NEW BOSTON LANDFILL
BOWIE COUNTY, TEXAS
TCEQ PERMIT APPLICATION NO. MSW 576C

PERMIT AMENDMENT APPLICATION

PART III:
Attachment G – Landfill Gas Management Plan
Attachment H – Closure Plan
Attachment I – Postclosure Plan
Attachment J – Cost Estimate for Closure and Postclosure Care
PART IV – SITE OPERATING PLAN

Volume 5

Prepared for

Waste Management of Texas

Technically Complete September 12, 2014

Prepared by

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1700 Robert Road, Suite 100 ◆ Mansfield, Texas 76063 ◆ 817-563-1144

NEW BOSTON LANDFILL
BOWIE COUNTY, TEXAS
TCEQ PERMIT APPLICATION NO. MSW 576C

PERMIT AMENDMENT APPLICATION

VOLUME 5 OF 5

Prepared for

Waste Management of Texas, Inc.

Technically Complete September 12, 2014

Biggs & Mathews Environmental, Inc.
Firm Registration No. F-256

Prepared by

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TEXAS BOARD OF PROFESSIONAL ENGINEERS
FIRM REGISTRATION NO. F-256

TEXAS BOARD OF PROFESSIONAL GEOSCIENTISTS
FIRM REGISTRATION NO. 50222

NEW BOSTON LANDFILL
BOWIE COUNTY, TEXAS
TCEQ PERMIT APPLICATION NO. MSW 576C

PERMIT AMENDMENT APPLICATION

VOLUME 5 OF 5

CONTENTS

Biggs & Mathews Environmental, Inc.
Firm Registration No. F-256

NEW BOSTON LANDFILL
BOWIE COUNTY, TEXAS
TCEQ PERMIT NO. MSW 576C

PERMIT AMENDMENT APPLICATION

PART III – FACILITY INVESTIGATION AND DESIGN
ATTACHMENT G
LANDFILL GAS MANAGEMENT PLAN

Prepared for

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9/29/2014

Biggs & Mathews Environmental, Inc.
Firm Registration No. F-256

CONTENTS

CONTENTS (Continued)

Biggs & Mathews Environmental, Inc.
Firm Registration No. F-256

1 INTRODUCTION

30 TAC §§330.63(g), 330.371

1.1 Scope

This landfill gas (LFG) management plan has been developed for the New Boston Landfill as required by 30 TAC §330.63(g). This LFG management plan is consistent with the requirements set forth in §330.371. The LFG management plan provides a site-specific approach to implementing LFG monitoring. This plan describes the existing (576B) and proposed (576C) LFG monitoring network and discusses the operation and monitoring of this network, the verification of monitoring results, notification procedures, and outlines possible remediation activities, if required.

The New Boston Landfill will comply with all applicable federal and state regulations. These include the Environmental Protection Agency's (EPA) – Clean Air Act, Section 111(b), New Source Performance Standards (NSPS) for municipal solid waste (MSW) landfills, and the applicable requirements of the TCEQ Office of Air Quality, including the standard permit requirements and 30 TAC Chapter 330, Subchapter U.

The site does currently operate and monitor an active LFG collection and control system for completed waste disposal areas. Refer to Section 6 of this attachment for discussion on the active LFG collection and control system.

1.2 Purpose

Compliance with §330.371 requires landfills to implement a routine LFG monitoring program to verify that (1) the concentration of methane does not exceed 1.25 percent methane by volume in facility structures (excluding LFG collection and control system components), and that (2) the concentration of methane does not exceed 5 percent methane by volume in monitoring points, probes, subsurface soils, or other matrices at the facility permit boundary.

The purpose of this LFG management plan is to provide guidance for management of LFG at the site. These guidelines cover the evaluation of LFG migration at the points of compliance (permit boundary) and in structures on the permitted site. This will be verified by monitoring LFG concentrations at or within the facility permit boundary and within on-site buildings. Various options for LFG migration mitigation are discussed in Section 5 of this attachment.

1.3 General

Consistent with §330.371(d), the executive director may establish alternative schedules for demonstrating compliance with methane monitoring as required by §330.371(b), and with action plan activities as required by §330.371(c).

Consistent with §330.371(e), the landfill gas monitoring and control program will continue for a period of 30 years after certification of final closure of the facility, or until Waste Management of Texas, Inc. (WMTX) receives written authorization to reduce the program. Authorization to reduce gas monitoring and control shall be based on a demonstration by the owner or operator that there is no potential for gas migration beyond the permit boundary or into on-site structures. The demonstration will be supported by data collected and additional studies, as required.

Consistent with §330.371(f), gas monitoring and control systems will be revised as needed to maintain current and effective gas monitoring and control systems. Postclosure land use of the facility will not interfere with the function of gas monitoring and control systems.

2 SITE CHARACTERISTICS

30 TAC §330.371

2.1 Introduction

Eleven permanent LFG monitoring probes and four gas vents have been installed along the perimeter of the active waste fill area to detect potential LFG migration under the active 576B configuration. The proposed LFG monitoring network consists of a total of 24 probes. The installed and proposed LFG monitoring probes serve as the point of compliance regarding LFG migration. The existing and proposed LFG monitoring probe and gas vent locations are shown on Drawing G1.1 in Appendix G1.

2.2 Geologic Conditions

The site geologic conditions present at the New Boston Landfill are discussed in Attachment E, Section 4.3.

2.3 Hydrogeologic Conditions

The hydrogeologic conditions present at the New Boston Landfill are discussed in detail in Attachment E, Section 5.6.

2.4 Hydraulic Conditions

Hydraulic conditions at the New Boston Landfill are discussed in Attachment C1 – Permit Boundary Drainage Analysis and Design.

2.5 Facility Structures within the Property Boundary

The New Boston Landfill has a proposed permit boundary encompassing approximately 332 acres, of which approximately 132 acres will be available for waste placement. There are several existing structures within the New Boston Landfill permit boundary. These structures include a gatehouse, storage facility, and maintenance and office facility. The gatehouse, storage building, and maintenance and office facility are enclosed and have continuous methane monitors. All enclosed structures will be monitored for the presence of LFG as described in Section 3.2.1 of this attachment. Refer to Appendix G1, Drawing G1.1 and G1.3 for location of structures.

2.6 Underground Utilities

As shown on Drawing G1.1 in Appendix G1, a 15-foot gas line easement is located along the south, east and west permit boundary of the existing West Disposal Area and running through the center of the expansion bisecting the North and South Disposal Areas of the site. The pipeline was installed directly in the in situ clays with no transmissive bedding or transmissive backfill materials. This clay backfill was utilized to preclude the utility easement from becoming a gas migration pathway.

There are no utility lines or easements within the disposal footprint of the landfill. Refer to Drawing G1.1 for locations of the existing and proposed passive vents where the utility trenches cross the permit boundary.

2.7 Offsite Structures

All New Boston Landfill facility structures are located within the permit boundary. All known habitable structures located off site within 1/4 mile (1,320 feet) of the permit boundary are depicted on Drawing G1.3.

2.8 LFG Interceptor Trenches

A pair of abandoned LFG interceptor trenches is located on the north side of the site near gas monitoring probes GMP-2 and GMP-3, as shown on Drawing G1.1 in Appendix G1. These trenches originally consisted of approximately 15 feet of gravel installed below a 5 foot layer of compacted soil with perforated collection piping at the bottom of the trench and vent risers every 100 feet. The trenches were installed to provide a means for venting trapped LFG that had migrated to this area and was trapped below a confining layer of clay. The trenches were successful at venting the trapped LFG and remediating the migration, and after no additional LFG above the regulatory limit was detected during subsequent routing monitoring at GMP-2 or GMP-3, the trenches were abandoned by capping the vent risers below ground.

2.9 Summary

The geologic, hydrogeologic, and hydraulic conditions were evaluated to ensure that the selected monitoring frequency would be sufficient to identify potential landfill gas migration before it can travel a significant distance outside the permit boundary. Based on the expected effect of these conditions on the transport rate for landfill gas migration, it has been determined that quarterly monitoring will be sufficient to meet the requirements of 30 TAC §330.371(b).

3 MONITORING

30 TAC §330.371

3.1 Perimeter Monitoring

3.1.1 Perimeter Monitoring Network

The LFG monitoring probe network for the existing landfill includes a total of eleven existing LFG monitoring probes and four existing gas vents located along the perimeter of the active waste fill area. The proposed LFG monitoring probe network includes a total of 24 LFG monitoring probes. Locations of the existing and proposed LFG monitoring probes and gas vents are shown in Appendix G1, on Drawing G1.1. The existing LFG monitoring probes will remain as the monitoring probe locations for the existing West Disposal Area. Two probes, GMP-4 and GMP-5, and one gas vent, GV-4, will be relocated. Copies of the installation logs for the existing permanent LFG monitoring probes are included in Appendix G3.

Proposed gas probes GMP-4R, GMP-5R, GMP-12 through GMP-24, and gas vent GV-4A will be added along the permit boundary. Refer to Appendix G1, Drawing G1.1 for the proposed LFG monitoring probe and gas vent network. The proposed LFG monitoring probes will be installed in phases as the waste footprint develops. The following table shows the probe installation schedule.

Gas Probe Installation Schedule	
Prior to Accepting Waste in Sector	**Gas Probes To Be Installed**
1A	GMP-4R, 5R, 12, 13, 21, 22, 23, and 24
3A	GMP-19 and 20
4A	GMP-14, 17, and 18
5A	GMP-15 and 16
South Disposal Area	GMP-17, 18, 19, 20, 21, 22, 23, and 24

It should be noted that gas probes GMP-17 through GMP-24 are listed twice in the table above. This is because these probes will be installed at the earlier of waste acceptance in the South Disposal Area or their triggering sector in the North Disposal Area. If the sequence of development for the landfill changes, the probe phasing will be modified accordingly.

3.1.2 Landfill Gas Monitoring Probes

LFG monitoring probes have been installed along the perimeter of the waste fill area. Boring logs and typical construction details for the LFG probes were submitted to the

TCEQ as part of the Gas Monitoring Probe Installation Report. Copies of the installation logs for the existing permanent LFG monitoring probes are included in Appendix G3. Proposed LFG monitoring probes will be installed in accordance with the detail shown on Appendix G1, Drawing G1.2.

As shown on Drawing G1.2 and installation logs included in Appendix G3, the existing and proposed gas monitoring probes are designed to consist of solid piping within a concrete pad, bentonite seal, and filter sand packs for a depth of approximately 5 to 10 feet below ground surface. Below this depth, the gas monitoring probes are designed to consist of screened piping within gravel or sand packs through the remaining depth of the probes to intercept migrating gas.

Each proposed gas monitoring probe is designed to monitor the soil strata above the lowest planned future elevation of waste within 1,000 feet of the probe. The interprobe spacing for the proposed gas monitoring probes will be less than 1,000 feet, with closer spacing in areas with nearby offsite structures.

3.1.3 Utility Vents

Utility vent GV-4 will be relocated to the new permit boundary within the Atmos Energy easement within 120 days from the issuance of the permit for this expansion. Refer to Appendix G1, Drawing G1.1 for proposed utility vent locations and Drawing G1.2 for details of the utility vents.

3.1.4 Monitoring Procedures

Monitoring will be conducted by a qualified landfill representative or a qualified consultant. To avoid artificially impacting the probe static pressure during the induction of the gas sample into the instrument, the static pressure will be measured and recorded prior to measuring gas composition. Static gas pressure will be measured and recorded in inches of water column. The calibration and operation of the monitoring equipment will be as recommended by the instrument manufacturer.

During each monitoring event, the probes will be monitored for the following parameters:

- Static pressure, as measured in inches of water column, gauge
- Methane concentration, as measured in percent by volume
- Oxygen concentration (optional), as measured in percent by volume
- Depth to groundwater, as measured in feet

During each monitoring event, the gas vents will be monitored for methane concentration, as measured in percent by volume.

Monitoring for gas composition and gas pressure will be performed using a portable Landtec® GEM-2000, or equivalent instrument, capable of measuring the required parameters. The monitoring equipment will be calibrated and maintained in accordance

with the manufacturer's recommended procedures. Manufacturer's maintenance and calibration requirements for the monitoring instruments will be maintained on site with the LFG monitoring records described in Section 3.3.

After these parameters are measured, the probe of a liquid level indicator will be lowered into the LFG probe through an opening located on the top of the LFG probe to measure water level (if any) inside the LFG probe. If no water is present, the level indicator will be used to verify and report total depth of probe to assure that a probe is not obstructed.

3.1.5 Maintenance Procedures

Each time LFG monitoring is conducted, the sampler will inspect the integrity of the LFG monitoring probes or vents. The sampler will record pertinent information on the Quarterly Landfill Gas Monitoring Report (see Appendix G2) or similar forms. The Quarterly Landfill Gas Monitoring Report will be kept in the site operating record. The sampler will perform the following at each monitoring event:

- Verify that the LFG monitoring probe or vent is clearly labeled on the outer casing or lid.
- Verify that the protective casing is intact and is not bent or excessively corroded.
- Verify that the concrete pad is intact (no evidence of cracking or heaving).
- Verify that the padlock is functional.
- Verify that the inner casing is intact.

If damage to the LFG monitoring probe or vent is observed, it will be reported to the landfill manager. If it is not possible to repair the LFG monitoring probe or vent and the damage can potentially affect the accuracy of future monitoring results, the LFG monitoring probe or vent will be decommissioned and replaced with a new LFG monitoring probe in accordance with Sections 3.1.2, and 3.4 of this attachment.

3.2 Facility Structures Monitoring

3.2.1 Monitoring Procedures

On-site buildings and structures designed for human occupation will be monitored, with a continuous LFG monitor/alarm that will provide an audible alarm if methane concentrations exceed 1.25 percent methane by volume.

If allowable methane concentration limits are exceeded within structures, the building will be immediately evacuated and ventilated by opening doors and windows. Notification consistent with procedures in Section 4.2 of this attachment will be implemented immediately.

3.2.2 Maintenance Procedures

Continuous LFG monitors/alarms will be calibrated and maintained in accordance with the manufacturer's recommendations. Continuous LFG monitors/alarms will be tested following the manufacturer's testing specifications.

3.3 Recordkeeping/Reporting

Field monitoring data records will be maintained for the methane monitoring and kept in the site operating record. Field data will be recorded on the Quarterly Landfill Gas Monitoring Report form (or similar form) shown in Appendix G2.

Quarterly monitoring results will be placed in the site operating record. LFG monitoring points, probes, utility vents, subsurface soils, or other matrices will be monitored quarterly. The LFG monitoring program will continue for a period of 30 years after the final closure of the facility or until the owner or operator receives written authorization from the TCEQ to revise or discontinue the program. Gas monitoring records will be maintained in the site operating record.

3.4 Backup Plan for Monitoring Probes, Vents and Continuous Monitors

The following is a back-up plan to be used if any installed LFG monitoring probes or continuous monitoring devices become unusable or inoperative.

Stationary Perimeter Probes/Vents

1. Damaged or inoperative perimeter probes or vents will be repaired within 30 days of the date of damage or replaced within 60 days from the TCEQ approval date of the permit modification requesting replacement.

2. Upon completion of the replacement probe or vents, an installation report including boring logs and construction details will be submitted to the TCEQ.

3. Should a monitoring event occur prior to replacement of a damaged probe or vent, a barhole will be placed next to the damaged probe or vent and a portable gas monitor used until the probe or vent is replaced.

Stationary Combustible Gas Monitor

1. Damaged or inoperative stationary combustible gas monitors will be repaired within 30 days of the date of damage.

2. A portable gas indicator will be used until the damaged or inoperative stationary unit is replaced.

3.5 Monitoring Frequency

LFG monitoring points, probes, utility vents, subsurface soils, or other matrices are monitored quarterly, at a minimum. Facility structures are monitored with continuous LFG monitors. The facility will monitor more frequently those locations where monitoring results indicate that LFG migration is occurring or is accumulating in structures.

4 ACTION PLAN

30 TAC §330.371

4.1 Initial Response Measures

As required under 30 TAC §330.371, this action plan has been prepared for the protection of human health in the event concentrations of methane exceed allowable limits either within on-site buildings or at the permit boundary of the site. The appropriate emergency response is different for each situation; therefore, this plan addresses buildings and permit boundaries separately.

4.1.1 Emergency Action

The initial action in the event methane is detected at levels above regulatory limits is to protect human health. The specific response depends on the circumstances of the situation.

Buildings/Structures. If the monitoring device in a facility building/structure is triggered, or if gas monitoring equipment indicates that the methane concentration has exceeded the regulatory limit, the building/structure is to be evacuated of all personnel immediately and the landfill manager will be notified. Personnel (except for authorized monitoring personnel) will not be allowed to re-enter the affected building/structure until additional measures are taken. Notification consistent with procedures in Section 4.2 of this attachment will be conducted immediately.

Permit Boundary. If methane levels above the regulatory limit are detected at the permit boundary in the LFG monitoring points, probes, subsurface soils, or other matrices, the landfill manager will be notified. The immediate emergency response measure will be for the landfill manager to determine if any nearby buildings or structures (including off-site) are at risk and if evacuation of the buildings or structures should be requested.

Once immediate actions have been completed to protect human health, notification consistent with procedures in Section 4.2 of this attachment will be conducted.

4.2 Notification Procedures

When methane concentrations above the regulatory limit have been detected in the monitoring points, probes, subsurface soils, or other matrices, or within any on-site structures, the monitoring personnel will notify the landfill manager, who in turn will

immediately take steps to ensure the protection of human health. Notification will be made immediately in accordance with §330.371. Notification will be made to the executive director of the TCEQ; the TCEQ Region 5 Office; appropriate city, county, and local government officials and emergency officials; and any residents, tenants, and owners of property within ¼ mile of the reading.

When methane levels above the regulatory limit have been detected (refer to Section 4.1.1 of this attachment), the landfill manager will place in the site operating record documentation of the methane gas levels detected and a description of the steps taken to ensure protection of human health within seven days of detection in accordance with §330.371. Written notification will also be sent to the TCEQ Region 5 Office within seven days outlining the steps taken.

5 REMEDIATION PLAN

30 TAC §330.371

If methane levels above regulatory limits are encountered in the buildings/structures or in one or more LFG monitoring points, probes, subsurface soils, or other matrices, remediation actions will be implemented within 60 days. The first step in developing a remediation plan will be an investigation of the cause of the methane levels. The investigation may include some or all of the following elements, depending on the circumstances:

- Bar-hole probe or hydropunch testing in the vicinity of the impacted monitoring probe
- Sampling and laboratory analysis of LFG monitoring probe samples to determine concentration of methane and trace compounds
- Additional LFG probe monitoring
- Installation of additional monitoring probes

Using accumulated data, an assessment will be made to determine an appropriate course of action to mitigate the migration of LFG. Such actions will vary with the specific incident. An incident-specific remediation plan, based on results of the investigation, will be submitted within 60 days of detection. Copies of the remediation plan will be placed in the operating record and provided to the executive director of the TCEQ along with notification that the plan has been implemented. The executive director may establish an alternative schedule for demonstrating compliance.

6 LFG SYSTEM

30 TAC §330.371

6.1 Existing LFG Collection and Control System

Currently, the site has an active LFG collection and control system (GCCS), as shown in Appendix G4 on Drawing G4.1. The existing GCCS consists of vertical LFG extraction wells, a piping network, a condensate management system, and a blower/flare facility. The existing blowers provide vacuum to the extraction wells through the LFG collection piping network. The extracted LFG is routed from the collection points to the on-site flare, where the gas is combusted.

As additional waste is placed, the existing LFG extraction wells will be extended and/or redrilled.

6.2 Future GCCS Expansions

As the site develops, additional extraction wells will be installed as needed to reduce the buildup of internal gas pressures caused by the increased generation of LFG. The locations of the anticipated future vertical extraction wells are shown on Drawing G4.2. Future wells are not planned for the Type IV disposal area due to the lack of expected gas generation in this area.

