at the facility as discussed below in Section 5.6.3.

5.6.3 Program for Detection and Prevention of Regulated Hazardous Wastes and Prohibited PCBs

The program for detection and prevention of disposal of regulated hazardous waste and prohibited PCB wastes at the facility includes the following elements:

1. Informing generators and transporters of unauthorized waste types, including regulated hazardous and prohibited PCB wastes.
2. Strict review of waste streams prior to acceptance as described in Section 5.6.2.
3. Training for facility personnel to recognize regulated hazardous and prohibited PCB wastes and using these skills to screen the incoming wastes at the gate and at the working face.
4. Random inspections of incoming loads.
5. Records of random inspections.
6. Working face observations as described in Section 5.6.2.
7. Notification to TCEQ of incidents involving the disposal of regulated hazardous waste and prohibited PCB wastes.
8. Provisions for remediation of the incident.

Training. The overall personnel training program that will be implemented at the facility will be as described in Section 5.4 of this SOP. This program will include training on topics specifically related to the detection and exclusion of regulated hazardous waste and prohibited PCB wastes, including the following:

- familiarization with applicable regulations;
- load inspection procedures;
- identification and recognition of regulated hazardous waste, prohibited PCB wastes, and other prohibited wastes – including indications for hazardous and PCB wastes such as:
 - yellow hazardous waste or PCB labels;
 - DOT hazard placards or markings;
 - liquids and/or sludges;
 - drums (55-gallon, or 85-gallon overpack);
 - powders or dusts;
 - odors, heat, or chemical fumes; and
 - bright or unusual colored wastes;
- waste handling procedures;
- health and safety;
- notification procedures; and
- recordkeeping.

Load Inspection Procedure. Random inspections of incoming waste loads will be performed by facility personnel trained in the recognition of prohibited waste, including regulated hazardous waste and prohibited PCB waste. In addition to the random load inspections, incoming loads will be visually inspected at the working face as described in Section 5.6.2.

For the random load inspections, the Site Manager or designated alternate will objectively select an average of one (1) waste hauling vehicle per day on days that the facility accepts waste. The waste hauling vehicles will be selected at varying times. The driver of the randomly selected load will be notified and instructed to proceed to a lined area near the working race. The waste will be spread sufficiently to determine the composition of the waste to inspect for regulated hazardous and prohibited PCB waste and other prohibited wastes.

Recordkeeping. As part of the program for detection and prevention of disposal of regulated hazardous waste and prohibited PCB wastes, the following documentation will be maintained in the SOR:

- load Inspection Reports;
- records of regulated hazardous waste or prohibited PCB waste notifications;
- records of rejected loads; and
- personnel training.

Load Inspection Reports will be completed for loads subjected to random inspection. The reports will include the date and time of inspection, the name and address of the transporter, the type of vehicle, the size and contents of the load, and the results of the inspection.

Management and Notification of Incidents. If regulated hazardous or prohibited PCB waste is detected, the waste will be promptly returned to the vehicle and the waste will not be disposed of at the facility. If the hauler is not available, the waste will be properly segregated and protected against the elements, secured against unauthorized removal, and isolated from other waste and landfill activities until arrangements can be made for appropriate handling and transportation to the generator or an appropriately authorized facility. If known, the hauler will be contacted and required to remove the waste from the facility. TCEQ, and any local agency with jurisdiction that has requested to be notified, will be notified of any incident involving the confirmed disposal of regulated hazardous waste or prohibited PCB waste in the landfill. No notification will be provided for loads rejected by the facility or returned to the transporter or generator. A remediation plan will be submitted and coordinated with TCEQ for removal of regulated hazardous waste or prohibited PCB waste disposed of in the landfill.

6.0 FIRE PROTECTION PLAN

6.1 Fire Protection Training

Facility operations personnel (other than personnel with administrative duties only) will receive annual training in fire protection and fire-fighting. The training will include:

- review and discussion of this Fire Protection Plan;
- fire prevention and hazard awareness;
- location of fire-fighting equipment and materials;
- operation of fire extinguishers;
- alternate fire-fighting methods, including use of soil stockpile and water truck;
- appropriate personnel protective equipment;
- properties of methane gas and proper safety procedures;
- facility evacuation procedures; and
- coordination with the local fire department.

Administrative personnel will receive annual training relating to fire prevention and hazard awareness and facility evacuation procedures. Records of training will be kept in the SOR.

6.2 Fire Prevention

The main potential fire hazard at this facility is operations associated with waste disposal (e.g., disposal truck traffic on-site, off-loading of waste at working face, handling waste during compaction for disposal), since some wastes are potentially combustible materials. Other site activities involving potentially combustible materials are vehicle fuel storage and dispensing, wood recycling, and landfill gas monitoring/management.

To minimize fire hazards at the site, the following standards are in effect:

- Smoking is allowed only in designated areas. Smoking is specifically prohibited:
 - on any area of the landfill waste footprint;
 - at fuel storage and dispensing areas;
 - at material recycling areas; and
 - near landfill gas management system features (e.g., gas monitoring probes).
- “No Smoking” signs will be posted at appropriate locations.
- Fuels will be stored and dispensed only in authorized areas. Efforts will be made to contain and control fuel spills immediately upon discovery. Spilled fuel and impacted soil will be promptly collected, profiled, and properly disposed (in accordance with the facility “Spill Prevention, Control, and Countermeasures [SPCC] Plan” and applicable state and federal requirements).
- No unauthorized burning of solid waste will be permitted at the site.

- “Hot loads” will not be unloaded at the working face. The Gate Attendant and Equipment Operators will observe incoming loads for signs of burning waste such as smoke, steam, or heat; and will manage hot loads as described subsequently in Section 6.4.2.
- Waste will be properly compacted and covered with soil as described in this SOP.
- All landfill equipment and buildings at the site will be equipped with fire extinguishers. Fire extinguishers will be maintained as required by the manufacturer.
- The emergency telephone contact numbers for the facility will be posted at the front gate.
- All employees will be instructed in the control of small fires during the facility’s required emergency response training.

6.3 General Fire-Fighting Procedures

The following general procedures will be implemented in the event of a fire:

- If it can be done safely, fires will be promptly extinguished by trained site personnel.
- If necessary:
 - Contact the local fire department by calling 911.
 - Notify the Site Manager and alert other facility personnel.
 - Assess the extent of the fire and the potential for the fire to spread.
 - If safe, attempt to contain or extinguish the fire until the local fire department arrives.
 - Assist the local fire department as appropriate.
 - Evacuate the facility, as necessary.

In general, fire-fighting methods include smothering a fire with soil, spraying a fire with water, using a fire extinguisher, or separating burning material from other waste. Fire-fighting equipment available at the site includes: (i) a water truck; (ii) fire extinguishers; and (iii) landfill equipment for excavating, transporting, and placing soil.