The LFG extraction wells will be constructed as shown on Drawing G4.3. Each extraction well will consist of a perforated pipe within a gravel backfill. The LFG extraction wells will be installed in phases as needed as the landfill develops. The exact number and location of wells, piping, and future LFG facilities will be determined based on field conditions at the time of installation. Upon completion of each phase of GCCS expansion, record drawings suitable for inclusion in this permit will be submitted to TCEQ and a copy placed in the site operating record.

Additional blowers and piping network will be installed as needed to provide the vacuum and capacity to handle the flow rate of LFG in the future. In addition, each extraction well will be equipped with a control valve and monitoring port, as shown on Drawing G4.3. These control valves and monitoring ports, used in conjunction with controls on the blower, will allow the site to regulate vacuum and LFG levels at each individual extraction well. This will allow the site to make adjustments in order to effectively collect LFG.

The operation and maintenance of the proposed LFG system will be performed consistent with industry guidelines and practices. Wellhead and system monitoring will be performed on a routine basis to monitor overall system performance. As needed, system adjustments will be made to optimize the extraction of LFG from the landfill to control LFG migration, odors, and greenhouse gases. In addition, the system will be

routinely visually inspected for any evidence of needed repairs or other maintenance. General maintenance procedures will include the following:

- Each wellhead will be monitored and adjusted as needed to control LFG while reducing oxygen intrusion into the landfill.
- Condensate sumps will be checked for proper operation.
- Blowers and flares will be inspected for proper operation.

The system has been designed to include isolation valves and a looped piping network to allow the site to be adjusted, maintained, and quickly repaired.

6.3 Air Permits

The site currently holds the following permits:

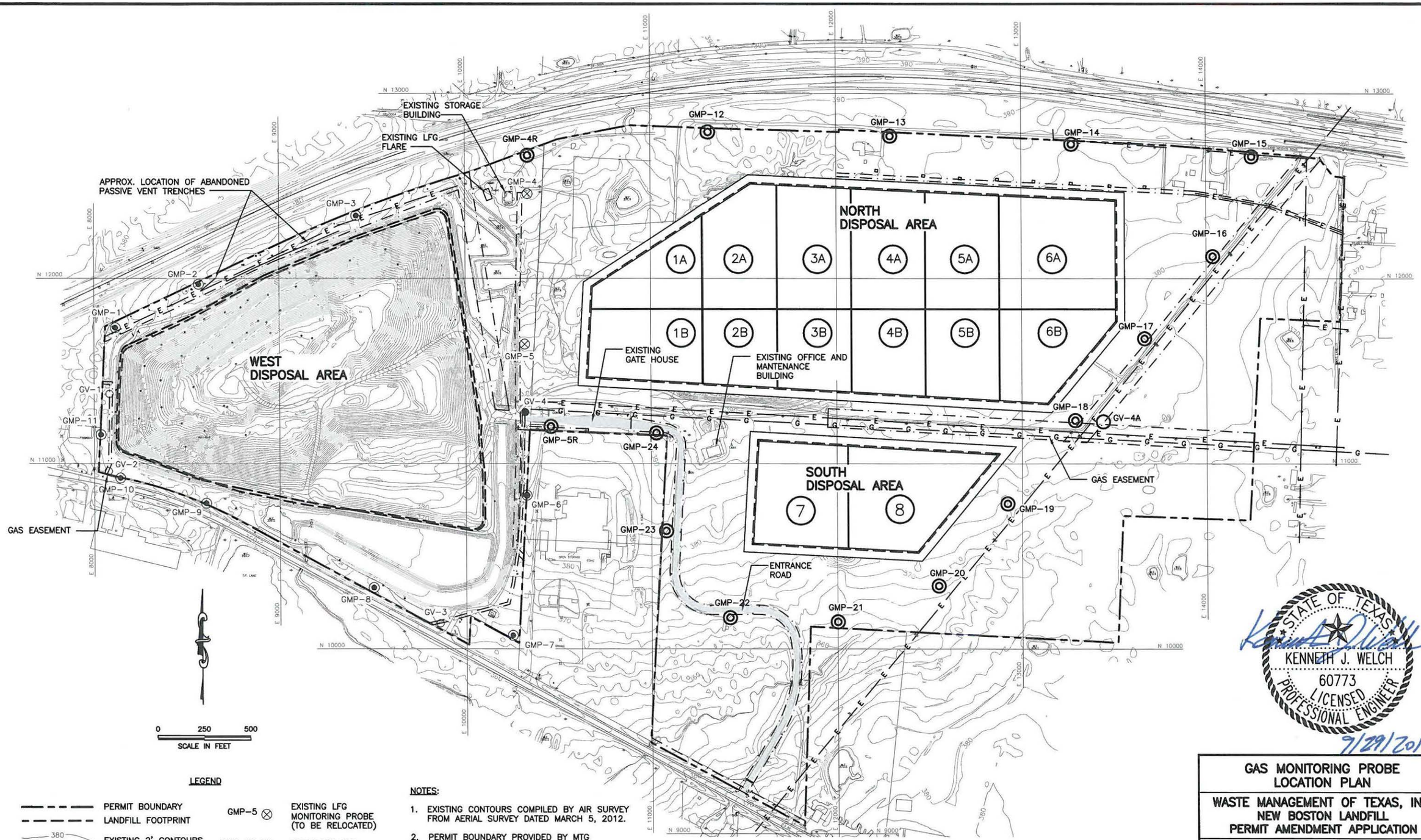
- Standard Permit – 111820
- General Operating Permit – O2646

NEW BOSTON LANDFILL

APPENDIX G1
LANDFILL GAS MONITORING PROBE LOCATIONS AND DETAILS

30 TAC §330.371

Technically Complete September 12, 2014



LEGEND

- PERMIT BOUNDARY
- LANDFILL FOOTPRINT
- 380 EXISTING 2' CONTOURS
- N 11000 SITE GRID
- CELL BOUNDARY
- (5) CELL DESIGNATION
- GMP-8 EXISTING LFG MONITORING PROBE
- GMP-5 EXISTING LFG MONITORING PROBE (TO BE RELOCATED)
- GMP-19 PROPOSED LFG MONITORING PROBE
- GV-3 EXISTING LFG VENT
- GV-4A PROPOSED LFG VENT
- GV-4 EXISTING LFG VENT (TO BE RELOCATED)

NOTES:

1. EXISTING CONTOURS COMPILED BY AIR SURVEY FROM AERIAL SURVEY DATED MARCH 5, 2012.
2. PERMIT BOUNDARY PROVIDED BY MTG ENGINEERS AND SURVEYORS, INC.
3. REFER TO DRAWING G1.2 FOR LANDFILL GAS MONITORING PROBE DETAIL AND INFORMATION.
4. ENCLOSED STRUCTURES INCLUDE GATEHOUSE, OFFICE AND MAINTENANCE BUILDING, AND STORAGE BUILDING. ALL ENCLOSED STRUCTURES HAVE PERMANENT GAS MONITORS.

STATE OF TEXAS
KENNETH J. WELCH
60773
LICENSED
PROFESSIONAL ENGINEER
9/29/2014

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REVISIONS						
REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY
–	9/12/14	TECHNICALLY COMPLETE	GLW	JHP	KJW	KJW

GAS MONITORING PROBE LOCATION PLAN

WASTE MANAGEMENT OF TEXAS, INC.
NEW BOSTON LANDFILL
PERMIT AMENDMENT APPLICATION

BIGGS & MATHEWS ENVIRONMENTAL
CONSULTING ENGINEERS
MANSFIELD • WICHITA FALLS
817-563-1144

TBPE FIRM NO. F-256 | TBPG FIRM NO. 50222

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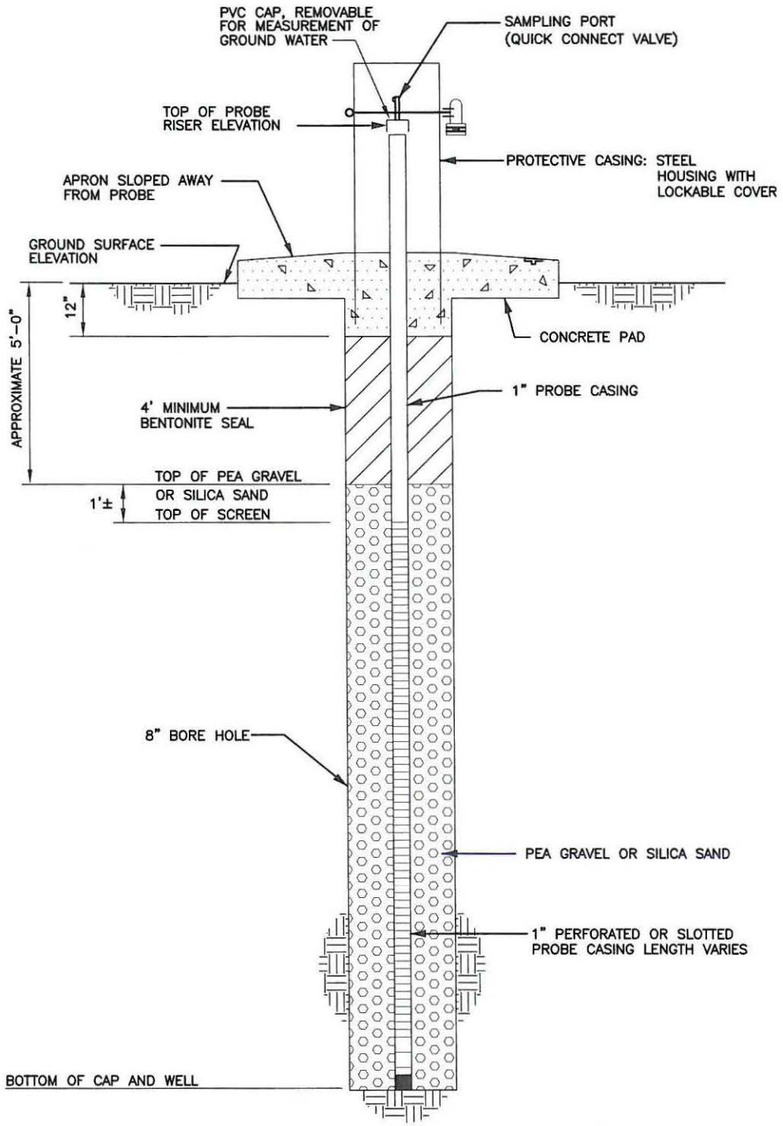

MONITORING PROBE DETAILS (MP-1) G1.2

NOTES

1. ALL SIZES AND DIMENSIONS ARE APPROXIMATE.
2. REFER TO APPENDIX G3 FOR INSTALLATION LOGS OF EXISTING PROBES GMP-1 THROUGH GMP-11.

GAS MONITORING PROBE INFORMATION

GAS PROBE	GROUND ELEVATION (FT-MSL)	PROBE DEPTH (FT-BGS)	BOTTOM OF PROBE ELEVATION (FT-MSL)
EXISTING GAS MONITORING PROBES			
GMP-1	371.3	25	346.3
GMP-2	384.1	38	346.1
GMP-3	377.8	30	347.8
GMP-4	376.8	30	346.8
GMP-5	374.4	26	348.4
GMP-6	383.6	32.5	351.0
GMP-7	364.4	15	349.4
GMP-8	364.4	20	344.4
GMP-9	363.9	20	343.9
GMP-10	371.3	24.5	346.8
GMP-11	369.8	25	344.8
PROPOSED GAS MONITORING PROBE INFORMATION			
GMP-4R	380	50	330.0
GMP-5R	386	56	330.0
GMP-12	387	57	330.0
GMP-13	389	59	330.0
GMP-14	387	57	330.0
GMP-15	384	54	330.0
GMP-16	380	50	330.0
GMP-17	380	50	330.0
GMP-18	379	49	330.0
GMP-19	374	44	330.0
GMP-20	369	39	330.0
GMP-21	364	34	330.0
GMP-22	370	40	330.0
GMP-23	384	54	330.0
GMP-24	390	60	330.0

UTILITY VENT (MP-2) G1.2

NTS

NOTE

1. ALL SIZES AND DIMENSIONS ARE APPROXIMATE.

STATE OF TEXAS
KENNETH J. WELCH
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PROFESSIONAL ENGINEER
9/29/2014

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REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY
–	9/12/14	TECHNICALLY COMPLETE	GLW	JHP	KJW	KJW

MONITORING PROBE/ VENT DETAILS

WASTE MANAGEMENT OF TEXAS, INC.
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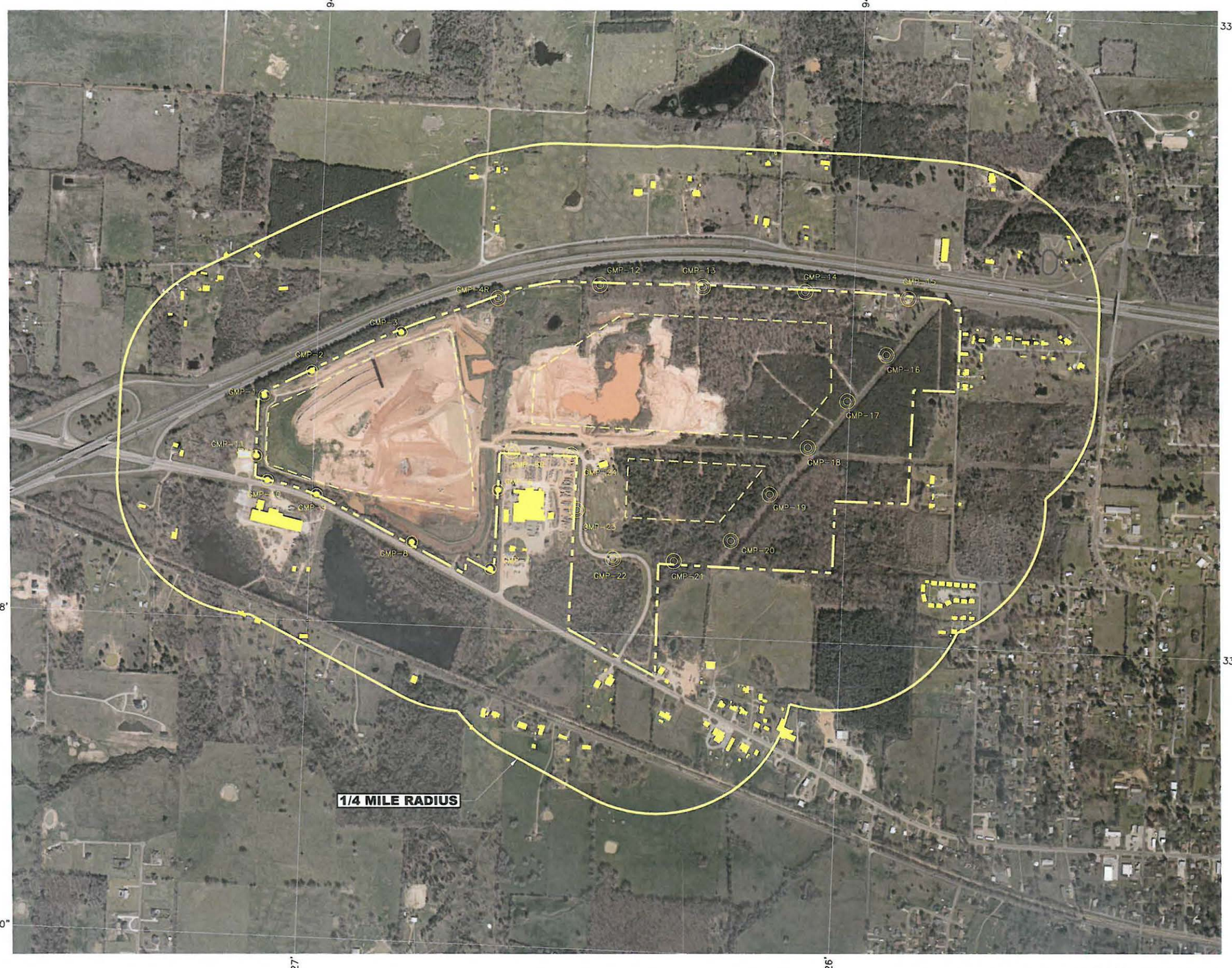

0 500 1000

SCALE IN FEET

LEGEND

PERMIT BOUNDARY

LANDFILL FOOTPRINT

1/4 MILE RADIUS

EXISTING LFG MONITORING PROBE

PROPOSED LFG MONITORING PROBE

HABITABLE STRUCTURE

NOTE:

1. AERIAL PHOTOGRAPH IMMEDIATELY SURROUNDING THE PROPERTY PROVIDED BY AERO-METRIC FROM AERIAL PHOTOGRAPHY FLOWN MARCH 5, 2012.

9/29/2014

STRUCTURES WITHIN 1/4 MILE OF PERMIT BOUNDARY

WASTE MANAGEMENT OF TEXAS, INC. NEW BOSTON LANDFILL PERMIT AMENDMENT APPLICATION

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REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY
–	9/12/14	TECHNICALLY COMPLETE	GLW	JHP	KJW	KJW

DSN. KJW DATE : 06/13

DWN. SRC SCALE : GRAPHIC

CHK. KJW DWG : G1.3-Aerial.dwg

DRAWING G1.3

J:\101\05\112\Att G\G1.3-Aerial.dwg Layout: G1.4 User: bboles

NEW BOSTON LANDFILL

APPENDIX G2
REPORTING AND RECORDING FORMS

30 TAC §330.371

Technically Complete September 12, 2014

NEW BOSTON LANDFILL MSW 576C
LANDFILL GAS MONITORING REPORT

INSTRUMENTATION INFORMATION

Combustible Gas Instrument Type: _____
Pressure Instrument Type: _____
Water Level Instrument Type: _____

Field calibration report is in accordance with instrument manufacturer's recommended procedures within factory calibration tolerances.

	Time/Date	Methane	CO2	O2	Balance
Field Calibration					

ADDITIONAL INFORMATION

Weather Conditions: _____
Barometric Pressure: _____ Temperature: _____
Sampling Date: _____ Sampler: _____
Time: Start: _____ Finish: _____

ON-SITE STRUCTURES

ON-SITE STRUCTURE	*Verify if Continuous LFG Alarm is Operational*	*Continuous LFG Alarm Activated (LEL>25%) During This Quarter*	*Continuous LFG Alarm have current calibration sticker; date on sticker*
	Circle One	*Circle One*	*Circle One*
Gate House	Yes No	Yes No	Yes No Date:
Office/Maintenance Building	Yes No	Yes No	Yes No Date:
Storage Building	Yes No	Yes No	Yes No Date:

GENERAL COMMENTS:

_____
_____
_____
_____

NEW BOSTON LANDFILL MSW 576C
LANDFILL GAS MONITORING REPORT

GAS MONITORING PROBES/VENTS

PROBE/VENT #	SURFACE ELEV. *Ft-msl*	BOTTOM ELEV. *Ft-msl*	TIME SAMPLED	STATIC PRESSURE *"w.c.*[1]	% CH_4 *0-100*	% *LEL*[2] *0-100*	%[4] O_2 (0pt.) *0-100*	DEPTH TO WATER	WATER ELEV. *Ft.-msl*	PROBE INTEGRITY VERIFIED *YES/NO*[3]
1										
2										
3										
4R										
5R										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
GV-1										
GV-2										
GV-3										
GV-4A										

[1] *"w.c. - inches Water Column*
[2] *% LEL=(20) X (observed % methane) - Note: Record>100% in LEL column if % methane is >5%*
[3] Note any problems with the probes in the general comments section above.
[4] Optional

GENERAL COMMENTS:

_____

_____

Sampler: _____

Company: _____

Date: _____

Gas Operations Mgr: _____

Landfill Site Mgr: _____

NEW BOSTON LANDFILL

APPENDIX G3
INSTALLATION INFORMATION
AND TCEQ PERMIT MODIFICATION APPROVALS –
EXISTING LANDFILL GAS MONITORING PROBES

30 TAC §330.371

Technically Complete September 12, 2014

INSTALLATION OF LANDFILL GAS MONITORING PROBES

NEW BOSTON LANDFILL
BOWIE COUNTY, TEXAS
TNRCC PERMIT NO. 576A

Prepared for

Western Waste Industries, Inc.

May 1995

5-2-95

Prepared by

EMCON
5701 East Loop 820 South
Fort Worth, Texas 76119
817 / 478-8254

Project 61118-001-070

NEW BOSTON LANDFILL
TECHNICALLY COMPLETE JUNE 10, 2002

EMCON
5701 East Loop 820 South • Fort Worth, Texas 76119-7051 • (817) 478-8254 • Metro (817) 572-3411 • Fax (817) 478-8874

May 2, 1995
Project 61118-001-070

Mr. H. Thomas Collins, P.E.
Compliance and Enforcement Section
Municipal Solid Waste Division
Texas Natural Resource Conservation Commission
P.O. Box 13087
Austin, Texas 78711-3087

Re: Installation of Landfill Gas Monitoring Probes
New Boston Landfill, Permit No. 576A
Bowie County, Texas

Dear Mr. Collins:

On behalf of Western Waste Industries, Inc., we are submitting one original and two copies of the report documenting installation of the Landfill Gas (LFG) Monitoring probes for the New Boston Landfill. The probes were installed on April 13, 14, & 17. Installation of the gas probes and preparation of the installation were completed in accordance with the requirements of 30 TAC §330.56(n)(8)(B) and the Methane Monitoring Handbook published by Texas Natural Conservation Commission.

Please do not hesitate to contact us if there are any questions.

Sincerely,

EMCON

STATE OF TEXAS
THOMAS D. BAKER
40860
REGISTERED
PROFESSIONAL ENGINEER
5-2-95

Thomas D. Baker, P.E.
Director, Technical Services

Enclosure: Installation of Landfill Gas Monitoring Probes Report (3)

cc: Mr. John Carrington - Western Waste Industries, Inc.
Mr. Keith Durrett - Western Waste Industries, Inc.
Mr. Kent Wiken - EMCON

FW/I/1118/001/WWFG.DOC/501-95 /js:1

NEW BOSTON LANDFILL
TECHNICALLY COMPLETE JUNE 10, 2002

CONTENTS

1 INTRODUCTION

This report documents the landfill gas (LFG) monitoring probe installation for the New Boston Landfill. Included in this report are a LFG probe location map, construction details, borings logs, and State of Texas well reports. This report is submitted in accordance with the requirements of the Methane Monitoring Handbook published by the Texas Natural Resource Conservation Commission (TNRCC).

The LFG Management Plan provides for a LFG monitoring network consisting of probes located around the perimeter of the site. The LFG Management Plan, TNRCC Methane Monitoring Handbook, and subsequent discussions with TNRCC staff personnel, provided the guidance for the probe installation.

2 LANDFILL GAS MONITORING PROBE NUMBER AND LOCATION

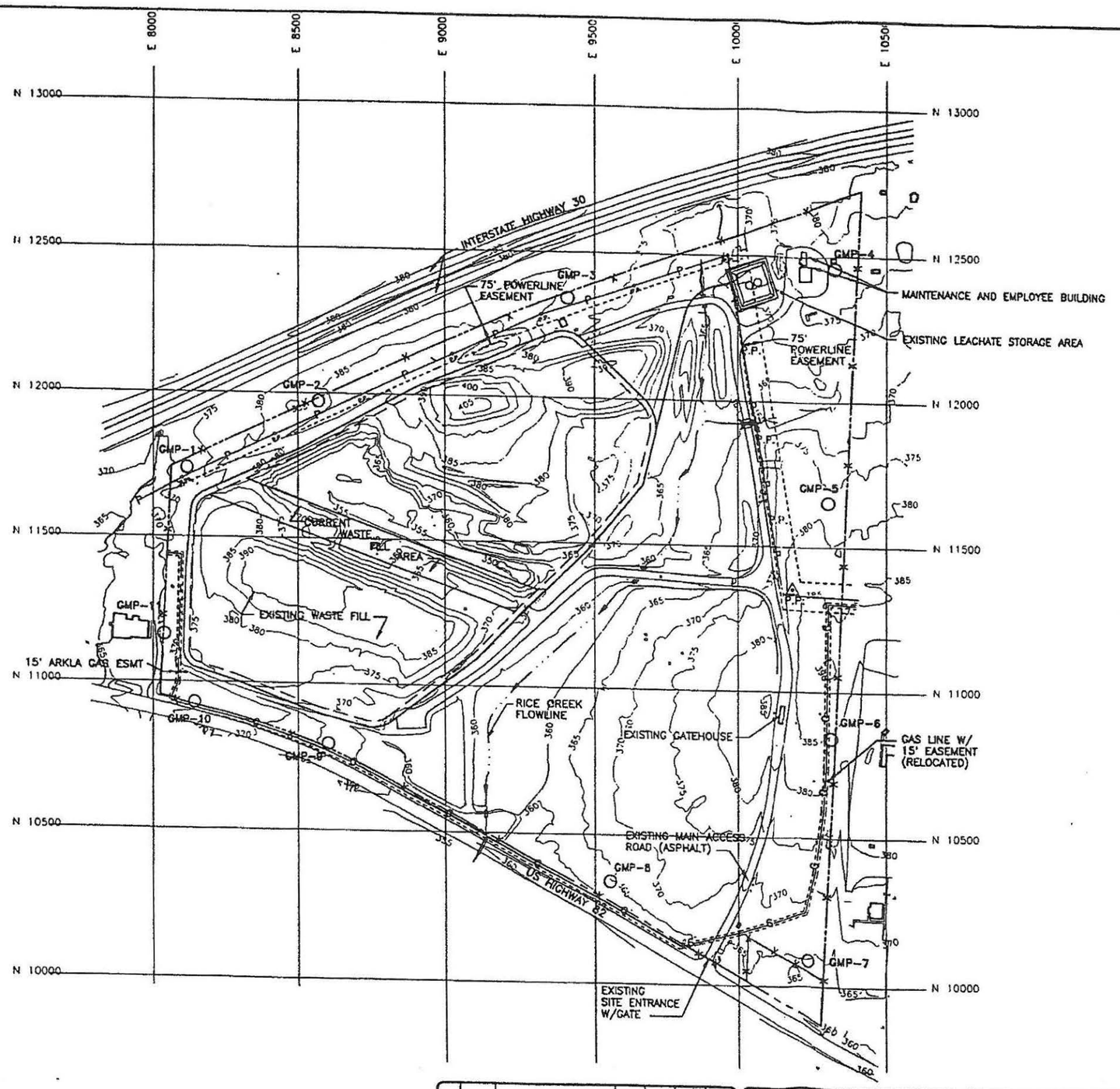
Eleven LFG monitoring probes were installed at this site. The number of probes and their locations were outlined in a plan sent to H. Thomas Collins, P.E., Team Leader, Landfill Remediation Team, Compliance and Enforcement Section, dated March 24, 1995. Approval of the installation plan by TNRCC was documented in an April 25, 1995, letter from Mr. Collins.

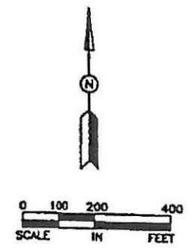
3 LANDFILL GAS MONITORING PROBE INSTALLATION

The LFG monitoring probes were installed on April 13, 14, and 17, 1995, and consisted of 1-inch diameter PVC pipe with slotted screens. Probe locations are shown on Figure A.1. The screens generally extended from the bottom of the hole to 4 feet below the ground surface. A gravel pack was placed from the bottom of the hole to approximately the top of screen, and 6 inches of sand was placed over the gravel pack. The installation was completed with 2 feet of hydrated bentonite and a concrete apron. The boring depth for each probe was selected to extend to the higher of the seasonal low water level at the monitoring point or the lowest elevation of waste within 1000 feet of the monitoring point. Groundwater and waste elevations, as well as bottom of probe elevations and screen elevations are listed on Figure A.2. The borings were drilled with continuous flight augers which resulted in a nominal 8-inch diameter hole.

A typical LFG monitoring probe construction detail is shown on Figure A.2 along with a schedule of specific information for each probe. Logs of borings which include soil descriptions and a probe construction detail are presented on Figures A.3 through A.13. The LFG monitoring probes were installed under the supervision of a well driller licensed in the State of Texas. Well logs for each probe are provided on Figures B.1 through B 11.

APPENDIX A





LEGEND

- 380 — 5' CONTOUR LINE (FT-MSL)
- PROPERTY LINE AND PERMIT BOUNDARY
- P — POWER LINE
- G — GAS MAIN
- FENCE LINE
- EASEMENT LINE
- N 10000 — SITE GRID
- GMP-3 ○ — GAS MONITORING PROBE LOCATION

NOTES:

1. EXISTING CONTOURS COMPILED FROM AN AERIAL SURVEY PERFORMED BY INTERA, DECEMBER, 1994.
2. GAS MONITORING PROBE DETAILS PROVIDED ON FIGURE A.2.

STATE OF TEXAS
THOMAS D. BAKER
40060
REGISTERED PROFESSIONAL ENGINEER
5-2-95

FOR PERMITTING PURPOSES ONLY

REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY
DATE OF ISSUE 5-95		DWN BY JLM DES BY TDB	CHK BY TDB APP BY JDW			

EMCON

G3-8

Western Waste Industries

GAS MONITORING PROBE LOCATION PLAN

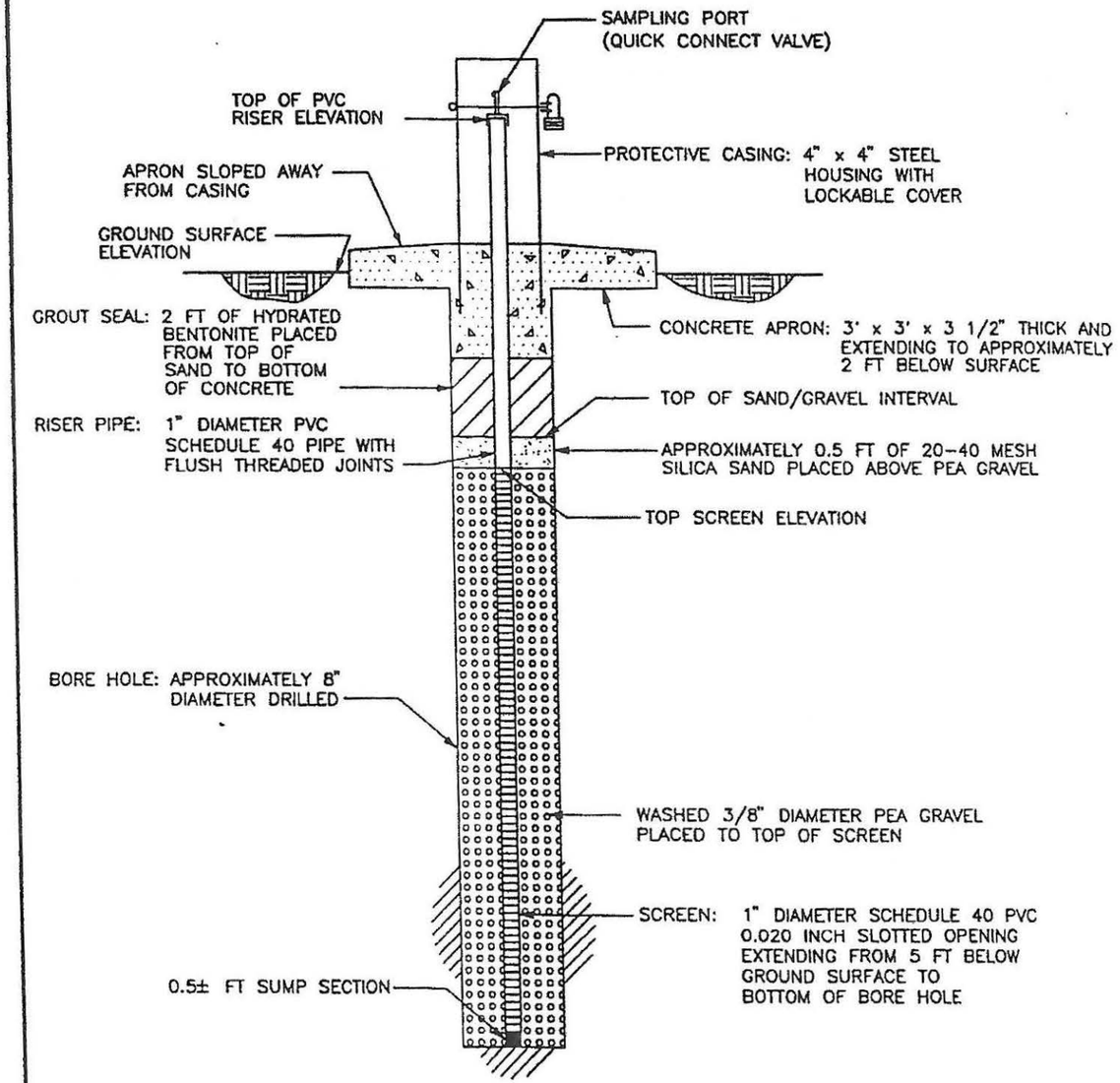
NEW BOSTON LANDFILL
BOWIE COUNTY, TEXAS

FIGURE A.1

PROJECT NO

M:\PLAN\WESTERN\PGA1

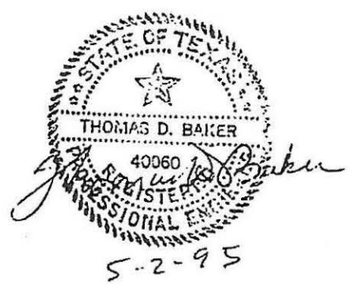
Technically Complete September 12, 2014



GMP	SURFACE ELEVATION (FEET)	TOP OF RISER ELEV (FEET)	GAS PROBE COORDINATES		GROUNDWATER SEASONAL LOW	MSW LOW ELEVATION	BOTTOM OF PROBE ELEVATION	PROBE SCREEN INTERVAL	PROBE DEPTH (FEET)
			NORTHING	EASTING					
1	371.3	374.0	11737.97	8114.78	323	350	346.3	346/365	25
2	384.1	386.8	11972.61	8570.08	335	350	346.1	346/379	38
3	377.8	380.3	12343.72	9410.92	347	350	347.8	348/373	30
4	376.8	379.5	12463.63	10329.75	356	352	346.8	347/372	30
5	374.4	378.9	11653.46	10314.16	353	352	348.4	348/370	26
6	383.6	386.2	10840.27	10323.66	346	356	351.0	351/378	32.5
7	364.4	367.2	10086.59	10246.05	340	353	349.4	350/359	15
8	364.4	366.8	10342.45	9500.58	346	348	344.4	345/359	20
9	363.9	366.5	10794.47	8602.78	321	347	343.9	344/359	20
10	371.3	374.0	10929.98	8141.74	321	347	346.8	347/367	24.5
11	369.8	372.4	11162.89	8036.52	322	347	344.8	345/365	25

REMARKS:

1. SURFACE ELEVATION AT MONITORING POINT DETERMINED BY SURVEY.
2. GROUNDWATER ELEVATIONS AT MONITORING POINT ESTIMATED FROM NEAREST SHALLOW PIEZOMETER OR INTERPOLATED FROM NEAREST TWO PIEZOMETERS USING LOWEST STABILIZED WATER LEVEL.
3. MSW LOW ELEVATION WITHIN 1000 FEET OF MONITORING POINT IS BASED ON TOP OF LINER ELEVATIONS DETERMINED FROM AVAILABLE PLANS.



N:\P_PM\WESTERN\GEO\M-PROBE2

REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY
	DATE OF ISSUE 5-95		DWN BY P.M. DES BY TDB		CHK BY TDB APP BY KWK	

emcon

G3-9

Western Waste Industries

GAS MONITORING PROBE DETAIL

NEW BOSTON LANDFILL
BOWIE COUNTY, TEXAS

FIGURE
A.2
PROJECT NO

Technically Complete September 12, 2014

LOG OF GAS PROBE NO. GMP- 1

Project Description: NEW BOSTON LANDFILL
Gas Monitoring Probes

Location: E 8114.78 N 11737.97
Surface El.: 371.33' MSL

Depth, feet	Samples	Symbol / USCS	MATERIAL DESCRIPTION	Gas Probe Construction Detail	Hand Penetrometer tsf	Penetration Blows / Foot	Moisture Content, %	Unit Dry Weight, lb/cu ft.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
0	U-1		CLAYEY SAND (SC), dark olive gray										
			369.3										
			CLAY (CL), sandy, red, orange & gray										
5	U-2		365.3										
			CLAYEY SAND (SC), grayish tan w/gray clay seams										
			363.3										
			CLAYEY SAND (SC), reddish tan to red										
10	U-3												
15	U-4		- w/red clay seams below 17 ft.										
20	U-5												
25			346.3										
30													
35													
40													

Completion Depth: 25.0 ft.
Date Boring Started: 4/14/95
Date Boring Completed: 4/14/95
Engineer/Geologist: M. Brown
Project No.: 61118-001-070

Remarks:

EMCON

The stratification lines represent approximate strata boundaries. In situ, the transition may be gradual.

FIGURE A.3
NEW BOSTON LANDFILL
TECHNICALLY COMPLETE JUNE 10, 2002

LOG OF GAS PROBE NO. GMP- 2

Project Description: NEW BOSTON LANDFILL
Gas Monitoring Probes

Location: E 8570.08 N 11972.61
Surface El.: 384.10' MSL

Depth, feet	Samples	Symbol / USCS	MATERIAL DESCRIPTION	Elevation
0	U-1		SANDY CLAY (CL), tan & olive	382.1
5	U-2		CLAY (CL), silty & sandy, reddish tan w/iron stains & w/occasional light gray sandy clay seams	
10	U-3		- reddish gray below 7.5 ft.	372.1
15	U-4		CLAYEY SAND (SC), silty, light reddish tan	368.1
			SANDY CLAY (CL), silty, dark reddish tan	364.1
20	U-5		CLAYEY SAND (SC), reddish tan	
25	U-6		- thin sandstone layers 25 to 30 ft.	354.1
30	U-7		CLAY (CL), reddish tan	
35	U-8			346.1
40				

Gas Probe Construction Detail

Hand Penetrometer tsf	Penetration Blows / Foot	Moisture Content, %	Unit Dry Weight, lb/cu ft.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf

Completion Depth: 38.0 ft.
Date Boring Started: 4/13/95
Date Boring Completed: 4/13/95
Engineer/Geologist: M. Brown
Project No.: 61118-001-070

Remarks:

pcal id: NR070

EMCON

The stratification lines represent approximate strata boundaries. In situ, the transition may be gradual.

FIGURE A.4
NEW BOSTON LANDFILL
TECHNICALLY COMPLETE JUNE 10, 2002

Technically Complete September 12, 2014

LOG OF GAS PROBE NO. GMP- 3

Project Description: NEW BOSTON LANDFILL
Gas Monitoring Probes

Location: E 9410.93 N 12343.72
Surface El.: 377.77' MSL

Depth, feet	Samples	Symbol / USCS	MATERIAL DESCRIPTION	Gas Probe Construction Detail	Hand Penetrometer tsf	Penetration Blows / Foot	Moisture Content, %	Unit Dry Weight, lb/cu ft.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
0	U-1		CLAYEY SAND (SC), silty, tan										
			375.8										
			CLAYEY SAND (SC), silty, tan w/gray sandy clay seams										
5	U-2		371.8										
			CLAY (CL), silty & sand, reddish tan w/gray clay seams & iron stains										
10	U-3		367.8										
			CLAY (CL), red, silty										
			364.8										
			SHALY CLAY (CL), red w/tan sand clay seams										
15	U-4												
20	U-5												
25	U-6												
30			347.8										
35													
40													

Completion Depth: 30.0 ft.
Date Boring Started: 4/13/95
Date Boring Completed: 4/13/95
Engineer/Geologist: M. Brown
Project No.: 61118-001-070

Remarks:

proj.lic: NB070

EMCON

The stratification lines represent approximate strata boundaries. In situ, the transition may be gradual.