6.4 Area-Specific Fire-Fighting Procedures

6.4.1 Working Face

Working Face Fire-Fighting Procedures. If there is a fire at the working face, incoming waste receipts will be suspended or rerouted to another portion of the disposal area and another working face established there until the fire is extinguished. The following fire-fighting methods may be employed at the working face:

- isolate the burning material from other waste using bulldozers and compactors;
- smother with soil using bulldozers or compactors;
- apply water from the water truck (replenished from on-site water sources);
- use a fire extinguisher on small fires;
- cut a firebreak using bulldozers or compactors around the fire to prevent it from spreading; and

- place earthen berms around the fire area using bulldozers or compactors to prevent it from spreading.

If a fire cannot be extinguished using the above methods, the local fire department will be contacted immediately by calling 911. Facility personnel will use reasonable measures to contain the fire until the fire department arrives.

Calculation of Soil Volume Requirements. An adequate amount of soil will be available at all times to cover the open area of the working face to a depth of six (6) inches. Based on the anticipated ranges in size of the working face(s) at the facility, the anticipated range of corresponding soil volumes is as follows:

Area of Working Face (ft²)	Minimum Required Soil Volume (yd³)
2,500	47
5,000	93
10,000	186
20,000	371
30,000	556
40,000	741
50,000	926

The soil to be used in the event of a fire at the working face will be from the following sources:

- Soil that is pushed off previously covered waste in areas that will serve as the working face for that week's placement of waste.
- Soil that forms run-on and runoff diversion berms around the working face.
- Soil that is hauled to the active face as waste placement activities occur that will be used as weekly cover.

The soil will be available within 100 feet of the area to be covered.

The Site Manager or designated alternate will estimate the volume of soil needed throughout waste placement activities using the above table and the actual working face dimensions, or by calculating the volume in cubic yards using the formula: [(working face(s) length (ft) x width (ft) x 0.5' thick)/27 ft³/cy]. It is noted that the above table of working face areas and corresponding soil volumes show the amount of soil that may be needed for typical conditions to cover the entire work area, depending on working face size. At any given time, the actual size of the open, uncovered working face may be smaller (i.e., just a portion of that day's working face may be open at any one time).

The size of the working face will be limited based on the availability of equipment to provide the fire protection described below, within one hour of detection of a fire.

Calculation of Maximum Allowable Working Face Size from Fire-Fighting (Soil Covering) Requirements.

Sufficient on-site equipment must be provided to place a six-inch layer of earthen material to cover any waste not already covered with six inches of earthen material within one hour of detecting a fire. Calculations demonstrating that the type and number of equipment listed previously in Table IV-3 in Section 5.2 of this SOP will be able to transport the volume of earth required are presented below. The calculation is performed to back-calculate (solve for) the maximum allowable size of the working face based on the equipment present and their earthmoving capabilities.

- Three (3) scenarios are analyzed based on the minimum pieces of earthmoving (fire-fighting) equipment that would be available depending on the range of waste acceptance rates, as presented in Table IV-3 in Section 5.2.
- The equipment capabilities are as follows (using production rates published in Caterpillar Performance Handbook, Edition 47):
 - The equipment will push soil from the nearby stockpile(s) described above.
 - The average dozing distance is 100'.
 - Each piece of equipment (bulldozer(s) and compactor, when present) will have production equivalent to a D6 dozer pushing a loose soil stockpile – i.e., 420 cy/hr.
- The working face size in square feet is solved-for by dividing the production capacity by the required soil thickness, using consistent units. For example, with one bulldozer, the maximum allowable working face size is calculated as: $[(420 \text{ cy/hr} \times 27 \text{ ft}^3/\text{cy}) / 0.5 \text{ ft}] = 22,680 \text{ ft}^2$ (rounded to the nearest 10 square feet). For a convenient frame of reference, this area can also be expressed as an equivalent square area by taking the square root of the calculated area. The resulting calculation for all three scenarios is tabulated below.

Scenario	Equipment Piece(s)	Production Capacity (CY/hr)	Area (ft ²) That Can Be Covered by 6-inches of Soil in One Hour [i.e., Maximum Working Face Size]	Equivalent Square Dimensions of Calculated Area (ft x ft)
1	1 Bulldozer	420	22,680	150 x 150
2	1 Bulldozer + 1 Compactor	840	45,360	210 x 210
3	2 Bulldozers + 1 Compactor	1,260	68,040	260 x 260

The above table presents the results of the calculation of the maximum allowable working face size based on the different anticipated scenarios of available equipment. It is noted that during a fire, other on-site equipment (e.g., water truck, fire extinguishers, excavator and dump truck, or scraper) may be used to fight the fire. To be conservative, the soil covering/fire-fighting capabilities of these other equipment pieces have not been included in the above calculation. It should be recognized that these other equipment pieces will add to the fire-fighting capabilities at the facility.

6.4.2 Incoming Hot Load

“Hot loads” may be identified by the presence of smoke, steam, heat, or flames being released from the load, or notification by the driver. Any truck perceived to be carrying a hot load will be directed to a portion of the disposal area away from the working face, where the load can be discharged without danger of spreading the fire. The fire will then be extinguished by smothering with earthen material or the application of water. The waste will only be transported to the working face after the Site Manager or designated alternate has determined that no potential exists for the waste to re-ignite. No smoldering or smoking waste will be moved to the working face. Hot loads inadvertently discharged at the working face and resulting in a fire will be handled in the manner described above for managing a fire at the working face.

6.4.3 Vehicle or Equipment

If site equipment or a site-operated vehicle catches fire, the operator will attempt to bring the unit to a stop away from fuel areas, exposed waste material, and other equipment or vehicles. If possible, the operator will shut off the engine and set the brake. Fire may be extinguished by fire suppression equipment installed on some equipment or by trained personnel that will attempt to extinguish the fire using fire extinguishers or water. If the fire cannot be extinguished using the above methods, the local fire department will be contacted immediately by calling 911. Facility personnel will use reasonable measures to contain the fire until the fire department arrives.

6.4.4 Structures

Personnel will follow the general procedures outlined in Section 6.3 of this SOP for fires occurring in on-site structures. The potential for fires will be minimized by employing routine maintenance and cleanup. Fire extinguishers will be provided in structures. No site personnel will enter a structure that is on fire.

6.4.5 Other Areas

Fire-fighting procedures at the large/heavy/bulky item area, the wood recycling area, and the C&D recycling area will be the same as for the working face, as described in Section 6.4.1.

6.5 Notification of TCEQ

If a fire is not extinguished within 10 minutes of detection, the facility will contact the TCEQ Region 12 Office as soon as practical, but no later than four (4) hours after detection. The facility will provide the Region 12 Office with a written description of the fire and response within fourteen (14) days of the event. TCEQ Region 12 contact information is as follows:

TCEQ Region 12 Office
5425 Polk St., Ste. H
Houston, TX 77023-1452
Ph. (713) 767-3500
Fax (713) 767-3646

7.0 ACCESS CONTROL

7.1 Access Control Measures

Access control to prevent unauthorized access, unauthorized dumping, and public exposure to the landfill is provided by: (i) fencing around the perimeter of the facility; (ii) control features at the main entrance/exit gates; (iii) locked gates at other secondary site access point(s) around the facility perimeter; and (iv) site personnel awareness and observations for maintaining access control.