FIGURE A.5
NEW BOSTON LANDFILL
TECHNICALLY COMPLETE JUNE 10, 2002

LOG OF GAS PROBE NO. GMP- 4

Project Description: NEW BOSTON LANDFILL
Gas Monitoring Probes

Location: E 10329.75 N 12463.63
Surface El.: 376.81' MSL

Depth, feet	Samples	Symbol / USCS	MATERIAL DESCRIPTION	Gas Probe Construction Detail	Hand Penetrometer tsf	Penetration Blows / Foot	Moisture Content, %	Unit Dry Weight, lb/cu ft.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
0	U-1		CLAYEY SAND (SC), brown										
			374.8										
			SANDY CLAY (CL), reddish tan & gray										
5	U-2		371.8										
			SANDY CLAY (CL), silty, reddish gray										
10	U-3		366.8										
			SHALY CLAY (CH), red w/iron staining										
15	U-4												
20	U-5												
25	U-6												
30			346.8										
35													
40													

Completion Depth: 30.0 ft.
Date Boring Started: 4/13/95
Date Boring Completed: 4/13/95
Engineer/Geologist: M. Brown
Project No.: 61118-001-070

Remarks:

proj.lit: NB070

EMCON

The stratification lines represent approximate strata boundaries. In situ, the transition may be gradual.

NEW BOSTON LANDFILL
TECHNICALLY COMPLETE JUNE 10, 2002

FIGURE A.6

LOG OF GAS PROBE NO. GMP- 5

Project Description: NEW BOSTON LANDFILL
Gas Monitoring Probes

Location: E 10314.16 N 11653.46
Surface El.: 374.40' MSL

Depth, feet	Samples	Symbol / USCS	MATERIAL DESCRIPTION	Gas Probe Construction Detail	Hand Penetrometer tsf	Penetration Blows / Foot	Moisture Content, %	Unit Dry Weight, lb/cu ft.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
0	U-1		SANDY CLAY (CL), reddish tan & gray (Fill) 373.4										
			SANDY CLAY (CL), silty, olive brown 369.4										
5	U-2		SANDY CLAY (CL), silty, reddish tan w/iron staining & gray sandy clay seams										
10	U-3		362.4										
			SHALY CLAY (CH), red w/tan sandy clay seams & iron staining										
15	U-4		356.4										
			CLAY (CH), silty, red w/shaly clay seams & w/calcareous cemented mudstone seams below 20 ft.										
20	U-5												
25	U-6		348.4										
30													
35													
40													

Completion Depth: 26.0 ft.
Date Boring Started: 4/14/95
Date Boring Completed: 4/14/95
Engineer/Geologist: M. Brown
Project No.: 61118-001-070

Remarks:

EMCON

The stratification lines represent approximate strata boundaries. In situ, the transition may be gradual.

NEW BOSTON LANDFILL TECHNICALLY COMPLETE JUNE 10, 2002

FIGURE A.7

LOG OF GAS PROBE NO. GMP- 6

Project Description: NEW BOSTON LANDFILL
Gas Monitoring Probes

Location: E 10323.66 N 10840.28
Surface El.: 383.55' MSL

Depth, feet	Samples	Symbol / USCS	MATERIAL DESCRIPTION	Elevation	Gas Probe Construction Detail	Hand Penetrometer tsf	Penetration Blows / Foot	Moisture Content, %	Unit Dry Weight, lb/cu ft.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
0	U-1		CLAYEY SAND (SC), brown to dark brown w/iron ore particles	381.6										
			SANDY CLAY (CL), silty, tan	376.6										
5	U-2													
			SANDY CLAY (CL), silty, reddish tan w/gray clay seams	373.6										
10	U-3		CLAY (CL), reddish tan & gray	368.6										
15	U-4		CLAYEY SAND (SC), tan, silty	366.6										
			CLAY (CL), reddish tan	363.6										
20	U-5		CLAY (CH), red, w/iron stains	358.6										
25	U-6		SANDY CLAY (CL), red, silty	351.1										
30	U-7													
35														
40														

Completion Depth: 32.5 ft.
Date Boring Started: 4/13/95
Date Boring Completed: 4/13/95
Engineer/Geologist: M. Brown
Project No.: 61118-001-070

Remarks:

EMCON

The stratification lines represent approximate strata boundaries In situ, the transition may be gradual.

NEW BOSTON LANDFILL TECHNICALLY COMPLETE JUNE 10, 2002

FIGURE A.8

LOG OF GAS PROBE NO. GMP- 7

Project Description: NEW BOSTON LANDFILL
Gas Monitoring Probes

Location: E 10246.05 N 10086.59
Surface El.: 364.35' MSL

Depth, feet	Samples	Symbol / USCS	MATERIAL DESCRIPTION	Gas Probe Construction Detail	Hand Penetrometer tsf	Penetration Blows / Foot	Moisture Content, %	Unit Dry Weight, lb/cu ft.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
0	U-1		CLAYEY SAND (SC), brown & olive										
			361.4										
5	U-2		CLAY (CL), tan & olive w/yellow & red iron staining										
			358.4										
			CLAY (CL), reddish tan & gray w/manganese dioxide stains										
10	U-3		353.4										
			CLAY (CH), reddish tan & gray										
	U-4		349.4										
15													
20													
25													
30													
35													
40													

Completion Depth: 15.0 ft.
Date Boring Started: 4/13/95
Date Boring Completed: 4/13/95
Engineer/Geologist: M. Brown
Project No.: 61118-001-070

Remarks:

EMCON

The stratification lines represent approximate strata boundaries. In situ, the transition may be gradual.

NEW BOSTON LANDFILL
TECHNICALLY COMPLETE JUNE 10, 2002

FIGURE A.9

LOG OF GAS PROBE NO. GMP- 8

Project Description: NEW BOSTON LANDFILL
Gas Monitoring Probes

Location: E 9500.58 N 10342.45
Surface El.: 364.42' MSL

Depth, feet	Samples	Symbol / USCS	MATERIAL DESCRIPTION	Gas Probe Construction Detail	Hand Penetrometer tsf	Penetration Blows / Foot	Moisture Content, %	Unit Dry Weight, lb/cu ft.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
0	U-1		SANDY CLAY (CL), silty, tan & light brown										
5	U-2		357.4										
			SANDY CLAY (CL), reddish tan w/gray clay seams										
10	U-3		354.4										
			SHALY CLAY (CH), red w/iron staining & gray clay seams										
15	U-4												
20			344.4										
25													
30													
35													
40													

Completion Depth: 20.0 ft.
Date Boring Started: 4/14/95
Date Boring Completed: 4/14/95
Engineer/Geologist: M. Brown
Project No.: 61118-001-070

Remarks:

EMCON

The stratification lines represent approximate strata boundaries. In situ, the transition may be gradual.

NEW BOSTON LANDFILL
TECHNICALLY COMPLETE JUNE 10, 2002

FIGURE A.10

LOG OF GAS PROBE NO. GMP- 9

Project Description: NEW BOSTON LANDFILL
Gas Monitoring Probes

Location: E 8602.78 N 10794.47
Surface El.: 363.86' MSL

Depth, feet	Samples	Symbol / USCS	MATERIAL DESCRIPTION	Gas Probe Construction Detail	Hand Penetrometer tsf	Penetration Blows / Foot	Moisture Content, %	Unit Dry Weight, lb/cu ft.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
0	U-1		CLAY (CL), brown to dark brown										
			362.9										
			SANDY CLAY (CL), yellowish tan, silty w/occasional gray clay seams w/iron staining										
5	U-2												
			355.9										
			SANDY CLAY (CL), reddish orange w/red shaly clay seams										
10	U-3		352.9										
			SHALY CLAY (CH), red w/occasional gray clay seams & yellow iron stains										
15	U-4												
20	U-5		342.4										
25													
30													
35													
40													

Completion Depth: 21.5 ft.
Date Boring Started: 4/17/95
Date Boring Completed: 4/17/95
Engineer/Geologist: M. Brown
Project No.: 61118-001-070

Remarks:

gcal id: NB070

EMCON

The stratification lines represent approximate strata boundaries. In situ, the transition may be gradual.

NEW BOSTON LANDFILL
TECHNICALLY COMPLETE JUNE 10, 2002

FIGURE A.11

LOG OF GAS PROBE NO. GMP-10

Project Description: NEW BOSTON LANDFILL
Gas Monitoring Probes

Location: E 8141.74 N 10929.99
Surface El.: 371.34' MSL

Depth, feet	Samples	Symbol / USCS	MATERIAL DESCRIPTION	Gas Probe Construction Detail	Hand Penetrometer tsf	Penetration Blows / Foot	Moisture Content, %	Unit Dry Weight, lb/cu ft.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
0	U-1		CLAYEY SAND (SC), reddish tan										
			369.3										
			CLAY (CL), reddish tan & gray										
5	U-2		- blocky below 5 ft.										
			364.3										
			CLAYEY SAND (SC), silty, light reddish tan w/dark red shaly clay seams										
10	U-3												
15	U-4		- increase in clay seams below 15 ft.										
			351.3										
20	U-5		SHALY CLAY (CH), red w/sand & iron staining										
			346.3										
25													
30													
35													
40													

Completion Depth: 25.0 ft.
Date Boring Started: 4/14/95
Date Boring Completed: 4/14/95
Engineer/Geologist: M. Brown
Project No.: 61118-001-070

Remarks:

EMCON

The stratification lines represent approximate strata boundaries. In situ, the transition may be gradual.

NEW BOSTON LANDFILL
TECHNICALLY COMPLETE JUNE 10, 2002

FIGURE A.12

LOG OF GAS PROBE NO. GMP-11

Project Description: NEW BOSTON LANDFILL
Gas Monitoring Probes

Location: E 8036.52 N 11162.89
Surface El.: 369.81' MSL

Depth, feet	Samples	Symbol / USCS	MATERIAL DESCRIPTION	Gas Probe Construction Detail	Hand Penetrometer tsf	Penetration Blows / Foot	Moisture Content, %	Unit Dry Weight, lb/cu ft.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
0	U-1		CLAYEY SAND (SC), tan & brown — 368.8										
			CLAY (CL), w/sand, red & tan — 364.8										
5	U-2		SANDY CLAY (CL), reddish brown & gray — 362.8										
			CLAYEY SAND (SC), silty, tan to reddish tan w/gray clay seams										
10	U-3		- dark red calcareous mudstone seams @ 12 ft.										
15	U-4		— 351.8										
			SHALY CLAY (CH), red w/some silt & iron staining										
20	U-5		— 344.8										
25													
30													
35													
40													

Completion Depth: 25.0 ft.
Date Boring Started: 4/14/95
Date Boring Completed: 4/14/95
Engineer/Geologist: M. Brown
Project No.: 61118-001-070

Remarks:

EMCON

The stratification lines represent approximate strata boundaries. In situ, the transition may be gradual.

NEW BOSTON LANDFILL
TECHNICALLY COMPLETE JUNE 16, 2007

FIGURE A.13

APPENDIX B

Send original copy by certified mail to: Texas Water Commission, P.O. Box 13087, Austin, Texas 78711

Please use black ink.

ATTENTION OWNER: *Confidentiality Privilege Notice on Reverse Side*

State of Texas WELL REPORT

GMP - 1

Texas Water Well Drillers Board
P.O. Box 13087
Austin, Texas 78711

1) OWNER Western Waste Industries (Name) ADDRESS Hwy. 82 at I-30 (Street or RFD) New Boston, TX 75501 (City) (State) (Zip)

2) LOCATION OF WELL: County Bowie, 1 miles in west (NE, SW, etc.) direction from New Boston, Texas (Town)
New Boston Landfill

Driller must complete the legal description below with distance and direction from two intersecting section or survey lines, or he must locate and identify the well on an official Quarter- or Half-Scale Texas County General Highway Map and attach the map to this form.

☐ LEGAL DESCRIPTION:

Section No. _____ Block No. _____ Township _____ Abstract No. _____ Survey Name _____

Distance and direction from two intersecting section or survey lines _____

☒ SEE ATTACHED MAP

3) TYPE OF WORK (Check):
☒ New Well ☐ Deepening ☐ Reconditioning ☐ Plugging

4) PROPOSED USE (Check): Gas Probe
☐ Domestic ☐ Industrial ☒ Monitor ☐ Public Supply ☐ Irrigation ☐ Test Well ☐ Injection ☐ De-Watering

5) DRILLING METHOD (Check):
☐ Driven ☐ Mud Rotary ☐ Air Hammer ☐ Jetted ☒ Bored ☐ Air Rotary ☐ Cable Tool ☐ Other _____

6) WELL LOG:
Date Drilling: Started 4-14 19 95 Completed 4-14 19 95

DIAMETER OF HOLE		
Dia. (in.)	From (ft.)	To (ft.)
8"	Surface	completion

7) BOREHOLE COMPLETION:
☐ Open Hole ☐ Straight Wall ☐ Underreamed
☒ Gravel Packed ☐ Other _____
If Gravel Packed give interval ... from 4.5 ft. to 25 ft.

From (ft.)	To (ft.)	Description and color of formation material
0	2	CLAYEY SAND, gray
2	6	CLAY, red, tan & gray
6	8	CLAYEY SAND, gray & tan
8	25	CLAYEY SAND, red

(Use reverse side if necessary)

8) CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if commercial	Setting (ft.) From	Setting (ft.) To	Gage Casing Screen
1	N	PVC Screen	5	25	0.02
1	N	PVC casing	0	5	

9) CEMENTING DATA [Rule 287.44(1)]
Cemented from 0 ft. to 4.5 ft. No. of Sacks Used 3
_____ ft. to _____ ft. No. of Sacks Used _____
Method used Bentonite
Cemented by GM Enterprises

10) SURFACE COMPLETION 3' x 3' surface slab
☐ Specified Surface Slab Installed [Rule 287.44(2)(A)]
☐ Specified Steel Sleeve Installed [Rule 287.44(3)(A)]
☐ Pitless Adapter Used [Rule 287.44(3)(B)]
☒ Approved Alternative Procedure Used [Rule 287.71]

11) WATER LEVEL: N/A
Static level _____ ft. below land surface Date _____
Artesian flow _____ gpm. Date _____

12) PACKERS: N/A Type Depth

13) TYPE PUMP: N/A
☐ Turbine ☐ Jet ☐ Submersible ☐ Cylinder ☐ Other _____
Depth to pump bowls, cylinder, jet, etc., _____ ft.

14) WELL TESTS: N/A
Type Test ☐ Pump ☐ Bailer ☐ Jetted ☐ Estimated
Yield: _____ gpm with _____ ft. drawdown after _____ hrs.

15) WATER QUALITY: N/A
Did you knowingly penetrate any strata which contained undesirable constituents?
☐ Yes ☐ No If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? _____ Depth of strata _____
Was a chemical analysis made? ☐ Yes ☐ No

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief. I understand that failure to complete items 1 thru 15 will result in the log(s) being returned for completion and resubmittal.

COMPANY NAME GM Enterprises (Type or print) WELL DRILLER'S LICENSE NO. 3006 M

ADDRESS 7098 ~~Mansfield~~ Highway (Street or RFD) Kennedale (City) Texas (State) 76060 (Zip)

(Signed) _____ (Licensed Well Driller) (Signed) _____ (Registered Driller Trainee)

Please attach electric log, chemical analysis, and other pertinent information, if available.

For TWC use only: Well No. _____ Located on map _____

TWC-0199 (Rev. 05-18-90) TEXAS WATER COMMISSION COPY

Send original copy by certified mail to: Texas Water Commission, P.O. Box 13087, Austin, Texas 78711

Please use black ink.

ATTENTION OWNER: *Confidentiality Privilege Notice on Reverse Side*

State of Texas WELL REPORT

GMP - 2

Texas Water Well Drillers Board
P.O. Box 13087
Austin, Texas 78711

1) OWNER Western Waste Industries (Name) ADDRESS Hwy. 82 at I-30 (Street or RFD) New Boston, TX 75501 (City) (State) (Zip)

2) LOCATION OF WELL: County Bowie, 1 miles in west (NE, SW, etc.) direction from New Boston, Texas (Town)
New Boston Landfill

Driller must complete the legal description below with distance and direction from two intersecting section or survey lines, or he must locate and identify the well on an official Quarter- or Half-Scale Texas County General Highway Map and attach the map to this form.

☐ LEGAL DESCRIPTION:

Section No. _____ Block No. _____ Township _____ Abstract No. _____ Survey Name _____

Distance and direction from two intersecting section or survey lines _____

☒ SEE ATTACHED MAP

3) TYPE OF WORK (Check):
☒ New Well ☐ Deepening ☐ Reconditioning ☐ Plugging

4) PROPOSED USE (Check): Gas Probe
☐ Domestic ☐ Industrial ☒ Monitor ☐ Public Supply ☐ Irrigation ☐ Test Well ☐ Injection ☐ De-Watering

5) DRILLING METHOD (Check):
☐ Driven ☐ Mud Rotary ☐ Air Hammer ☐ Jetted ☒ Bored ☐ Air Rotary ☐ Cable Tool ☐ Other _____

6) WELL LOG:
Date Drilling: Started 4-14 19 95 Completed 4-14 19 95

DIAMETER OF HOLE		
Dia. (in.)	From (ft.)	To (ft.)
8"	Surface	completion

7) BOREHOLE COMPLETION:
☐ Open Hole ☐ Straight Wall ☐ Underreamed
☒ Gravel Packed ☐ Other _____
If Gravel Packed give interval ... from 4.5 ft. to 38 ft.

From (ft.)	To (ft.)	Description and color of formation material
0	2	SANDY CLAY, tan/olive
2	12.5	SANDY CLAY, red/brn/tan
12.5	16	CLAYEY SAND, red-tan
16	20	SANDY CLAY, dk red
20	30	CLAYEY SAND, red-tan
30	38	CLAY, red/brn tan

(Use reverse side if necessary)

8) CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if commercial	Setting (ft.) From	Setting (ft.) To	Gage Casing Screen
1	N	PVC Screen	5	38	0.02
1	N	" Riser	0	5	

9) CEMENTING DATA [Rule 287.44(1)]
Cemented from 0 ft. to 4.5 ft. No. of Sacks Used 3
_____ ft. to _____ ft. No. of Sacks Used _____
Method used Bentonite
Cemented by GM Enterprises

10) SURFACE COMPLETION 3' x 3' surface slab
☐ Specified Surface Slab Installed [Rule 287.44(2)(A)]
☐ Specified Steel Sleeve Installed [Rule 287.44(3)(A)]
☐ Pitless Adapter Used [Rule 287.44(3)(B)]
☒ Approved Alternative Procedure Used [Rule 287.71]

11) WATER LEVEL: N/A
Static level _____ ft. below land surface Date _____
Artesian flow _____ gpm. Date _____

12) PACKERS: N/A Type Depth

13) TYPE PUMP: N/A
☐ Turbine ☐ Jet ☐ Submersible ☐ Cylinder
☐ Other _____
Depth to pump bowls, cylinder, jet, etc., _____ ft.

14) WELL TESTS: N/A
Type Test ☐ Pump ☐ Bailer ☐ Jetted ☐ Estimated
Yield: _____ gpm with _____ ft. drawdown after _____ hrs.

15) WATER QUALITY: N/A
Did you knowingly penetrate any strata which contained undesirable constituents?
☐ Yes ☐ No If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? _____ Depth of strata _____
Was a chemical analysis made? ☐ Yes ☐ No

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief. I understand that failure to complete items 1 thru 15 will result in the log(s) being returned for completion and resubmittal.

COMPANY NAME GM Enterprises (Type or print) WELL DRILLER'S LICENSE NO. 3006 M

ADDRESS 9098 Mansfield Highway (Street or RFD) Kennedale (City) Texas (State) 76060 (Zip)

(Signed) _____ (Licensed Well Driller)

(Signed) _____ (Registered Driller Trainee)

Please attach electric log, chemical analysis, and other pertinent information, if available.

For TWC use only: Well No. _____ Located on map _____

TWC-0199 (Rev. 05-18-90)

TEXAS WATER COMMISSION COPY

Send original copy by certified mail to: Texas Water Commission, P.O. Box 13087, Austin, Texas 78711 — Please use black ink.

ATTENTION OWNER: *Confidentiality Privilege Notice on Reverse Side*

State of Texas WELL REPORT

GMP - 3

Texas Water Well Drillers Board
P.O. Box 13087
Austin, Texas 78711

1) OWNER Western Waste Industries (Name) ADDRESS Hwy. 82 at I-30 (Street or RFD) New Boston, TX 75501 (City) (State) (Zip)

2) LOCATION OF WELL: County Bowie, 1 miles in west (NE, SW, etc.) direction from New Boston, Texas (Town)
New Boston Landfill

Driller must complete the legal description below with distance and direction from two intersecting section or survey lines, or he must locate and identify the well on an official Quarter- or Half-Scale Texas County General Highway Map and attach the map to this form.

☐ LEGAL DESCRIPTION:
Section No. _____ Block No. _____ Township _____ Abstract No. _____ Survey Name _____
Distance and direction from two intersecting section or survey lines _____
☒ SEE ATTACHED MAP

3) TYPE OF WORK (Check): ☒ New Well ☐ Deepening ☐ Reconditioning ☐ Plugging

4) PROPOSED USE (Check): Gas Probe ☐ Domestic ☐ Industrial ☒ Monitor ☐ Public Supply ☐ Irrigation ☐ Test Well ☐ Injection ☐ De-Watering

5) DRILLING METHOD (Check): ☐ Driven ☐ Mud Rotary ☐ Air Hammer ☐ Jetted ☒ Bored ☐ Air Rotary ☐ Cable Tool ☐ Other _____

6) WELL LOG:
Date Drilling: Started 4-13 19 95 Completed 4-13 19 95

DIAMETER OF HOLE		
Dia. (in.)	From (ft.)	To (ft.)
8"	Surface	completion

7) BOREHOLE COMPLETION: ☐ Open Hole ☐ Straight Wall ☐ Underreamed ☒ Gravel Packed ☐ Other _____
If Gravel Packed give interval . . . from 4.5 ft. to 30 ft.

From (ft.)	To (ft.)	Description and color of formation material
0	2	CLAYEY SAND, tan
2	6	CLAYEY SAND, tan-gray
6	10	SANDY CLAY, red-tan
10	13	SANDY CLAY, red
13	30	SILTY CLAY, red

(Use reverse side if necessary)

8) CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if commercial	Setting (ft.) From	Setting (ft.) To	Gage Casing Screen
1	N	PVC Screen	5	30	0.010
1	N	" Riser	0	5	

9) CEMENTING DATA [Rule 287.44(1)]
Cemented from 0 ft. to 4.5 ft. No. of Sacks Used 3
_____ ft. to _____ ft. No. of Sacks Used _____
Method used Bentonite
Cemented by GM Enterprises

10) SURFACE COMPLETION 3' x 3' surface slab
☐ Specified Surface Slab Installed [Rule 287.44(2)(A)]
☐ Specified Steel Sleeve Installed [Rule 287.44(3)(A)]
☐ Pitless Adapter Used [Rule 287.44(3)(B)]
☒ Approved Alternative Procedure Used [Rule 287.71]

11) WATER LEVEL: N/A
Static level _____ ft. below land surface Date _____
Artesian flow _____ gpm. Date _____

12) PACKERS: N/A Type Depth

13) TYPE PUMP: N/A
☐ Turbine ☐ Jet ☐ Submersible ☐ Cylinder ☐ Other _____
Depth to pump bowls, cylinder, jet, etc., _____ ft.

14) WELL TESTS: N/A
Type Test ☐ Pump ☐ Bailer ☐ Jetted ☐ Estimated
Yield: _____ gpm with _____ ft. drawdown after _____ hrs.

15) WATER QUALITY: N/A
Did you knowingly penetrate any strata which contained undesirable constituents?
☐ Yes ☐ No If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? _____ Depth of strata _____
Was a chemical analysis made? ☐ Yes ☐ No

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief. I understand that failure to complete items 1 thru 15 will result in the log(s) being returned for completion and resubmittal.

COMPANY NAME GM Enterprises (Type or print) WELL DRILLER'S LICENSE NO. 3006 M

ADDRESS 7098 Mansfield Highway (Street or RFD) Kennedale (City) Texas (State) 76060 (Zip)

(Signed) _____ (Licensed Well Driller) (Signed) _____ (Registered Driller Trainee)

Please attach electric log, chemical analysis, and other pertinent information, if available.

For TWC use only: Well No. _____ Located on map _____

TWC-0199 (Rev. 05-18-90) TEXAS WATER COMMISSION COPY

Send original copy by certified mail to: Texas Water Commission, P.O. Box 13087, Austin, Texas 78711

Please use black ink.

ATTENTION OWNER: *Confidentiality Privilege Notice on Reverse Side*

State of Texas WELL REPORT

GMP - 4

Texas Water Well Drillers Board
P.O. Box 13087
Austin, Texas 78711

1) OWNER Western Waste Industries (Name) ADDRESS Hwy. 82 at I-30 (Street or RFD) New Boston, TX 75501 (City) (State) (Zip)

2) LOCATION OF WELL: County Bowie, 1 miles in west (NE, SW, etc.) direction from New Boston, Texas (Town)
New Boston Landfill

Driller must complete the legal description below with distance and direction from two intersecting section or survey lines, or he must locate and identify the well on an official Quarter- or Half-Scale Texas County General Highway Map and attach the map to this form.

☐ LEGAL DESCRIPTION:

Section No. _____ Block No. _____ Township _____ Abstract No. _____ Survey Name _____

Distance and direction from two intersecting section or survey lines _____

☒ SEE ATTACHED MAP

3) TYPE OF WORK (Check):
☒ New Well ☐ Deepening ☐ Reconditioning ☐ Plugging

4) PROPOSED USE (Check): Gas Probe
☐ Domestic ☐ Industrial ☒ Monitor ☐ Public Supply ☐ Irrigation ☐ Test Well ☐ Injection ☐ De-Watering

5) DRILLING METHOD (Check):
☐ Driven ☐ Mud Rotary ☐ Air Hammer ☐ Jetted ☒ Bored ☐ Air Rotary ☐ Cable Tool ☐ Other _____

6) WELL LOG:
Date Drilling: Started 4-13 19 95 Completed 4-13 19 95

DIAMETER OF HOLE		
Dia. (in.)	From (ft.)	To (ft.)
8"	Surface	completion

7) BOREHOLE COMPLETION:
☐ Open Hole ☐ Straight Wall ☐ Underreamed
☒ Gravel Packed ☐ Other _____
If Gravel Packed give interval ... from 4.5 ft. to 30 ft.

From (ft.)	To (ft.)	Description and color of formation material
0	2	CLAYEY SAND, brown
2	5	SANDY CLAY, red, tan, gr
5	10	SANDY CLAY, red & gray
10	30	SHALY CLAY, red

(Use reverse side if necessary)

8) CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if commercial	Setting (ft.) From	Setting (ft.) To	Gage Casing Screen
1	N	PVC Screen	5	30	0.02
1	N	" Riser	0	5	

9) CEMENTING DATA (Rule 287.44(1))
Cemented from 0 ft. to 4.5 ft. No. of Sacks Used 3
_____ ft. to _____ ft. No. of Sacks Used _____
Method used Bentonite
Cemented by GM Enterprises

10) SURFACE COMPLETION 3' x 3' surface slab
☐ Specified Surface Slab Installed (Rule 287.44(2)(A))
☐ Specified Steel Sleeve Installed (Rule 287.44(3)(A))
☐ Pitless Adapter Used (Rule 287.44(3)(B))
☒ Approved Alternative Procedure Used (Rule 287.71)

11) WATER LEVEL: N/A
Static level _____ ft. below land surface Date _____
Artesian flow _____ gpm. Date _____

12) PACKERS: N/A Type Depth

13) TYPE PUMP: N/A
☐ Turbine ☐ Jet ☐ Submersible ☐ Cylinder ☐ Other _____
Depth to pump bowls, cylinder, jet, etc., _____ ft.

14) WELL TESTS: N/A
Type Test ☐ Pump ☐ Bailer ☐ Jetted ☐ Estimated
Yield: _____ gpm with _____ ft. drawdown after _____ hrs.

15) WATER QUALITY: N/A
Did you knowingly penetrate any strata which contained undesirable constituents?
☐ Yes ☐ No If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? _____ Depth of strata _____
Was a chemical analysis made? ☐ Yes ☐ No

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief. I understand that failure to complete items 1 thru 15 will result in the log(s) being returned for completion and resubmittal.

COMPANY NAME GM Enterprises (Type or print) WELL DRILLER'S LICENSE NO. 3086 M

ADDRESS 7098 Mansfield Highway (Street or RFD) Kennedale (City) Texas (State) 76060 (Zip)

(Signed) _____ (Licensed Well Driller) (Signed) _____ (Registered Driller Trainee)

Please attach electric log, chemical analysis, and other pertinent information, if available.

For TWC use only: Well No. _____ Located on map _____

TWC-0199 (Rev. 05-18-90)

TEXAS WATER COMMISSION COPY

NEW BOSTON LANDFILL
TECHNICALLY COMPLETE JUNE 10, 2002

FIGURE B.4

Technically Complete September 12, 2014

Send original copy by certified mail to: Texas Water Commission, P.O. Box 13087, Austin, Texas 78711

Please use black ink.

ATTENTION OWNER: *Confidentiality Privilege Notice on Reverse Side*

State of Texas WELL REPORT

GMP - 5

Texas Water Well Drillers Board
P.O. Box 13087
Austin, Texas 78711

1) OWNER Western Waste Industries (Name) ADDRESS Hwy. 82 at I-30 (Street or RFD) New Boston, TX 75501 (City) (State) (Zip)

2) LOCATION OF WELL: County Bowie, 1 miles in west (NE, SW, etc.) direction from New Boston, Texas (Town)
New Boston Landfill

Driller must complete the legal description below with distance and direction from two intersecting section or survey lines, or he must locate and identify the well on an official Quarter- or Half-Scale Texas County General Highway Map and attach the map to this form.

☐ LEGAL DESCRIPTION:

Section No. _____ Block No. _____ Township _____ Abstract No. _____ Survey Name _____

Distance and direction from two intersecting section or survey lines _____

☒ SEE ATTACHED MAP

3) TYPE OF WORK (Check):
☒ New Well ☐ Deepening ☐ Reconditioning ☐ Plugging

4) PROPOSED USE (Check): Gas Probe
☐ Domestic ☐ Industrial ☒ Monitor ☐ Public Supply ☐ Irrigation ☐ Test Well ☐ Injection ☐ De-Watering

5) DRILLING METHOD (Check):
☐ Drive ☐ Mud Rotary ☐ Air Hammer ☐ Jetted ☒ Bored ☐ Air Rotary ☐ Cable Tool ☐ Other _____

6) WELL LOG:
Date Drilling: Started 4-14 19 95 Completed 4-14 19 95

DIAMETER OF HOLE		
Dia. (in.)	From (ft.)	To (ft.)
8"	Surface	completion

7) BOREHOLE COMPLETION:
☐ Open Hole ☐ Straight Wall ☐ Underreamed
☒ Gravel Packed ☐ Other _____
If Gravel Packed give interval ... from 4.5 ft. to 26 ft.

From (ft.)	To (ft.)	Description and color of formation material
0	1	SANDY CLAY, red, tan, &
1	5	SANDY CLAY, olive brown
5	12	SANDY CLAY, red-tan
12	18	SHALY CLAY, Red
18	26	SANDY CLAY, red, silty

(Use reverse side if necessary)

8) CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if commercial	Setting (ft.) From	Setting (ft.) To	Gage Casing Screen
1	N	PVC Screen	5	26	0.0.
1	N	" Riser	0	5	

9) CEMENTING DATA [Rule 287.44(1)]
Cemented from 0 ft. to 4.5 ft. No. of Sacks Used 3
_____ ft. to _____ ft. No. of Sacks Used _____
Method used Bentonite
Cemented by GM Enterprises

10) SURFACE COMPLETION 3' x 3' surface slab
☐ Specified Surface Slab Installed [Rule 287.44(2)(A)]
☐ Specified Steel Sleeve Installed [Rule 287.44(3)(A)]
☐ Pitless Adapter Used [Rule 287.44(3)(B)]
☒ Approved Alternative Procedure Used [Rule 287.71]

11) WATER LEVEL: N/A
Static level _____ ft. below land surface Date _____
Artesian flow _____ gpm. Date _____

12) PACKERS: N/A Type Depth

13) TYPE PUMP: N/A
☐ Turbine ☐ Jet ☐ Submersible ☐ Cylinder
☐ Other _____
Depth to pump bowls, cylinder, jet, etc., _____ ft.

14) WELL TESTS: N/A
Type Test: ☐ Pump ☐ Bailer ☐ Jetted ☐ Estimated
Yield: _____ gpm with _____ ft. drawdown after _____ hrs.

15) WATER QUALITY: N/A
Did you knowingly penetrate any strata which contained undesirable constituents?
☐ Yes ☐ No If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? _____ Depth of strata _____
Was a chemical analysis made? ☐ Yes ☐ No

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief. I understand that failure to complete items 1 thru 15 will result in the log(s) being returned for completion and resubmittal.

COMPANY NAME GM Enterprises (Type or print) WELL DRILLER'S LICENSE NO. 3006 M

ADDRESS 7098 Mansfield Highway (Street or RFD) Kennedale (City) Texas (State) 76060 (Zip)

(Signed) _____ (Licensed Well Driller)

(Signed) _____ (Registered Driller Trainee)

Please attach electric log, chemical analysis, and other pertinent information, if available.

For TWC use only: Well No. _____ Located on map _____

TWC-0199 (Rev. 05-18-90)

TEXAS WATER COMMISSION COPY

NEW BOSTON LANDFILL
TECHNICALLY COMPLETE JUNE 10, 2002

FIGURE B.5

Technically Complete September 12, 2014

Send original copy by certified mail to: Texas Water Commission, P.O. Box 13087, Austin, Texas 78711

Please use black ink.

ATTENTION OWNER: *Confidentiality Privilege Notice on Reverse Side*

State of Texas WELL REPORT

GMP - 6

Texas Water Well Drillers Board
P.O. Box 13087
Austin, Texas 78711

1) OWNER Western Waste Industries (Name) ADDRESS Hwy. 82 at I-30 (Street or RFD) New Boston (City) TX (State) 75501 (Zip)

2) LOCATION OF WELL: County Bowie, 1 miles in west (NE, SW, etc.) direction from New Boston, Texas (Town)
New Boston Landfill

Driller must complete the legal description below with distance and direction from two intersecting section or survey lines, or he must locate and identify the well on an official Quarter- or Half-Scale Texas County General Highway Map and attach the map to this form.

☐ LEGAL DESCRIPTION:

Section No. _____ Block No. _____ Township _____ Abstract No. _____ Survey Name _____

Distance and direction from two intersecting section or survey lines _____

☒ SEE ATTACHED MAP

3) TYPE OF WORK (Check):
☒ New Well ☐ Deepening ☐ Reconditioning ☐ Plugging

4) PROPOSED USE (Check): Gas Probe
☐ Domestic ☐ Industrial ☒ Monitor ☐ Public Supply ☐ Irrigation ☐ Test Well ☐ Injection ☐ De-Watering

5) DRILLING METHOD (Check): ☐ Driven
☐ Mud Rotary ☐ Air Hammer ☐ Jetted ☒ Bored ☐ Air Rotary ☐ Cable Tool ☐ Other _____

6) WELL LOG:
Date Drilling: Started 4-13 19 95 Completed 4-13 19 95

DIAMETER OF HOLE

Dia. (in.)	From (ft.)	To (ft.)
8"	Surface	completion

7) BOREHOLE COMPLETION:
☐ Open Hole ☐ Straight Wall ☐ Underreamed
☒ Gravel Packed ☐ Other _____
If Gravel Packed give interval . . . from 4.5 ft. to 32.5 ft.

From (ft.)	To (ft.)	Description and color of formation material
0	2	CLAYEY SAND, brown/BK
2	7	SANDY CLAY, tan
7	10	SANDY CLAY, Red-tan
10	15	SANDY CLAY, red-gy.
15	20	CLAYEY SAND/CLAY, tan-Red/gy
20	25	CLAY, red
25	32.5	SANDY CLAY, red

(Use reverse side if necessary)

8) CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if commercial	Setting (ft.) From	Setting (ft.) To	Gage Casing Screen
1	N	PVC Screen	5	32.5	0.02
1	N	" Riser	0	5	

9) CEMENTING DATA [Rule 267.44(1)]
Cemented from 0 ft. to 4.5 ft. No. of Sacks Used 3
_____ ft. to _____ ft. No. of Sacks Used _____
Method used Bentonite
Cemented by GM Enterprises

10) SURFACE COMPLETION 3' x 3' surface slab
☐ Specified Surface Slab Installed [Rule 267.44(2)(A)]
☐ Specified Steel Sleeve Installed [Rule 267.44(3)(A)]
☐ Pitless Adapter Used [Rule 267.44(3)(B)]
☒ Approved Alternative Procedure Used [Rule 267.71]

11) WATER LEVEL: N/A
Static level _____ ft. below land surface Date _____
Artesian flow _____ gpm. Date _____

12) PACKERS: N/A Type Depth

13) TYPE PUMP: N/A
☐ Turbine ☐ Jet ☐ Submersible ☐ Cylinder
☐ Other _____
Depth to pump bowls, cylinder, jet, etc., _____ ft.

14) WELL TESTS: N/A
Type Test: ☐ Pump ☐ Bailer ☐ Jetted ☐ Estimated
Yield: _____ gpm with _____ ft. drawdown after _____ hrs.

15) WATER QUALITY: N/A
Did you knowingly penetrate any strata which contained undesirable constituents?
☐ Yes ☐ No If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? _____ Depth of strata _____
Was a chemical analysis made? ☐ Yes ☐ No

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief. I understand that failure to complete items 1 thru 15 will result in the log(s) being returned for completion and resubmittal.

COMPANY NAME GM Enterprises (Type or print) WELL DRILLER'S LICENSE NO. 3006 M

DDRESS 7098 Mansfield Highway (Street or RFD) Kennedale (City) Texas (State) 76060 (Zip)

(Signed) _____ (Licensed Well Driller)

(Signed) _____ (Registered Driller Trainee)

Please attach electric log, chemical analysis, and other pertinent information, if available.

For TWC use only: Well No. _____ Located on map _____

TWC-0199 (Rev. 05-18-90)

TEXAS WATER COMMISSION COPY

NEW BOSTON LANDFILL
TECHNICALLY COMPLETE JUNE 10, 2002

FIGURE B.6

Technically Complete September 12, 2014

Send original copy by certified mail to: Texas Water Commission, P.O. Box 13087, Austin, Texas 78711 — Please use black ink.

ATTENTION OWNER: *Confidentiality Privilege Notice on Reverse Side*

State of Texas WELL REPORT

GMP - 7

Texas Water Well Drillers Board
P.O. Box 13087
Austin, Texas 78711

1) OWNER Western Waste Industries (Name) ADDRESS Hwy. 82 at I-30 (Street or RFD) New Boston, TX 75501 (City) (State) (Zip)

2) LOCATION OF WELL: County Bowie, 1 miles in west (NE, SW, etc.) direction from New Boston, Texas (Town)
New Boston Landfill

Driller must complete the legal description below with distance and direction from two intersecting section or survey lines, or he must locate and identify the well on an official Quarter- or Half-Scale Texas County General Highway Map and attach the map to this form.