Fencing and gates will serve as the primary landfill access controls. To discourage unauthorized entry into the landfill facility, the perimeter of the facility will be protected by fencing that is at minimum composed of 4-ft high, three-strand barbed wire fence, field fence, or other fence materials.

The site is accessed through an entry gate at the main entrance. Entry to the landfill is restricted to only those whose entry is authorized by site management (e.g., facility employees and contractors, authorized waste haulers, TCEQ personnel, properly identified visitors, etc.). Visitors entering the site are directed to the office location for check-in.

The Gate Attendant will direct waste transport drivers to the proper disposal area. There, the drivers will be directed to a specific unloading area. The Gate Attendant or other site personnel will also direct drivers needing access to other portions of the facility (e.g., construction contractors). Additionally, when appropriate, signs with directional arrows and/or barricades may be placed along site roads to direct traffic and control interior access.

During normal operating hours, facility personnel will be on duty at the scale house and in the vicinity of landfill operations to control access and disposal operations. When the site is closed, the entry gate will be closed to prevent site access, and locked when no personnel are present on-site.

7.2 Access Control Inspection, Maintenance, and Notifications

Access control features will be inspected monthly, and the results of the inspection will be documented. A breach in the perimeter fence will be temporarily repaired within 24 hours of detection.

When a breach of the perimeter fence or gate cannot be permanently repaired within eight (8) hours of detection of the breach, the facility will notify the TCEQ Region 12 Office within 24 hours of detection. The notice will include a schedule for when a permanent repair will be completed. Once the permanent repair is complete, the facility will notify the Region 12 Office of the completed repair.

8.0 UNLOADING AREAS

8.1 Unloading at Working Face

Unloading of waste to be placed in the landfill will only take place at the designated working face or recycling area under the supervision of trained site personnel. A maximum of two working faces at a time may be used for the receipt and disposal of waste. The maximum size of the working face(s) will be in accordance with the fire-fighting/soil spreading capabilities of the equipment (see Section 6.4.1). Equipment Operators will maintain the daily working face(s) at the smallest safe and practical size. Signs and barricades may be used in addition to instructions from site personnel to direct incoming loads to the designated unloading area.

Equipment Operators and other staff with responsibility for working face operations will be appropriately trained as specified in Section 5.4 of this SOP regarding approved waste acceptance procedures and requirements. This will include an understanding of prohibited waste (e.g., putrescible, hazardous, PCB, etc.) recognition and incident management methods. One or more of these trained employees will direct and visually monitor disposal of incoming loads at the working face. Trained personnel will be on duty at all times when wastes are being discharged at the working face, and will have the authority and responsibility to reject unauthorized loads, to assess appropriate surcharges, and to have unauthorized material removed by the transporter or on-site personnel or otherwise properly managed by the facility. A sign at the site entrance will display the rules regarding authorized and prohibited waste restrictions for the facility. Additionally, as previously mentioned in Section 5.6, the Gate Attendant will be trained to be on alert for signs of unauthorized waste in incoming loads.

8.2 Unloading Unauthorized and Prohibited Wastes

Unloading of waste in unauthorized areas is prohibited. Waste deposited in an unauthorized area will be removed immediately and disposed of properly.

The methods employed at the site to detect and prevent the disposal of prohibited wastes are discussed in Section 5.6 and will be followed during waste unloading. If unauthorized or prohibited waste is detected by site personnel after it has been discharged, the procedures, notifications, and recordkeeping outlined in Sections 5.6.2 and 5.6.3 will be followed for the type of waste involved in the incident.

8.3 Large/Heavy/Bulky Item Unloading and Collection Area

A staging area to unload and store received/salvaged large/heavy/bulky items (e.g., appliances, white goods) may be maintained at the site, either located within the current landfill footprint, or within the future landfill footprint. The unloading of such items will be supervised by site personnel and the large/heavy/bulky item area will be policed regularly to ensure that any noncompliant materials are removed and deposited in the landfill.

8.4 Wood Recycling Area

An unloading and stockpile area associated with the wood recycling area may be maintained at the site to facilitate segregation of wood materials (e.g., brush, leaves, grass clippings, other wood materials) and subsequent on-site grinding/chipping/mulching. The wood recycling area will be either located on the current landfill footprint or within the future landfill footprint. The unloading of brush and wood will be supervised by site personnel and the storage area for these materials will be inspected monthly to ensure that any non-brush/wood materials are removed and deposited in the landfill.

8.5 C&D Waste Recycling Area

A special area to stage and store potentially recyclable C&D materials received/salvaged at the facility may be maintained at the site, either located within the current landfill footprint, or within the future landfill footprint. The unloading of such items will be supervised by site personnel and the C&D recycling area will be inspected monthly to ensure that any noncompliant materials are removed and deposited in the landfill.

9.0 FACILITY OPERATING HOURS

The operating times when the facility may accept waste are Monday through Saturday, 6:00 a.m. to 7:00 p.m. These operating hours commence waste acceptance one hour earlier than specified in 30 TAC § 330.135. The Hawthorn Park RDF is a Type IV landfill, receiving primarily C&D waste streams from construction projects across the area. Many construction projects begin early in the morning, and there is often a need to empty waste containers and trailers prior to the start of the construction shift. Also, for traffic and safety purposes, some jobsites want the large waste containers serviced before the jobsite becomes congested by vehicles driven by construction staff and other personnel. The additional hour for waste acceptance facilitates this effective approach to waste management for the construction industry.

The operating times when the facility may operate heavy equipment for conducting landfill operations (e.g., waste compaction; cover soil excavation, spreading, and placement, maintenance involving heavy equipment; etc.) and transport materials on- or off-site are Monday through Saturday, 5:00 a.m. to 9:00 p.m. On-site construction activities, including operation of heavy equipment, may be performed Monday through Sunday, 5:00 a.m. to 9:00 p.m.

Site monitoring, surveying, maintenance, and other activities not requiring heavy equipment operation do not require specific approval and may be performed 7 days per week, 24 hours per day.

The facility may request TCEQ approval of alternate operating hours up to five (5) days in a calendar year period to accommodate special occasions, special purpose events, holidays, and other special occurrences. Also, the TCEQ Region 12 Office may allow additional temporary waste acceptance hours to address disasters, emergency situations, or other unforeseen circumstances that could result in the disruption of waste management services in the area. The facility will record in the SOR the dates, times, and durations when any alternate operating hours are used.

10.0 SITE SIGNS

A conspicuous sign measuring at least 4-ft by 4-ft will be maintained at the site entrance. The sign will be readable from the facility entrance and will state, at a minimum, in letters at least 3 inches high:

- the name of the facility;
- the type of site (i.e., Type IV);
- the hours and days of operation;
- a 24-hour emergency contact phone number(s);
- the phone number of the local fire department; and
- the facility MSW permit number.