☐ LEGAL DESCRIPTION:
Section No. _____ Block No. _____ Township _____ Abstract No. _____ Survey Name _____
Distance and direction from two intersecting section or survey lines _____
☒ SEE ATTACHED MAP

3) TYPE OF WORK (Check):
☒ New Well ☐ Deepening ☐ Reconditioning ☐ Plugging

4) PROPOSED USE (Check): Gas Probe
☐ Domestic ☐ Industrial ☒ Monitor ☐ Public Supply ☐ Irrigation ☐ Test Well ☐ Injection ☐ De-Watering

5) DRILLING METHOD (Check): ☐ Drive
☐ Mud Rotary ☐ Air Hammer ☐ Jetted ☒ Borer ☐ Air Rotary ☐ Cable Tool ☐ Other _____

6) WELL LOG:
Date Drilling: Started 4-13 19 95 Completed 4-13 19 95

DIAMETER OF HOLE		
Dia. (in.)	From (ft.)	To (ft.)
8"	Surface	completion

7) BOREHOLE COMPLETION:
☐ Open Hole ☐ Straight Wall ☐ Underreamed
☒ Gravel Packed ☐ Other _____
If Gravel Packed give interval ... from 4.5 ft. to 15 ft.

From (ft.)	To (ft.)	Description and color of formation material
0	3	Clayey SAND, brown
3	6	Clay, tan & olive
6	11	SANDy Clay, red-tan
11	15	Clay, Red, tan, gray

(Use reverse side if necessary)

8) CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if commercial	Setting (ft.) From	Setting (ft.) To	Gage Casing Screen
1	N	PVC Screen	5	15	.02
1	N	" Riser	0	5	

9) CEMENTING DATA [Rule 267.44(1)]
Cemented from 0 ft. to 4.5 ft. No. of Sacks Used 3
_____ ft. to _____ ft. No. of Sacks Used _____
Method used Bentonite
Cemented by GM Enterprises

10) SURFACE COMPLETION 3' x 3' surface slab
☐ Specified Surface Slab Installed [Rule 267.44(2)(A)]
☐ Specified Steel Sleeve Installed [Rule 267.44(3)(A)]
☐ Pitless Adapter Used [Rule 267.44(3)(B)]
☒ Approved Alternative Procedure Used [Rule 267.71]

11) WATER LEVEL: N/A
Static level _____ ft. below land surface Date _____
Artesian flow _____ gpm. Date _____

12) PACKERS: N/A Type Depth

13) TYPE PUMP: N/A
☐ Turbine ☐ Jet ☐ Submersible ☐ Cylinder
☐ Other _____
Depth to pump bowls, cylinder, jet, etc., _____ ft.

14) WELL TESTS: N/A
Type Test ☐ Pump ☐ Bailer ☐ Jetted ☐ Estimated
Yield: _____ gpm with _____ ft. drawdown after _____ hrs.

15) WATER QUALITY: N/A
Did you knowingly penetrate any strata which contained undesirable constituents?
☐ Yes ☐ No If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? _____ Depth of strata _____
Was a chemical analysis made? ☐ Yes ☐ No

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief. I understand that failure to complete items 1 thru 15 will result in the log(s) being returned for completion and resubmittal.

COMPANY NAME GM Enterprises (Type or print) WELL DRILLER'S LICENSE NO. 3006 M

ADDRESS 7098 Mansfield Highway (Street or RFD) Kennedale (City) Texas (State) 76060 (Zip)

(Signed) _____ (Licensed Well Driller)

(Signed) _____ (Registered Driller Trainee)

Please attach electric log, chemical analysis, and other pertinent information, if available.

For TWC use only: Well No. _____ Located on map _____

TWC-0199 (Rev. 05-18-90)

TEXAS WATER COMMISSION COPY

Send original copy by certified mail to: Texas Water Commission, P.O. Box 13087, Austin, Texas 78711

Please use black ink.

ATTENTION OWNER: *Confidentiality Privilege Notice on Reverse Side*

State of Texas WELL REPORT

GMP - 8

Texas Water Well Drillers Board
P.O. Box 13087
Austin, Texas 78711

1) OWNER Western Waste Industries (Name) ADDRESS Hwy. 82 at I-30 (Street or RFD) New Boston, TX 75501 (City) (State) (Zip)

2) LOCATION OF WELL: County Bowie, 1 miles in west (NE, SW, etc.) direction from New Boston, Texas (Town)
New Boston Landfill

Driller must complete the legal description below with distance and direction from two intersecting section or survey lines, or he must locate and identify the well on an official Quarter- or Half-Scale Texas County General Highway Map and attach the map to this form.

☐ LEGAL DESCRIPTION:
Section No. _____ Block No. _____ Township _____ Abstract No. _____ Survey Name _____
Distance and direction from two intersecting section or survey lines _____
☒ SEE ATTACHED MAP

3) TYPE OF WORK (Check):
☒ New Well ☐ Deepening ☐ Reconditioning ☐ Plugging

4) PROPOSED USE (Check): Gas Probe
☐ Domestic ☐ Industrial ☒ Monitor ☐ Public Supply ☐ Irrigation ☐ Test Well ☐ Injection ☐ De-Watering

5) DRILLING METHOD (Check):
☐ Driven ☐ Mud Rotary ☐ Air Hammer ☐ Jetted ☒ Bored ☐ Air Rotary ☐ Cable Tool ☐ Other _____

6) WELL LOG:
Date Drilling: Started 4-14 19 95 Completed 4-14 19 95

DIAMETER OF HOLE

Dia. (in.)	From (ft.)	To (ft.)
8"	Surface	completion

7) BOREHOLE COMPLETION:
☐ Open Hole ☐ Straight Wall ☐ Underreamed
☒ Gravel Packed ☐ Other _____
If Gravel Packed give interval . . . from 4.5 ft. to 20 ft.

From (ft.)	To (ft.)	Description and color of formation material
0	7	SANDY CLAY, tan silty, silty
7	10	SANDY CLAY, red-tan
10	20	SHALY CLAY, red

8) CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if commercial	Setting (ft.) From	Setting (ft.) To	Gage Casing Screen
1	N	PVC Screen	5	20	0.02
1	N	" Riser	0	5	

(Use reverse side if necessary)

9) CEMENTING DATA (Rule 287.44(1))
Cemented from 0 ft. to 4.5 ft. No. of Sacks Used 3
_____ ft. to _____ ft. No. of Sacks Used _____
Method used Bentonite
Cemented by GM Enterprises

10) SURFACE COMPLETION 3' x 3' surface slab
☐ Specified Surface Slab Installed (Rule 287.44(2)(A))
☐ Specified Steel Sleeve Installed (Rule 287.44(3)(A))
☐ Pitless Adapter Used (Rule 287.44(3)(B))
☒ Approved Alternative Procedure Used (Rule 287.71)

11) WATER LEVEL: N/A
Static level _____ ft. below land surface Date _____
Artesian flow _____ gpm. Date _____

12) PACKERS: N/A Type Depth

13) TYPE PUMP: N/A
☐ Turbine ☐ Jet ☐ Submersible ☐ Cylinder
☐ Other _____
Depth to pump bowls, cylinder, jet, etc., _____ ft.

14) WELL TESTS: N/A
Type Test ☐ Pump ☐ Bailer ☐ Jetted ☐ Estimated
Yield: _____ gpm with _____ ft. drawdown after _____ hrs.

15) WATER QUALITY: N/A
Did you knowingly penetrate any strata which contained undesirable constituents?
☐ Yes ☐ No If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? _____ Depth of strata _____
Was a chemical analysis made? ☐ Yes ☐ No

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief. I understand that failure to complete items 1 thru 15 will result in the log(s) being returned for completion and resubmittal.

COMPANY NAME GM Enterprises (Type or print) WELL DRILLER'S LICENSE NO. 3006 m

ADDRESS 7098 Mansfield Highway (Street or RFD) Kennedale (City) Texas (State) 76060 (Zip)

(Signed) _____ (Licensed Well Driller) (Signed) _____ (Registered Driller Trainee)

Please attach electric log, chemical analysis, and other pertinent information, if available.

For TWC use only: Well No. _____ Located on map _____

TWC-0199 (Rev. 05-18-90)

TEXAS WATER COMMISSION COPY

NEW BOSTON LANDFILL
TECHNICALLY COMPLETE JUNE 10, 2002

FIGURE B.8
Technically Complete September 12, 2014

Send original copy by certified mail to: Texas Water Commission, P.O. Box 13087, Austin, Texas 78711

Please use black ink.

ATTENTION OWNER: *Confidentiality Privilege Notice on Reverse Side*

State of Texas WELL REPORT

GMP - 9

Texas Water Well Drillers Board
P.O. Box 13087
Austin, Texas 78711

1) OWNER Western Waste Industries (Name) ADDRESS Hwy. 82 at I-30 (Street or RFD) New Boston, TX 75501 (City) (State) (Zip)

2) LOCATION OF WELL:
County Bowie, 1 miles in west (NE, SW, etc.) direction from New Boston, Texas (Town)
New Boston Landfill

Driller must complete the legal description below with distance and direction from two intersecting section or survey lines, or he must locate and identify the well on an official Quarter- or Half-Scale Texas County General Highway Map and attach the map to this form.

☐ LEGAL DESCRIPTION:
Section No. _____ Block No. _____ Township _____ Abstract No. _____ Survey Name _____
Distance and direction from two intersecting section or survey lines _____
☒ SEE ATTACHED MAP

3) TYPE OF WORK (Check):
☒ New Well ☐ Deepening ☐ Reconditioning ☐ Plugging

4) PROPOSED USE (Check): Gas Probe
☐ Domestic ☐ Industrial ☒ Monitor ☐ Public Supply ☐ Irrigation ☐ Test Well ☐ Injection ☐ De-Watering

5) DRILLING METHOD (Check):
☐ Drive ☐ Mud Rotary ☐ Air Hammer ☐ Jetted ☒ Bored ☐ Air Rotary ☐ Cable Tool ☐ Other _____

6) WELL LOG:
Date Drilling: Started 4-17 19 95 Completed 4-17 19 95

DIAMETER OF HOLE		
Dia. (in.)	From (ft.)	To (ft.)
8"	Surface	completion

7) BOREHOLE COMPLETION:
☐ Open Hole ☐ Straight Wall ☐ Underreamed
☒ Gravel Packed ☐ Other _____
If Gravel Packed give interval . . . from 4.5 ft. to 21.5 ft.

From (ft.)	To (ft.)	Description and color of formation material
0	1	SANDY CLAY, brown/DKb
1	8	SANDY CLAY, yellow & tan, silty
8	11	SANDY CLAY, red-brn,
11	21.5	SHALY CLAY, red

(Use reverse side if necessary)

8) CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if commercial	Setting (ft.) From	Setting (ft.) To	Gage Casing Screen
1	N	PVC Screen	5	20	0.02
1	N	" Riser	0	5	

9) CEMENTING DATA [Rule 287.44(1)]
Cemented from 0 ft. to 4.5 ft. No. of Sacks Used 3
_____ ft. to _____ ft. No. of Sacks Used _____
Method used Bentonite
Cemented by GM Enterprises

10) SURFACE COMPLETION 3' x 3' surface slab
☐ Specified Surface Slab Installed [Rule 287.44(2)(A)]
☐ Specified Steel Sleeve Installed [Rule 287.44(3)(A)]
☐ Pitless Adapter Used [Rule 287.44(3)(B)]
☒ Approved Alternative Procedure Used [Rule 287.71]

11) WATER LEVEL: N/A
Static level _____ ft. below land surface Date _____
Artesian flow _____ gpm. Date _____

12) PACKERS: N/A Type Depth

13) TYPE PUMP: N/A
☐ Turbine ☐ Jet ☐ Submersible ☐ Cylinder
☐ Other _____
Depth to pump bowls, cylinder, jet, etc., _____ ft.

14) WELL TESTS: N/A
Type Test ☐ Pump ☐ Bailer ☐ Jetted ☐ Estimated
Yield: _____ gpm with _____ ft. drawdown after _____ hrs.

15) WATER QUALITY: N/A
Did you knowingly penetrate any strata which contained undesirable constituents?
☐ Yes ☐ No If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? _____ Depth of strata _____
Was a chemical analysis made? ☐ Yes ☐ No

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief. I understand that failure to complete items 1 thru 15 will result in the log(s) being returned for completion and resubmittal.

COMPANY NAME GM Enterprises (Type or print) WELL DRILLER'S LICENSE NO. 3006 M

ADDRESS 7098 Mansfield Highway (Street or RFD) Kennedale (City) Texas (State) 76060 (Zip)

(Signed) _____ (Licensed Well Driller)

(Signed) _____ (Registered Driller Trainee)

Please attach electric log, chemical analysis, and other pertinent information, if available.

For TWC use only: Well No. _____ Located on map _____

TWC-0199 (Rev. 05-18-90)

TEXAS WATER COMMISSION COPY

Send original copy by certified mail to: Texas Water Commission, P.O. Box 13087, Austin, Texas 78711

Please use black ink.

ATTENTION OWNER: *Confidentiality Privilege Notice on Reverse Side*

State of Texas WELL REPORT

GMP - 10

Texas Water Well Drillers Board
P.O. Box 13087
Austin, Texas 78711

1) OWNER Western Waste Industries (Name) ADDRESS Hwy. 82 at I-30 (Street or RFD) New Boston (City) TX (State) 75501 (Zip)

2) LOCATION OF WELL: County Bowie, 1 miles in west (NE, SW, etc.) direction from New Boston, Texas (Town)
New Boston Landfill

Driller must complete the legal description below with distance and direction from two intersecting section or survey lines, or he must locate and identify the well on an official Quarter- or Half-Scale Texas County General Highway Map and attach the map to this form.

☐ LEGAL DESCRIPTION:

Section No. _____ Block No. _____ Township _____ Abstract No. _____ Survey Name _____

Distance and direction from two intersecting section or survey lines _____

☒ SEE ATTACHED MAP

3) TYPE OF WORK (Check):
☒ New Well ☐ Deepening ☐ Reconditioning ☐ Plugging

4) PROPOSED USE (Check): Gas Probe
☐ Domestic ☐ Industrial ☒ Monitor ☐ Public Supply ☐ Irrigation ☐ Test Well ☐ Injection ☐ De-Watering

5) DRILLING METHOD (Check): ☐ Driven
☐ Mud Rotary ☐ Air Hammer ☐ Jetted ☒ Bored ☐ Air Rotary ☐ Cable Tool ☐ Other _____

6) WELL LOG:
Date Drilling: Started 4-14 19 95 Completed 4-14 19 95

DIAMETER OF HOLE		
Dia. (in.)	From (ft.)	To (ft.)
8"	Surface	completion

7) BOREHOLE COMPLETION:
☐ Open Hole ☐ Straight Wall ☐ Underreamed
☒ Gravel Packed ☐ Other _____
If Gravel Packed give interval ... from 4 ft. to 25 ft.

From (ft.)	To (ft.)	Description and color of formation material
0	2	CLAYEY SAND, red-tan
2	7	CLAY, red, tan, SDL
7	20	CLAYEY SAND, red-tan
20	25	SHALY CLAY, red

(Use reverse side if necessary)

8) CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if commercial	Setting (ft.) From	Setting (ft.) To	Gage Casing Screen
1	N	PVC Screen	4.5	24.5	0.02
1	N	" Riser	0	4.5	

9) CEMENTING DATA (Rule 287.44(1))
Cemented from 0 ft. to 4.5 ft. No. of Sacks Used 3
_____ ft. to _____ ft. No. of Sacks Used _____
Method used Bentonite
Cemented by GM Enterprises

10) SURFACE COMPLETION 3' x 3' surface slab
☐ Specified Surface Slab Installed (Rule 287.44(2)(A))
☐ Specified Steel Sleeve Installed (Rule 287.44(3)(A))
☐ Pitless Adapter Used (Rule 287.44(3)(B))
☒ Approved Alternative Procedure Used (Rule 287.71)

11) WATER LEVEL: N/A
Static level _____ ft. below land surface Date _____
Artesian flow _____ gpm. Date _____

12) PACKERS: N/A Type Depth

13) TYPE PUMP: N/A
☐ Turbine ☐ Jet ☐ Submersible ☐ Cylinder
☐ Other _____
Depth to pump bowls, cylinder, jet, etc., _____ ft.

14) WELL TESTS: N/A
Type Test ☐ Pump ☐ Bailer ☐ Jetted ☐ Estimated
Yield: _____ gpm with _____ ft. drawdown after _____ hrs.

15) WATER QUALITY: N/A
Did you knowingly penetrate any strata which contained undesirable constituents?
☐ Yes ☐ No If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? _____ Depth of strata _____
Was a chemical analysis made? ☐ Yes ☐ No

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief. I understand that failure to complete items 1 thru 15 will result in the log(s) being returned for completion and resubmittal.

COMPANY NAME GM Enterprises (Type or print) WELL DRILLER'S LICENSE NO. 3006 M

ADDRESS 7098 Mansfield Highway (Street or RFD) Kennedale (City) Texas (State) 76060 (Zip)

(Signed) _____ (Licensed Well Driller)

(Signed) _____ (Registered Driller Trainee)

Please attach electric log, chemical analysis, and other pertinent information, if available.

For TWC use only: Well No. _____ Located on map _____

TWC-0199 (Rev. 05-18-90)

TEXAS WATER COMMISSION COPY

NEW BOSTON LANDFILL
TECHNICALLY COMPLETE JUNE 10, 2002 FIGURE B.10
Technically Complete September 12, 2014

Send original copy by certified mail to: Texas Water Commission, P.O. Box 13087, Austin, Texas 78711 — Please use black ink.

ATTENTION OWNER: *Confidentiality Privilege Notice on Reverse Side*

State of Texas WELL REPORT

GMP - 11

Texas Water Well Drillers Board
P.O. Box 13087
Austin, Texas 78711

1) **OWNER** Western Waste Industries (Name) **ADDRESS** Hwy. 82 at I-30 (Street or RFD) New Boston (City) TX (State) 75501 (Zip)

2) **LOCATION OF WELL:** County Bowie, 1 miles in west (NE, SW, etc.) direction from New Boston, Texas (Town)
New Boston Landfill

Driller must complete the legal description below with distance and direction from two intersecting section or survey lines, or he must locate and identify the well on an official Quarter- or Half-Scale Texas County General Highway Map and attach the map to this form.

☐ **LEGAL DESCRIPTION:**

Section No. _____ Block No. _____ Township _____ Abstract No. _____ Survey Name _____

Distance and direction from two intersecting section or survey lines _____

☒ **SEE ATTACHED MAP**

3) **TYPE OF WORK (Check):**
☒ New Well ☐ Deepening ☐ Reconditioning ☐ Plugging

4) **PROPOSED USE (Check):** Gas Probe
☐ Domestic ☐ Industrial ☒ Monitor ☐ Public Supply ☐ Irrigation ☐ Test Well ☐ Injection ☐ De-Watering

5) **DRILLING METHOD (Check):**
☐ Driven ☐ Mud Rotary ☐ Air Hammer ☐ Jetted ☒ Bored ☐ Air Rotary ☐ Cable Tool ☐ Other _____

6) **WELL LOG:**
Date Drilling: Started 4-14 19 95 Completed 4-14 19 95

DIAMETER OF HOLE

Dia. (in.)	From (ft.)	To (ft.)
8"	Surface	completion

7) **BOREHOLE COMPLETION:**
☐ Open Hole ☐ Straight Wall ☐ Underreamed
☒ Gravel Packed ☐ Other _____
If Gravel Packed give interval . . . from 4.5 ft. to 25 ft.