The contact phone number(s) must reach an individual with the authority to obligate the facility at all times that the facility is closed.

Other signs will be posted at the site entrance or along roads within the site to provide rules and other operational procedures.

11.0 CONTROL OF WINDBLOWN SOLID WASTE AND LITTER

The site will be operated in such a way as to minimize windblown material, using the measures described below.

- Incoming waste will be in enclosed vehicles or required to be covered/tarped or otherwise properly secured.
- Waste will be tracked and compacted with heavy equipment as it is placed at the working face.
- Cover soil will be applied to the working face at least once each week (as described in Section 24 of this SOP).
- Temporary litter control fences include portable panels with wire-mesh screens of varying heights that can be placed as necessary, and as close as practicable near the downwind side of the working face.

The number and location of temporary fences will be determined by the Site Manager or designated alternate as needed based on operating and weather conditions. Litter fences that are damaged shall be promptly repaired or replaced.

Weather conditions may result in material occasionally being blown away from the working face during waste placement operations. Facility personnel will collect litter within and around the site, along fences and access roads, and at the gate each day that the facility is operating. Windblown materials will be collected and returned to the active disposal area.

12.0 EASEMENTS AND BUFFER ZONES

This section of the SOP describes easement protection and buffer zones at the site.

12.1 Easements

No solid waste unloading, storage, disposal, or processing operations will occur within any easement, buffer zone, or right-of-way that crosses the site. No solid waste disposal will occur within 25 feet of the center line of any utility line or pipeline easement, unless otherwise authorized by TCEQ. All pipeline and utility easements must be clearly marked with posts that extend at least six feet above ground level, spaced at intervals no greater than 300 feet.

The easements and rights-of-way present on or adjacent to the site are shown on Figure I-C-2 in Part I of this PAA and are discussed in Part II of this PAA in Section 1.1.

12.2 Buffer Zones

A minimum 50-foot buffer zone will be maintained between the limits of waste placement and the permit boundary of the expanded facility. There are certain areas where waste was previously placed within 50 feet of the permit boundary, as authorized under the facility's previous permits. The buffer zone will provide for safe passage for fire-fighting and other emergency vehicles.

Buffer zones extending from the permit boundary to the limit of waste will be as shown on the facility layout plan presented in Part II of this PAA on Figure II-4 and as discussed in Section 1.1. No solid waste unloading, storage, or processing, or disposal will occur within the buffer zones. Buffer zones shall be clearly marked and maintained as detailed in Section 13 of this SOP.

13.0 LANDFILL MARKERS AND BENCHMARK

13.1 Required Landfill Markers

Landfill markers, consisting of metal or wood (or other durable material) posts extending at least 6-ft above ground level will be used to clearly mark specific site features. The markers will be color-coded to differentiate between features and will be visible during operating hours. Landfill markers will be installed to clearly mark significant features. The Executive Director may modify specific marker requirements to accommodate unique site-specific conditions. The type, placement, and color-coding system for the markers are described below.

1. Facility Boundary Markers (Black) - Facility boundary markers will be placed at each corner of the facility and along each boundary line of the permit boundary at intervals no greater than 300 ft. Fencing may be placed within these markers as required.
2. Buffer Zone Markers (Yellow) - Markers identifying the buffer zone will be placed along each buffer zone boundary at all corners and between corners along the buffer zone at intervals no greater than 300 ft. Placement of the landfill grid markers (discussed below) may be made along a buffer zone boundary.
3. Easements and Rights-of-Way Markers (Green) - Easement and right-of-way markers will be placed along the centerline or boundary edges of an easement and along the boundary of a right-of-way at intervals no greater than 300 ft and at each corner within the site and at the intersection of the facility boundary.
4. Site Landfill Grid System Markers (White) – The site grid system consists of lettered markers along two opposite sides and numbered markers along the other two sides. The grid system will encompass at least the area expected to be filled within the next 3-year period. Markers will be spaced no greater than 100-ft apart measured along perpendicular lines. Where markers cannot be seen from opposite boundaries, intermediate markers will be installed.
5. SLER Area Markers (Red) – SLER area markers will be placed so that areas for which a SLER has been submitted and approved by TCEQ are readily determinable. Such markers are to provide site workers immediate knowledge of the extent of approved disposal areas. These markers will be located so that they are not susceptible to being damaged during operations. The location of the SLER markers will be tied into the site grid system and will be reported on each SLER submitted. SLER markers will typically be placed at the corners (boundaries) of the lined cell and will not be placed inside constructed areas. The SLER markers will be maintained for at least as long as the disposal cell for which they are marking is active.
6. Flood Protection Markers (Blue) – Flood protection markers will be installed along the boundary of the 100-year floodplain within the facility permit boundary. The area subject to flooding shall be clearly marked by means of permanent posts spaced not more than 300 feet apart or closer if necessary, to retain visual continuity.

13.2 Permanent Benchmark

A permanent benchmark has been established at the site. The benchmark has a bronze marker set in concrete with the benchmark elevations and survey dates stamped on it. The benchmark is established at the site in an area that is readily accessible and will not be used for disposal. The location, coordinates, and elevation of the benchmark are shown on the facility layout plan in Part II of this PAA (see Figure II-2).

The benchmark elevation was established using known and reliable benchmarks in the area, including nearby National Geodetic Survey (NGS) monuments (Note: NGS was formerly named the United States Coast and Geodetic Survey).

13.3 Inspection and Maintenance of Markers and Benchmark

The benchmark and all required site markers will be maintained so that they are visible during operating hours and will not be obscured by vegetation. Markers that are removed or destroyed will be replaced within 15 calendar days of removal or destruction. Landfill markers will be inspected monthly to ensure that they comply with the requirements of this SOP, and documentation of the inspections will be placed in the SOR. Markers that are damaged, missing, or that do not meet the regulatory requirements will be repaired or replaced within 15 calendar days of discovery of the deficiency. All markers will be repainted or otherwise maintained as necessary to retain visibility.

14.0 MATERIALS ALONG THE ROUTE TO THE SITE

Waste hauling vehicles arriving at the landfill will be required to have their loads covered with tarps, nets, or other means to secure the load. The facility will post a sign near the entrance stating this requirement. Additionally, the facility will add a surcharge, as appropriate, to encourage compliance.

Once per day on days when the facility is receiving waste, site personnel will pick up existing litter spilled along and within the rights-of-way of Tanner Road (which is the public access road serving the facility) for a distance of two miles in either direction from the facility entrance. This activity will be documented to demonstrate compliance. The Site Manager will consult with the Texas Department of Transportation, county, and/or local governments with maintenance authority over the roads concerning cleanup of public access roads and rights-of-way.

15.0 LARGE, HEAVY, OR BULKY ITEMS

Large, heavy, or bulky items received at the site may have a designated collection and staging area and may be salvaged/recycled as described in Section 19.1 of this SOP or may be disposed of at the working face.

Large appliances, brush, and other bulky items will not be placed within 5-ft of the top of the clay liner system. Items classified as large, heavy, or bulky may include, but are not limited to, white goods (appliances), air conditioner units, and large metal pieces. No chlorofluorocarbon (CFC)-containing appliances, or electrical equipment containing prohibited PCBs, will be accepted for disposal. Appliances that have had CFCs removed and have certification of removal in accordance with 40 CFR § 82.156(f)(2) may be accepted. In accordance with 40 CFR § 82.156(f)(3), signs will be posted indicating that appliances containing CFCs will not be accepted for disposal.

CFC-containing appliances such as refrigerators, freezers, and air conditioning units that are accepted for recycling will have a licensed CFC recovery technician come on-site to recover the CFCs, or will be sent to an off-site facility for CFC recovery, in accordance with 40 CFR § 82.156(f). These items may be stored as potentially recyclable materials as described in Section 19.1 of this SOP prior to CFC recovery or shipment to an off-site facility.

16.0 ODOR MANAGEMENT PLAN

16.1 Identification of Potential Odor Sources

Since putrescible waste is not accepted at the facility, the potential for generation of odors is limited. Potential odor sources at the facility may include other wastes being delivered to the landfill, the open working face, ponded water, or contaminated water.

16.2 Odor Control Measures

Odor control measures to minimize odor generation and odor emissions, and to address specific sources of potential odors, are as follows:

- Incoming wastes will be promptly landfilled and compacted. Wastes with odors will be promptly covered with other waste or with cover soil (see below).
- Cover will be applied on a weekly basis, at minimum (per Section 24 of this SOP), to prevent air and water from further impacting the wastes which could result in odors. If odors persist, cover soil may be placed more frequently than weekly, and using a cover soil thickness of greater than 6-inches.
- Contaminated water may become a source of odors and will be segregated from clean surface water (i.e., stormwater runoff), and will be managed in accordance with the Contaminated Water Management Plan (see Appendix IV-A of this SOP). Contaminated water will be removed within seven (7) days of detection, weather permitting. Excess contaminated water will be removed and transported off-site for disposal at a permitted treatment/disposal facility, or the contaminated water will be handled in a manner as approved by TCEQ.
- Ponded water over waste disposal areas at the site will be controlled as described in Section 25 of this SOP, which will help eliminate the potential for occurrence of odors associated with ponded water.

17.0 DISEASE VECTOR CONTROL

Because of the limited types of waste the facility may accept, and those that are prohibited, the attraction of vectors is expected to be minimal. In particular, the facility may not accept putrescible wastes, which are the types of wastes that most commonly attract disease vectors, such as rodents, excessive bird populations, flies, and mosquitoes. Also, the facility's routine operational requirements are designed to prevent the habitation of the landfill by vectors through compaction and covering of waste, and periodic grading/site-maintenance to eliminate environments that can attract and harbor vectors (e.g., eliminating weeds around the working face, eliminating ponded water).

Notwithstanding, facility personnel will monitor ongoing operations and be prepared to take additional action as necessary to control vectors. These actions may include:

- temporarily applying cover more frequently than once per week;
- temporarily applying a thicker layer of cover;
- use of non-lethal bird control measures, such as pyrotechnics, baiting, decoys, etc., to discourage birds at the site and scare them away if they become a nuisance; and
- contracting with professional exterminators, if necessary, to control rodents or other pests that may appear at the site.

If professional applications of pesticides are utilized, these will be documented in the SOR.

18.0 SITE ACCESS ROADS

18.1 Description of Site Roads

All-weather roadways will be used to provide access during wet weather from the site entrance at Tanner Road (public roadway) to the waste unloading area(s) being used during wet weather. On-site access roadways will be maintained in a clean and safe condition. At the facility, all-weather landfill access is provided by a paved entrance road from Tanner Road to the scales, where the road then transitions to an all-weather surface that continues as an internal access road onto the landfill to the waste unloading area(s).

Additional internal roads needed to access waste unloading areas will be established to provide waste vehicle access and facilitate site operations as waste filling progresses. These internal roads will be accessed from the facility entrance road described above. Internal roads for use during wet weather conditions will be surfaced with all-weather material, such as gravel, so that continuous access to waste disposal areas is provided during both wet and dry weather. Reflective guideposts or other suitable reflective equipment may be used as needed along select internal access roads used between the scale house and disposal areas to help direct traffic during early morning or evening operations.

18.2 Mud and Dust Control Measures

The all-weather road surfacing on the internal roads, and the paved access road between the scale area and the entrance/exit to Tanner Road, will minimize dust generation and mud tracking by vehicles exiting the facility. The site will also utilize a motorized power broom or other equipment to remove dust, debris, and mud from the paved site access road, and a water truck to minimize dust generation, as needed and described further below.

At least once per day on days when mud and associated debris may be tracked off-site onto Tanner Road, the Site Manager or designated alternate will inspect and, if necessary, clean the main site access road at the entrance area and the public road (Tanner Road) adjacent to the facility entrance. If mud or other associated debris is observed, it will be removed using the power broom or other equipment; if additional efforts are necessary to remove mud or other associated debris, road will be spray-washed with a water truck or other equipment capable of spray- or power-washing. Site access roads will also be graded and maintained periodically (see below in Section 18.3) as needed to minimize depressions, ruts, and potholes, which can lead to mud formation.

During dry weather, the operator will control dust by watering site roads using the water truck and/or sweeping the roads. Water used for this purpose will be sourced from the stormwater detention pond or from another off-site water supply.

As mentioned in Section 11 of this SOP, litter and other debris on site roads will be picked up at least once per day each day that the facility is operating and disposed of properly.

18.3 Road Maintenance Frequencies

Internal roads will be inspected at least once every two months for the presence of ruts, soft spots, potholes, and negative drainage (e.g., ponding) to determine the need for regrading. The frequency of road regrading will be dependent on the results of inspections and whether ruts, soft spots, potholes, or ponding of sufficient severity are detected. However, at a minimum, road regrading will occur once per year. As directed by the Site Manager or designated alternate, wet weather operations may require more frequent regrading to properly maintain the roads. Roadside ditches or culverts will be maintained as necessary to provide drainage. The on-site fleet of equipment, such as the broom, backhoe excavator, and dozers, may be used to provide road maintenance, as appropriate.

Road inspections and maintenance/repair activities will be documented by the Site Manager or designated alternate and placed in the SOR. Minimum information will include: date of inspection and/or repairs, name of employee performing work, and relevant findings/actions.

19.0 SALVAGING AND SCAVENGING

19.1 Salvaging

Salvaging, defined as the “controlled removal of waste materials for utilization, recycling or sale,” may be performed at the facility. If so, salvaging will not be allowed to interfere with prompt disposal of solid waste or otherwise create unsafe operating conditions or a public health nuisance. No items will be salvaged from the working face if the salvaging would endanger site personnel. Also, salvaging may not occur in areas that have already received weekly or intermediate cover.

Special wastes received at the disposal facility will not be salvaged. Class 1 wastes and pesticide, fungicide, rodenticide, and herbicide containers are not accepted at the facility and therefore will not be salvaged.