From (ft.)	To (ft.)	Description and color of formation material
0	1	Clayey SAND, tan & brn.
1	5	Clay, red-tan
5	7	SANDY Clay, red, brn & gray.
7	18	Clayey SAND, tan-red
18	25	SHALY Clay, red

(Use reverse side if necessary)

8) **CASING, BLANK PIPE, AND WELL SCREEN DATA:**

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if commercial	Setting (ft.) From	Setting (ft.) To	Gage Casing	Gage Screen
1	N	PVC Screen	5	25		.02
1	N	" Riser	0	5		

9) **CEMENTING DATA** [Rule 287.44(1)]
Cemented from 0 ft. to 4.5 ft. No. of Sacks Used 3
_____ ft. to _____ ft. No. of Sacks Used _____
Method used Bentonite
Cemented by GM Enterprises

10) **SURFACE COMPLETION** 3' x 3' surface slab
☐ Specified Surface Slab Installed [Rule 287.44(2)(A)]
☐ Specified Steel Sleeve Installed [Rule 287.44(3)(A)]
☐ Pitless Adapter Used [Rule 287.44(3)(B)]
☒ Approved Alternative Procedure Used [Rule 287.71]

11) **WATER LEVEL:** N/A
Static level _____ ft. below land surface Date _____
Artesian flow _____ gpm. Date _____

12) **PACKERS:** N/A Type Depth

13) **TYPE PUMP:** N/A
☐ Turbine ☐ Jet ☐ Submersible ☐ Cylinder
☐ Other _____
Depth to pump bowls, cylinder, jet, etc., _____ ft.

14) **WELL TESTS:** N/A
Type Test ☐ Pump ☐ Bailer ☐ Jetted ☐ Estimated
Yield: _____ gpm with _____ ft. drawdown after _____ hrs.

15) **WATER QUALITY:** N/A
Did you knowingly penetrate any strata which contained undesirable constituents?
☐ Yes ☐ No If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? _____ Depth of strata _____
Was a chemical analysis made? ☐ Yes ☐ No

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief. I understand that failure to complete items 1 thru 15 will result in the log(s) being returned for completion and resubmittal.

COMPANY NAME GM Enterprises (Type or print) WELL DRILLER'S LICENSE NO. 3006 M

ADDRESS 7098 Mansfield Highway (Street or RFD) Kennedale (City) Texas (State) 76060 (Zip)

(Signed) _____ (Licensed Well Driller) (Signed) _____ (Registered Driller Trainee)

Please attach electric log, chemical analysis, and other pertinent information, if available.

For TWC use only: Well No. _____ Located on map _____

TWC-0199 (Rev. 05-18-90)

TEXAS WATER COMMISSION COPY

NEW BOSTON LANDFILL TECHNICALLY COMPLETE JUNE 10, 2002

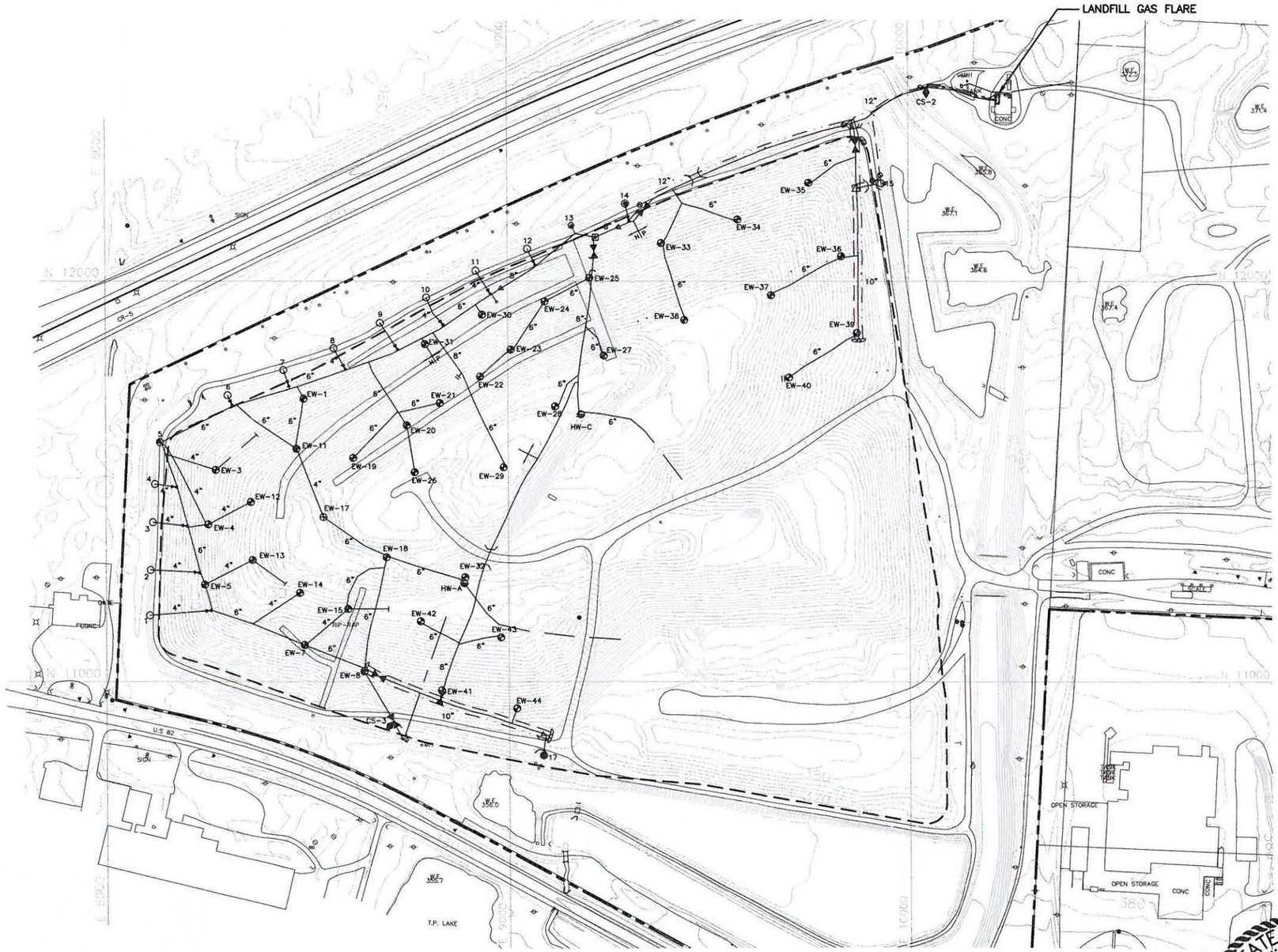
FIGURE B.11

Technically Complete September 12, 2014

NEW BOSTON LANDFILL

APPENDIX G4
LANDFILL GAS COLLECTION AND CONTROL SYSTEM PLAN
30 TAC §330.37

Technically Complete September 12, 2014



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SCALE IN FEET

LEGEND

- PERMIT BOUNDARY
- APPROXIMATE LIMIT OF WASTE
- SITE GRID
- EXISTING CONTOUR
- FINAL CONTOUR
- EW-24 EXISTING LFG EXTRACTION WELL
- EXISTING LFG COLLECTION PIPING
- EXISTING REMOTE WELLHEAD
- CS-2 EXISTING CONDENSATE SUMP
- EXISTING ISOLATION VALVE
- EXISTING LCS WELLHEAD
- 13 EXISTING LEACHATE CLEAN-OUT RISER (FOR CONDENSATE DRAINAGE)
- 15 EXISTING LEACHATE CLEAN-OUT RISER (FOR LFG EXTRACTION)
- 17 EXISTING U-TRAP TO LEACHATE CLEANOUT RISER CONNECTION
- EXISTING CONDENSATE FORCEMAIN
- EXISTING AIR SUPPLY LINE
- EXISTING HORIZONTAL COLLECTOR

NOTES:

1. EXISTING CONTOURS COMPILED BY AIR SURVEY FROM AERIAL SURVEY DATED MARCH 5, 2012.
2. PERMIT BOUNDARY PROVIDED BY MTG ENGINEERS AND SURVEYORS, INC.
3. REFER TO DRAWING G1.2 FOR LANDFILL GAS MONITORING PROBE DETAIL AND INFORMATION.

STATE OF TEXAS
KENNETH J. WELCH
60773
REGISTERED
PROFESSIONAL ENGINEER
9/29/2014

ISSUED FOR PERMITTING PURPOSES ONLY

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–	9/12/14	TECHNICALLY COMPLETE	GLW	JHP	KJW	KJW

EXISTING GCCS

WASTE MANAGEMENT OF TEXAS, INC.
NEW BOSTON LANDFILL
MAJOR PERMIT AMENDMENT

BIGGS & MATHEWS ENVIRONMENTAL
CONSULTING ENGINEERS
MANSFIELD
DALLAS ◆ WICHITA FALLS
817-563-1144
TBPE FIRM NO. F-256 TBPG FIRM NO. 50222

DSN.	KAW	DATE : 06/13	DRAWING G4.1
DWN.	GLW	SCALE : GRAPHIC	
CHK.	JHP	DWG : G4.1-GasProbes.dwg	

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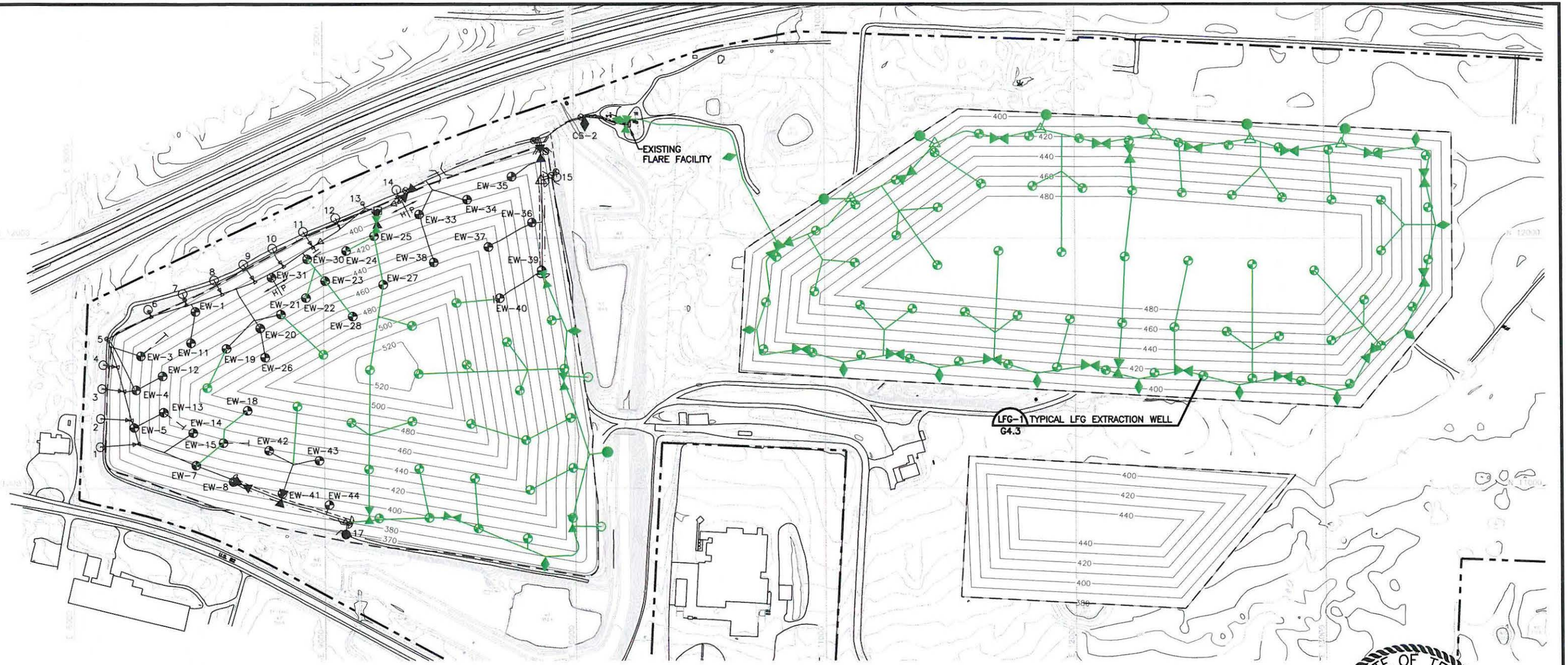

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SCALE IN FEET

LEGEND

- PERMIT BOUNDARY
- APPROXIMATE LIMIT OF WASTE
- SITE GRID
- EXISTING CONTOUR
- FINAL CONTOUR
- EW-24 EXISTING LFG EXTRACTION WELL
- EXISTING LFG COLLECTION PIPING
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- EXISTING CONDENSATE FORCEMAIN
- EXISTING AIR SUPPLY LINE
- PROPOSED LFG EXTRACTION WELL
- PROPOSED LFG COLLECTION PIPING
- PROPOSED REMOTE WELLHEAD
- PROPOSED CONDENSATE SUMP
- PROPOSED ISOLATION VALVE
- PROPOSED LEACHATE CLEANOUT RISER CONNECTION
- PROPOSED U-TRAP TO LEACHATE CLEANOUT RISER CONNECTION

NOTES:

1. EXISTING CONTOURS AND ELEVATIONS PROVIDED BY AERO-METRIC FROM AERIAL PHOTOGRAPHY FLOWN MARCH 06, 2013.
2. THE LOCATION AND NUMBER OF PROPOSED FUTURE EXTRACTION WELLS AND GCCS COMPONENTS ARE APPROXIMATE. EXACT NUMBER AND LOCATION WILL BE DETERMINED BASED ON SITE CONDITIONS AT THE TIME OF INSTALLATION. EXISTING WELLS MAY BE EXTENDED OR REDRILLED TO ACCOMMODATE FUTURE FILLING.

STATE OF TEXAS
KENNETH J. WELCH
60773
REGISTERED
PROFESSIONAL ENGINEER
9/29/2014

FINAL GCCS PLAN

WASTE MANAGEMENT OF TEXAS, INC.
NEW BOSTON LANDFILL
PERMIT AMENDMENT APPLICATION

BIGGS & MATHEWS ENVIRONMENTAL
CONSULTING ENGINEERS
MANSFIELD • WICHITA FALLS
817-563-1144
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DSN. KAW DATE : 06/13
DWN. SRC SCALE : GRAPHIC
CHK. JHP DWG : G4.2-FINAL GCCS.dwg

DRAWING G4.2

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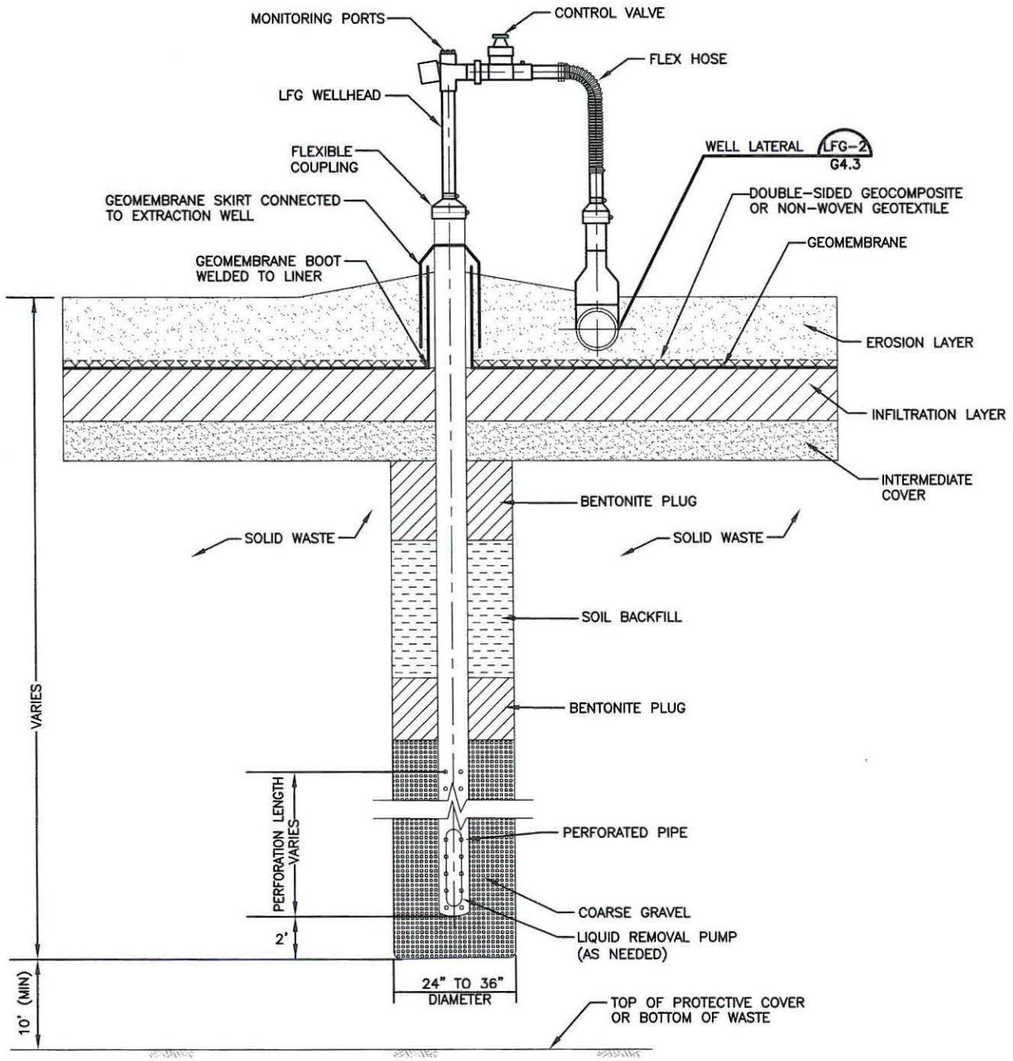
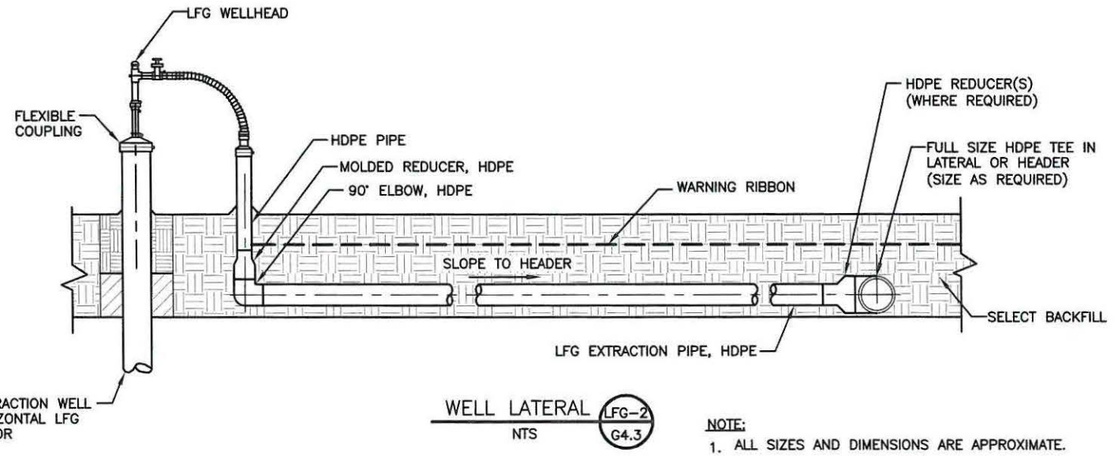


TYPICAL LFG EXTRACTION WELL LFG-1 G4.3

NTS



WELL LATERAL LFG-2 G4.3

NTS

NOTE:

1. ALL SIZES AND DIMENSIONS ARE APPROXIMATE.

NOTES:

1. ALL SIZES AND DIMENSIONS ARE APPROXIMATE.
2. THE EXACT WELLHEAD CONFIGURATION DEPENDS ON MANUFACTURER.
3. THE ELEVATION OF THE EXISTING LINER SYSTEM WILL BE VERIFIED PRIOR TO CONSTRUCTION. THE VERIFICATION PROCESS WILL INCLUDE THE REVIEW OF EXISTING AS-BUILT LINER CERTIFICATION INFORMATION.