Salvaged items, including potentially recyclable items such as shingles, sheetrock, tires, land clearing debris, metal, concrete, bricks, large/heavy/bulky items, or other inert materials, will be temporarily stored in a designated area(s) at the landfill located within the current or future waste footprint. Due to the location of access roads and waste placement, the location of these designated areas may vary over time. Concrete, bricks, or other inert materials may be used for erosion control, road base materials, or other similar uses. Salvaged items will be removed often enough to prevent them from becoming a nuisance, to preclude the discharge of any pollutants from the area, and to prevent an excessive accumulation of the material at the site. Large item salvage and white goods will not be stored at the facility for more than 180 days.

Additional information on C&D waste recycling at the facility can be found in Section 31 of this SOP.

19.2 Scavenging

Scavenging, defined as the “uncontrolled and unauthorized removal of materials at any point in the solid waste management system,” will not be allowed at the facility. Scavenging will be prevented through the following controls:

- Access control measures such as fencing, gates, and facility personnel duties (described in Section 7.1);
- Access control inspections and maintenance (e.g., fence inspection and repair as described in Section 7.2);
- Litter control and pickup (described in Section 11);
- Vector control actions (described in Section 17); and
- Application of weekly cover, and inspection/repairs to cover (described in Section 24).

20.0 ENDANGERED SPECIES PROTECTION

Requirement: A facility and the operation of the facility must not result in the destruction or adverse modification of the critical habitat of endangered or threatened species, or cause or contribute to the taking of any endangered or threatened species. Facilities must be operated in conformance with any endangered or threatened species protection plan required by the commission.

Site-Specific Conditions and Protection: An endangered and threatened species assessment was conducted for the site by a qualified biologist, as discussed in Part II, Section 15.0 of this PAA. No federal- or state-listed endangered or threatened species or any critical habitats for such species, were found at the site. Based on consultation with TPWD, the following mitigation measures were recommended for USA Waste to implement to minimize potential impacts on state listed species, if they are encountered during future development:

- Provide pre-construction training to all construction personnel for the identification and reporting of protected species, as well as describing the relevant rules and regulations that protect wildlife, including the penalties for harassing or harming protected species. This could include preparing a leaflet to be used as a training refresher for construction personnel on the identification and reporting of protected species.
- Any vegetation clearing should be scheduled outside of the general bird nesting season of March 15th to September 15th; however, if clearing must occur during nesting season, nest surveys should be conducted prior to clearing. Nest surveys should be conducted no more than 5 days prior to construction to maximize detection of active nests. If nests are observed during surveys, a vegetation buffer area of no less than 150-feet in diameter should remain around the nest until all young have fledged.
- If federally listed species are encountered during construction, work should stop immediately. The USFWS – Clear Lake Ecological Services Office should be contacted at (281) 286-8282 regarding compliance with the ESA.
- If during construction, the project area is found to contain rare species, natural plant communities, or special features, TPWD recommends that precautions be taken to avoid impacts to them.

The site is currently an operating MSW landfill and all of the site, with the exception of approximately 10 acres north of Center Block, has been cleared and developed as authorized under previous registrations and permits, and under the current permit MSW-2185. However, the above recommendations will be considered prior to development of this 10-acre area. Therefore, ongoing facility development and operation is not expected to cause or result in the destruction or adverse modification of critical habitats or contribute to the taking or harming of any endangered or threatened species.

21.0 LANDFILL GAS CONTROL

The monitoring and control of landfill gas will be in accordance with the approved Landfill Gas Management Plan presented in Part III, Attachment 6 of the Site Development Plan. As stated in Section 3.1 of this SOP, the Landfill Gas Management Plan, as well as related landfill gas monitoring records and submittals, will be included in the SOR. Also, submittals will be made to TCEQ as outlined in the Landfill Gas Management Plan.

22.0 OIL, GAS AND WATER WELLS

Information on water wells and oil/gas wells within and near the facility permit boundary is presented in Part II, Section 12.0, and in Part III, Attachment 4, Geology Report, Sections 3.2 and 3.3, of this PAA.

22.1 Oil and Gas Wells

The facility operator shall provide written notification to TCEQ of the location of any and all existing or abandoned on-site crude oil or natural gas wells, or other wells associated with mineral recovery that are under the jurisdiction of the Railroad Commission of Texas (RRC). If any wells are discovered during the course of site development, the Landfill District Manager or Site Manager will:

- Within 30 days of discovery, provide written notification to TCEQ of the location of any oil well, natural gas well, or other well associated with mineral recovery.
- Expose and cut the casing a minimum of 2-ft below the bottom of excavation for the liner at that location, followed by capping and plugging the well in accordance with all applicable rules and regulations of the RRC, or other applicable state agency.
- Provide TCEQ with written certification that all such wells have been capped, plugged, and closed in accordance with all applicable rules and regulations of the RRC.
- Submit to TCEQ a copy of the well plugging report that was submitted to the appropriate state agency, within 30 days after the well has been plugged.

Producing crude oil or natural gas wells that do not affect or hamper landfill operations may be operated within the facility boundary, if identified in the permit for the facility or in a written notification to TCEQ.

22.2 Water Wells

The facility operator shall provide written notification to TCEQ of the location of any and all existing or abandoned water wells situated within the facility upon discovery during the course of facility development. If an on-site water well is discovered during the site development, within 30 days of discovery, the facility will:

- Provide written notification to TCEQ of the location of the water well.
- Expose and cut the casing a minimum of 2-ft below the bottom of excavation for the liner at that location, followed by capping and plugging the well in accordance with all applicable TCEQ rules and regulations, or the rules and regulations of any other applicable state agency.
- Provide TCEQ with written certification that all such wells have been capped, plugged, and closed in accordance with all applicable rules and regulations.

Other types of wells will be plugged in accordance with the rules and regulations of the applicable state agency, and a copy of the well plugging report will be submitted to the appropriate state agency and TCEQ within 30 days after the well has been plugged.

The facility will submit a permit modification application to TCEQ identifying any proposed changes to the liner installation plan as a result of any oil, gas, or water well abandonment.

23.0 COMPACTION

Waste will be compacted to provide more efficient use of available disposal capacity, to minimize future consolidation and settlement, to help provide a firmer base for proper application of intermediate and final cover, as well as aid in fire protection and litter control.

Upon unloading, incoming waste will be spread at the working face by a bulldozer or landfill compactor. This equipment will then be used to move, shape, and make repeated passes on the material to sufficiently minimize voids and produce a compact mass. The equipment operators will be trained to determine whether the compaction equipment is functioning as designed to ensure that the waste lift is adequately compacted. The number of passes depends upon the nature of the waste that is being compacted.

24.0 LANDFILL COVER

This section contains the general provisions for weekly, intermediate, and final cover for the facility. TCEQ may grant a temporary waiver from the requirements for weekly and intermediate cover upon a satisfactory demonstration that there are extreme seasonal climatic conditions that make meeting such requirements impractical.

24.1 Soil Management

Soil will be obtained from on-site and off-site soil borrow sources and will be maintained in a soil stockpile as needed for facility operations, including application of cover and fire protection. The earthen material will consist of soil that has not previously come in contact with waste and will be of sufficient volume to meet the fire protection requirements specified in Section 6.4 of this SOP. As this earthen material is used, it will be replenished and/or located as soon as practical but shall at all times be maintained to meet the aforementioned fire protection requirements. The soil material will be located as not to interfere with vehicular traffic or impede drainage.

24.2 Weekly Cover

Cover will be placed weekly on all solid waste received during that week, by placing a layer of cover soil after the last load of waste from an operational week has been placed. The purposes of weekly cover include minimization of fire hazards, odors, blowing litter, vector food and harborage, and infiltration of precipitation. In addition, cover materials should discourage scavenging, limit erosion, and improve the aesthetic appearance of the facility.

A minimum compacted thickness of six (6) inches of soil will be placed in one lift and compacted. Scrapers or dump trucks will transport cover soil to the working face. A bulldozer or compactor will spread and compact the soil cover. Soil cover will be clean soil material that has not been mixed with or in previous contact with solid waste. Care will be taken to avoid mixing the landfilled waste with the soil cover material. Stormwater runoff from areas that have intact weekly cover is not considered as having come in contact with waste and, accordingly, is not managed as contaminated water.

The Site Manager or designated alternate will document the weekly cover placement and indicate that he/she has visually verified the thickness and condition of the cover in a Cover Application Log (see Section 24.6 of this SOP).

24.3 Intermediate Cover

All areas that will receive additional waste but have been inactive for longer than 180 days will be covered with intermediate cover. This intermediate cover will consist of an additional six (6) inches of soil cover material applied over the weekly cover, for a total of at least twelve (12) inches of well-compacted material. The top six (6) inches of this cover shall be material that is capable of sustaining native plant growth. The

intermediate cover will be seeded, sodded, or stabilized with other materials as approved by TCEQ and the plant growth and/or erosion control features will be maintained. The intermediate cover will be graded to help prevent ponding of water. Stormwater runoff from areas that have intact intermediate cover is not considered as having come in contact with waste and, accordingly, is not managed as contaminated water. Refer to Part III, Attachment 6 of the Site Development Plan for details on the erosion controls and management practices that shall apply to areas with intermediate cover draining to the site perimeter surface water management system.

When areas that have received intermediate cover are to become active again, the top six (6) inches may be stripped off for use as weekly cover.

24.4 Final Cover

Final cover placement will occur after areas of the site are filled to the design top-of-waste grades. Since the facility will be developed in phases over time, areas of the landfill will reach final waste grades as development progresses, and final cover installation will occur incrementally after such areas reach final grade. Placement of final cover on completed areas of the landfill will not interfere with ongoing operations. Surface water will be managed throughout the active life of the site to minimize infiltration into the filled areas and to minimize contact with solid waste.

The final cover grading plan (i.e., landfill completion plan showing final contours) and final cover system components are presented in the Site Development Plan in Part III of this PAA. The Closure Plan (Attachment 7 to the Site Development Plan) presents the specific requirements and schedules for closure activities, and related final cover system specifications, QA/QC requirements, certification requirements, notifications, etc. This includes requirements for establishing vegetation on the final cover. During the early stages of vegetative growth, mulching, slope soil regrading, and mowing will be performed as required to promote a complete vegetative coverage and effective erosion control.

The final cover for the landfill will be in accordance with the site closure plan in Part III, Attachment 7 and 30 TAC §330 Subchapter K.

24.5 Cover Inspection, Repair of Erosion, and Final Cover Maintenance

24.5.1 Inspection

During the active life of the landfill, inspection of intermediate and final cover, including checking for erosion and ponded water, will be performed on a weekly basis, and within two (2) operating days following the end of a rainfall event of 0.5 inches or more. These inspection reports will be maintained as part of the SOR.

24.5.2 Repair of Erosion

On intermediate and final cover areas, erosion shall be repaired before a six-inch deep gully within the intermediate cover soil or vegetative/erosion layer soil is exposed (to maintain integrity of the erosion layer and underlying cover materials). Accordingly, erosion to a depth of greater than four (4) inches will be repaired and restored within five (5) days of detection, as weather permits and if it is safe to access with site equipment. If conditions warrant, the TCEQ regional office may approve an extension (e.g., due to inclement weather, unfavorable seasonal weather conditions, extent of the damage and resulting repair work needing more time to complete, etc.). Repairs will typically consist of regrading, backfilling, compacting, and seeding, as necessary. The dates of detection of erosion and completion of repairs, and reasons for delay of repairs will be documented in the Cover Inspection Record (see Section 24.6).

24.5.3 Final Cover Maintenance

Maintenance of the integrity and effectiveness of the final cover system (cap) shall include mowing and regular inspections and repairs to correct stressed or dead vegetation, erosion, settlement, cracking, and standing water.

- The final cover vegetation will be mowed periodically to maintain healthy vegetation, avoid die-out due to shading, eliminate woody-stemmed vegetation, and provide for adequate inspection of the cover system.
- The final cover will be inspected for conditions that could impact cover integrity, including settlement, ponding water, burrowing animals, erosion, stressed or dead vegetation, and seeps.
- Settled, depressed, or eroded areas will be filled with soil and graded to provide positive drainage, and then revegetated. The top six (6) inches of soil fill used for repairs will be capable of supporting vegetation. Repair materials will be placed in a manner consistent with the original final cap system construction.
- Surface water conveyance devices on the cover will be inspected and maintained.

Areas with stressed or dead vegetation will be evaluated to determine the problem, and appropriate actions will be taken such as reseeding the areas or checking for the presence of landfill gas.

After final closure of the facility, the final cover will be inspected, repairs made, and documented in accordance with the Post-Closure Plan (Attachment 8 of the Site Development Plan).

24.6 Cover Documentation and Inspection Record

24.6.1 Cover Application Documentation

The Site Manager or designated alternate will maintain on a weekly basis a Cover Application Log to document those site grid areas where weekly cover and/or intermediate cover have been placed. The log will be kept at the site, readily available for inspection by TCEQ. The log for weekly and intermediate cover will specify the date cover was placed, the method used, and the last area where cover was placed. The

Site Manager or designated alternate will sign each entry to certify that the work was accomplished as stated in the log.

24.6.2 Cover Inspection Record

A Cover Inspection Record will also be maintained weekly and kept by the Site Manager or designated alternate to document the inspections described in Section 24.5, including the findings and any corrective actions (e.g., repairs) taken when necessary. For repairs made to the final cover system, the Cover Inspection Record will specify the area covered, the dates final cover was applied (repaired), and the thickness applied. The Site Manager or designated alternate will sign each entry to certify that the inspection and/or work was accomplished as stated in the record. The Cover Inspection Record will be placed in the SOR and made available for review by TCEQ and authorized agents or employees of local governments having jurisdiction.

25.0 PONDED WATER

Ponding of water over waste-filled areas will be prevented to the extent possible. The techniques the site will use to prevent ponding of water will be: (i) thorough compaction of waste as described in Section 23 of this SOP, to limit differential waste settlement/consolidation; (ii) proper grading of final waste slopes to the elevations shown on the Final Cover Grading Plan (in Site Development Plan), which provides for positive surface water drainage without depressions or low spots; and (iii) proper grading of interim waste slopes to have positive surface water drainage.

Landfill areas will be inspected as described in Section 24.5 to identify areas where ponding has occurred, including inspections after specified storm events. In the event ponded water on the landfill is observed, action will be taken to remedy the problem (e.g., regrading, pumping out the ponded water, or grading a temporary drainage path at the down-gradient side), as appropriate. The area of ponding will be backfilled with clean soil and regraded as soon as practicable after identified (within seven (7) days of the occurrence, weather permitting). Ponded water will be removed and managed as: (i) contaminated water if the ponded water has come in contact with waste; or (ii) as surface water if it has not come in contact with waste. Contaminated water will be managed in accordance with the Contaminated Water Management Plan presented in Appendix IV-A of this SOP.

Actions to prevent ponded water in advance of expected extended wet weather periods include inspecting for potential low spots that could pond water and filling these areas, installing diversion berms to limit run-on, or installing a drainage outlet if possible. During and after extended wet weather conditions, corrective actions to remedy ponded water include using pumps to dewater ponded areas along with the aforementioned preventative measures as feasible. During periods of extended wet weather, access to pump and repair areas may be delayed.

As described in Section 24.5 and 24.6, inspections for ponded water and any corrective actions will be documented in the Cover Inspection Record.

26.0 WASTE IN ENCLOSED CONTAINERS OR ENCLOSED VEHICLES

Waste will be accepted for disposal from stationary compactors and municipal waste collector routes that are permitted in accordance with 30 TAC §330.7(c) or 30 TAC Chapter 330, Subchapter C. The following procedures will be implemented for any waste received from permitted stationary compactors and municipal waste collector routes:

1. The collector will submit load documentation prior to discharging waste at the site.
2. The facility will retain the load documentation on-site for inspection by TCEQ.
3. The special procedures for waste received in enclosed containers or enclosed vehicles, as described in the remainder of this section, will be followed.

Waste in completely enclosed containers or enclosed vehicles, other than those meeting the requirements listed above, will not be accepted for disposal at the facility, unless the following special procedures have been met:

1. The facility will participate in the surveillance and enforcement program as detailed in 30 TAC §330.169(2).
2. Each enclosed container or enclosed vehicle will have all required approvals and/or permits from TCEQ in accordance with 30 TAC §330.7(c).
3. Enclosed containers or enclosed vehicles will be accepted at their designated time and on the specified day in accordance with 30 TAC §330.169, TCEQ permits, or applicable TCEQ orders.
4. A TCEQ inspector will be on-site and will witness the unloading process to ensure that no putrescible waste or household waste is present. Any waste considered non-allowable by the TCEQ inspector will be removed from the working face and from the site in accordance with 30 TAC §330.133(c).
5. Each transporter delivering waste in enclosed containers or enclosed vehicles will, prior to discharging the load, provide to the facility load documentation for the route the transporter is delivering. This load documentation will be maintained in the SOR.
6. TCEQ may revoke a transporter's authorization to deliver waste to a Type IV MSW facility for failure to comply with applicable requirements.

TCEQ will determine the approximate annual costs of implementing and maintaining the surveillance and enforcement of all the activities associated with the acceptance of enclosed containers or enclosed vehicles at Type IV landfills. Notification of these costs will be provided to each affected holder of a Type IV landfill permit with notice of a public hearing to apportion these costs. The public hearing will be held at a location to be determined by TCEQ with 20 days advance notice. Notice will be provided to Type IV landfill operators by regular and certified mail. The public hearing will be for the purpose of establishing the total compensation and expenditures required to administer this program and the apportionment of those costs to the Type IV landfill operators to be reimbursed to TCEQ. Unless other arrangements are made, the apportioned monthly payments will be due by the 10th day of each month. The apportioned costs to each

Type IV landfill may be altered periodically to add or subtract landfills from the program. A 30-day notice will be provided to each participating Type IV landfill and/or proposed additional landfill and a hearing will be held upon request by one of the affected parties or on TCEQ's own motion.

If the landfill operator is delinquent in making the monthly payment, the landfill must immediately halt acceptance of waste in enclosed containers or enclosed vehicles and may be subject to other penalties allowable under state law.

Stationary compactors permitted in accordance with 30 TAC § 330.7 and municipalities having transporter routes permitted in accordance with this rule are exempt from the requirements identified in 30 TAC § 330.169(1)-(3), and transporters will be allowed to discharge waste from these compactors at the facility. However, the Site Manager or designated alternate will obtain from the transporter load documentation for a municipal transporter route or a stationary compactor, as appropriate, prior to allowing discharge of the waste at the landfill. This load documentation will be maintained in the SOR.

27.0 DISPOSAL OF SPECIAL WASTES

Special wastes as defined in 30 TAC §330.3(154) will not be accepted at this facility, except for special wastes allowed by 30 TAC §330.171(a) (i.e., consistent with the limitations established in 30 TAC §330.5(a)(2) for Type IV facilities), and as described in the facility's waste acceptance plan (see Part II Section 2.0) and Section 5.5 of this SOP.

28.0 DISPOSAL OF INDUSTRIAL WASTES

28.1 Class 1 Non-Hazardous Industrial Waste

Class 1 nonhazardous industrial solid waste (defined in 30 TAC §330.3(21)) will not be accepted at this facility.

28.2 Class 2 and 3 Industrial Solid Waste

The facility may accept Class 2 industrial solid waste (defined in 30 TAC §330.3(22)) that is free of putrescible waste as allowed by 30 TAC §330.173(i) (i.e., consistent with the limitations established in 30 TAC §330.5(a)(2) for Type IV facilities), and as described in the facility's waste acceptance plan (see Part II Section 2.0) and Section 5.5 of this SOP.

The facility may accept Class 3 industrial solid waste (defined in 30 TAC §330.3(23)) provided the acceptance of this waste does not interfere with facility operation.

29.0 VISUAL SCREENING OF DEPOSITED WASTE

Visual screening of deposited waste materials at the facility is provided at times when waste placement is occurring below-grade, or by way of already-filled portions of the landfill that shield the working face.

30.0 CONTAMINATED WATER MANAGEMENT AND DISCHARGE

Contaminated water will be managed in accordance with the Contaminated Water Management Plan presented in Appendix IV-A of this SOP. The facility shall implement necessary steps to control and prevent the unauthorized discharge of contaminated water from the facility.

31.0 CONSTRUCTION AND DEMOLITION (C&D) WASTE RECYCLING

The site will implement a C&D recycling program and will designate a recycling area for these activities. An operations plan for this facility is presented in Appendix IV-B of this SOP.