STATE OF TEXAS
KENNETH J. WELCH
60773
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PROFESSIONAL ENGINEER
9/29/2014

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–	9/12/14	TECHNICALLY COMPLETE	GLW	JHP	KJW	KJW

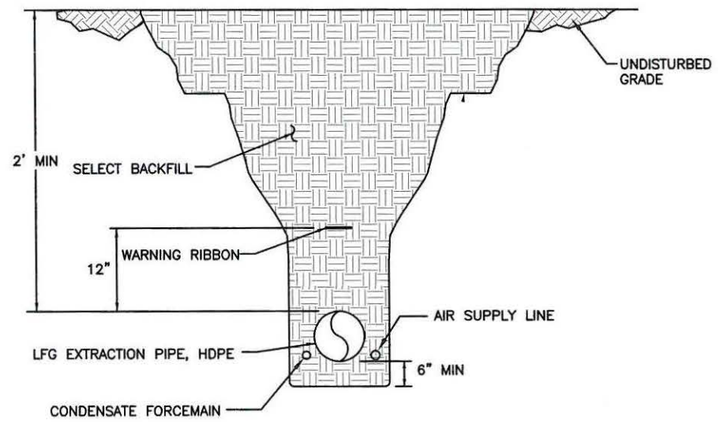
EXTRACTION WELL/LATERAL DETAIL

WASTE MANAGEMENT OF TEXAS, INC.
NEW BOSTON LANDFILL
PERMIT AMENDMENT APPLICATION

BIGGS & MATHEWS ENVIRONMENTAL
CONSULTING ENGINEERS
MANSFIELD • WICHITA FALLS
817-563-1144

TBPE FIRM NO. F-256 | TBPG FIRM NO. 50222

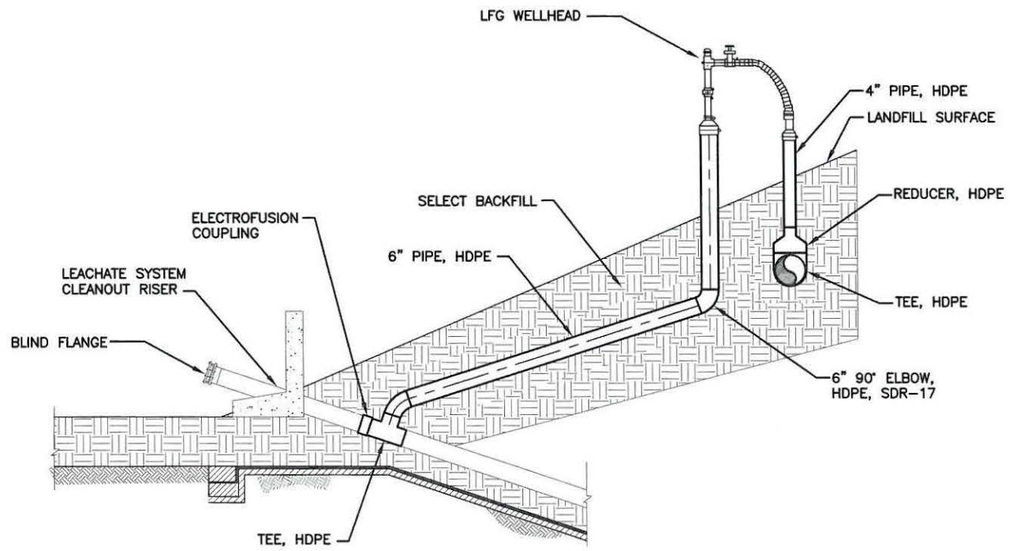
DSN. KJW	DATE : 06/13	DRAWING	G4.3
DWN. SRC	SCALE : GRAPHIC		
CHK. JHP	DWG : G4.3-WELL DETAIL.dwg		



PIPE TRENCH LFG-3 G4.4
NTS

NOTE:

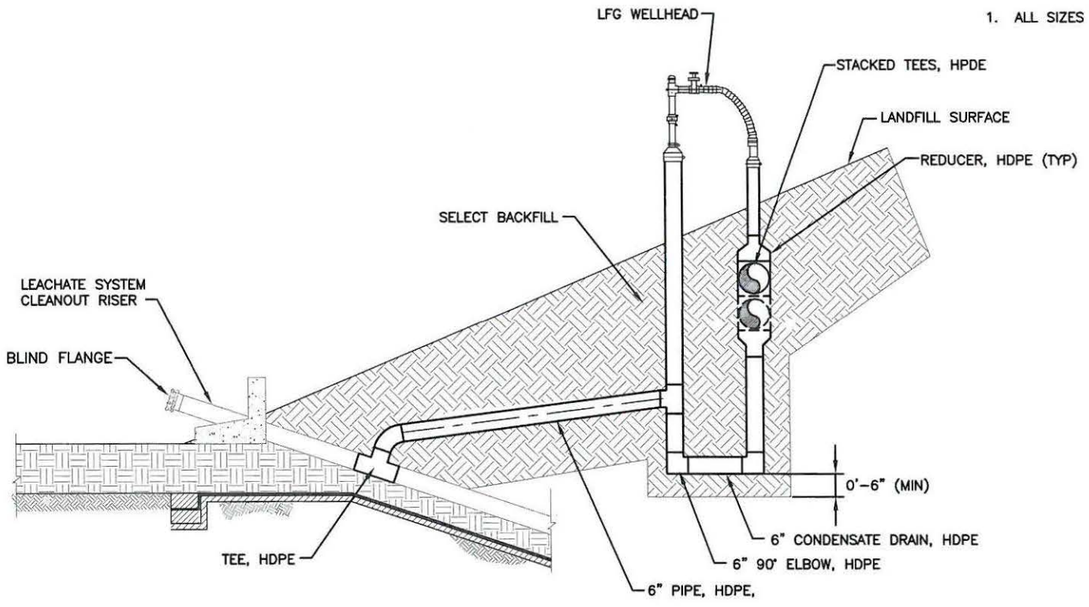
1. ALL SIZES AND DIMENSIONS ARE APPROXIMATE.



LFG PIPING TO LCR CONNECTION LFG-4 G4.4
NTS

NOTE:

1. ALL SIZES AND DIMENSIONS ARE APPROXIMATE.



LFG PIPING TO U-TRAP LCR CONNECTION LFG-5 G4.4
NTS

NOTE:

1. ALL SIZES AND DIMENSIONS ARE APPROXIMATE.

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LFG TRENCH/LCR DETAILS

WASTE MANAGEMENT OF TEXAS, INC.
NEW BOSTON LANDFILL
PERMIT AMENDMENT APPLICATION

BIGGS & MATHEWS ENVIRONMENTAL
CONSULTING ENGINEERS
MANSFIELD • WICHITA FALLS
817-563-1144
TBPE FIRM NO. F-256 TBPG FIRM NO. 50222

DSN. KJW DATE : 1/14
DWN. GLW SCALE : GRAPHIC
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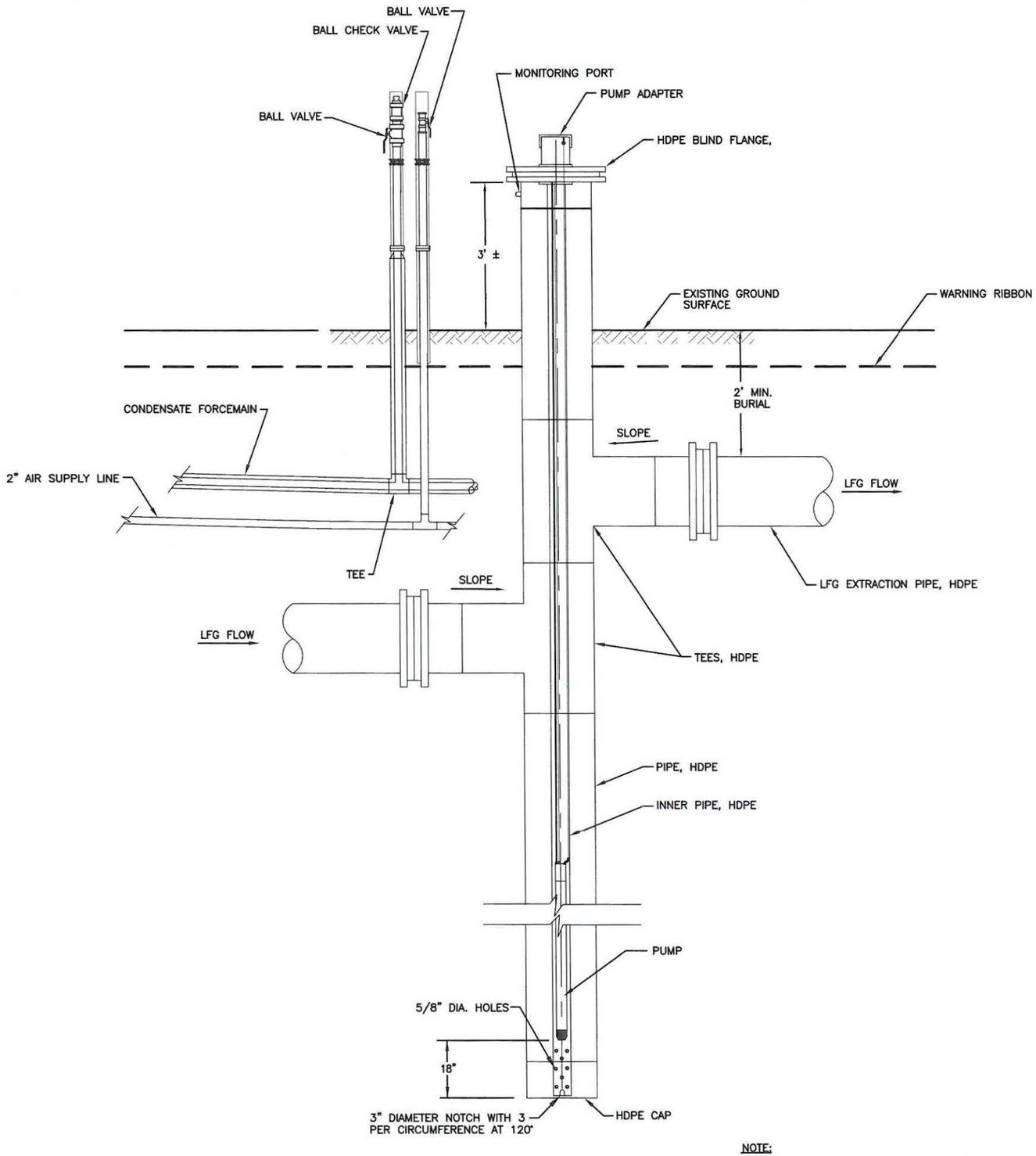
DRAWING G4.4

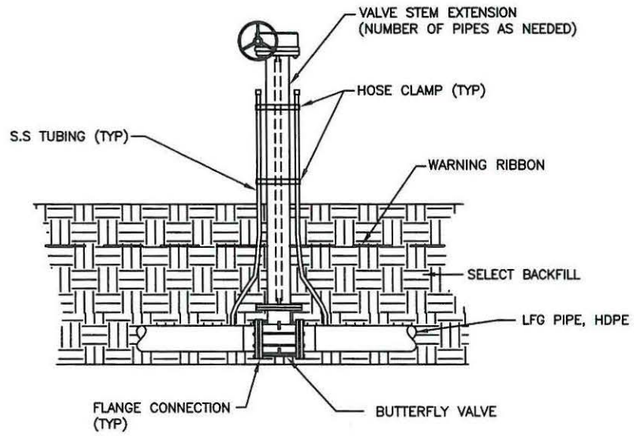


CONDENSATE SUMP (LFG-6)

NTS G4.5

NOTE:

1. ALL SIZES AND DIMENSIONS ARE APPRIOXIMATE.



LFG ISOLATION VALVE (LFG-7)

NTS G4.5

NOTE:

1. ALL SIZES AND DIMENSIONS ARE APPROXIMATE.

STATE OF TEXAS
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60773
LICENSED PROFESSIONAL ENGINEER
9/29/2014

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LFG SUMP/VALVE DETAILS

WASTE MANAGEMENT OF TEXAS, INC.
NEW BOSTON LANDFILL
PERMIT AMENDMENT APPLICATION

BIGGS & MATHEWS ENVIRONMENTAL
CONSULTING ENGINEERS
MANSFIELD • WICHITA FALLS
817-563-1144
TBPE FIRM NO. F-256 TBPG FIRM NO. 50222

DSN. KJW DATE : 1/14
DWN. GLW SCALE : GRAPHIC
CHK. JHP DWG : G4.5-CSD.dwg

DRAWING G4.5

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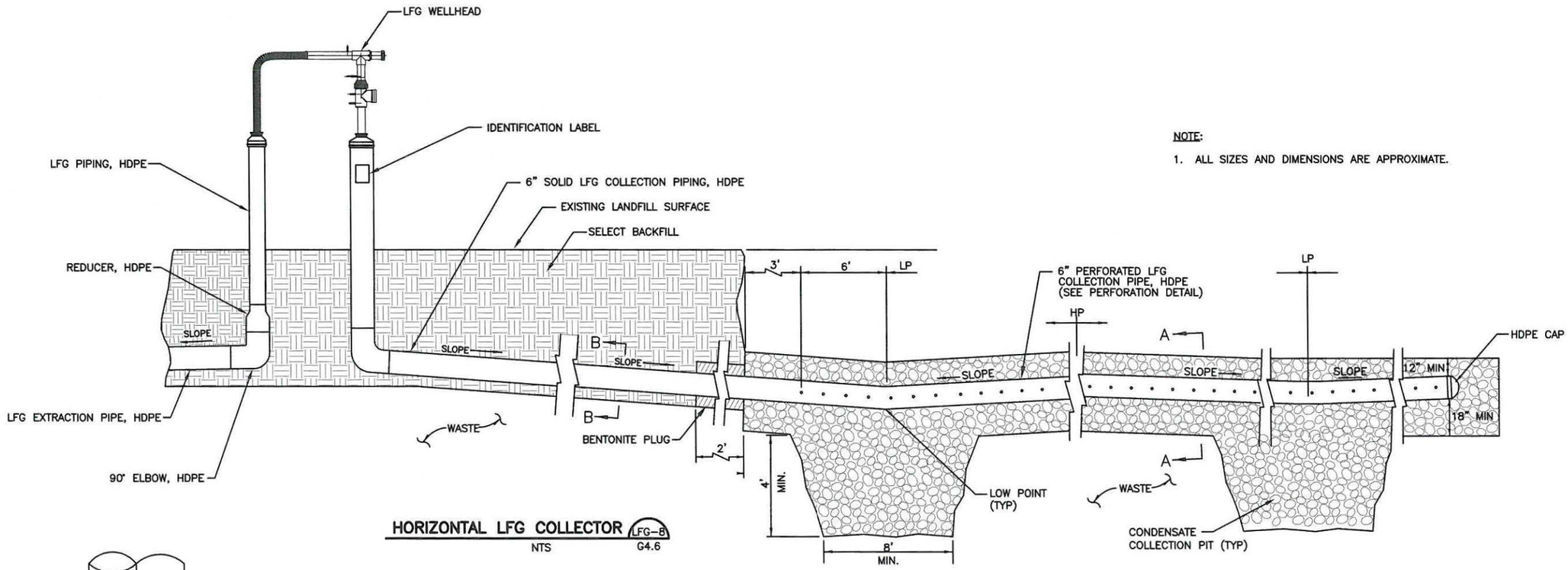
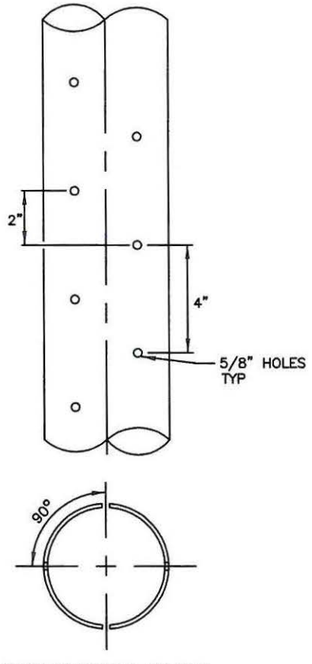


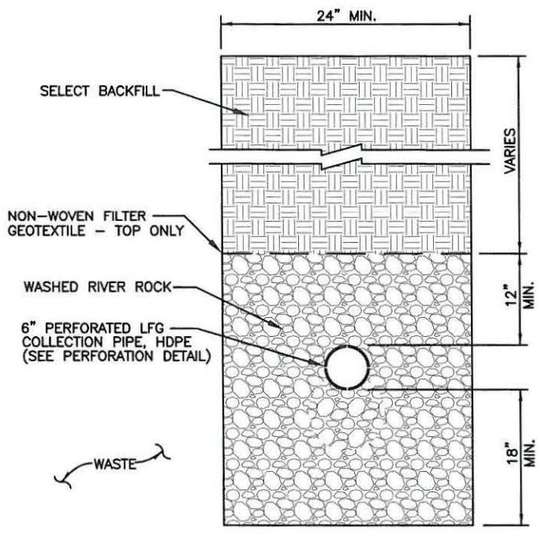
HORIZONTAL LFG COLLECTOR (LFG-8) G4.6
NTS

NOTE:

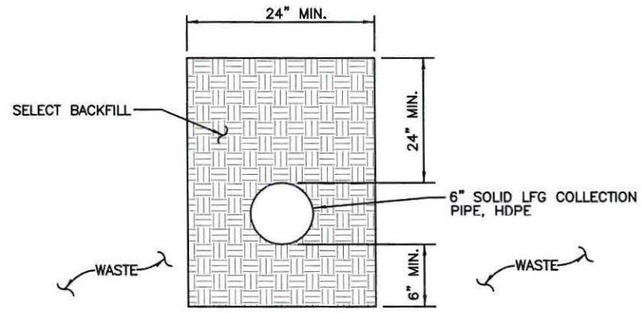
1. ALL SIZES AND DIMENSIONS ARE APPROXIMATE.



PERFORATION DETAIL
NTS



SECTION A–A
NTS



SECTION B–B
NTS

STATE OF TEXAS
KENNETH J. WELCH
60773
LICENSED
PROFESSIONAL ENGINEER
9/29/2014

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REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY
–	9/12/14	TECHNICALLY COMPLETE	GLW	JHP	KJW	KJW

HORIZONTAL COLLECTOR DETAILS

WASTE MANAGEMENT OF TEXAS, INC.
NEW BOSTON LANDFILL
PERMIT AMENDMENT APPLICATION

BIGGS & MATHEWS ENVIRONMENTAL
CONSULTING ENGINEERS
MANSFIELD • WICHITA FALLS
817-563-1144

TBPE FIRM NO. F-256 | TBPG FIRM NO. 50222

DSN. KJW | DATE : 1/14
DWN. GLW | SCALE : GRAPHIC
CHK. JHP | DWG : G4.6-HORZ.dwg

DRAWING G4.6

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NEW BOSTON LANDFILL
BOWIE COUNTY, TEXAS
TCEQ PERMIT APPLICATION NO. MSW 576C

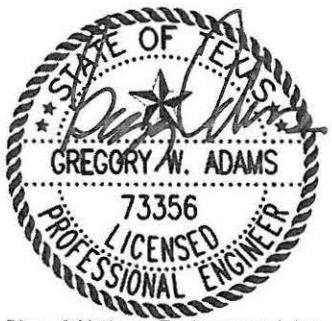
PERMIT AMENDMENT APPLICATION

PART III – FACILITY INVESTIGATION AND DESIGN
ATTACHMENT H
CLOSURE PLAN

Prepared for

Waste Management of Texas, Inc.

Technically Complete September 12, 2014



Biggs & Mathews Environmental, Inc.
Firm Registration No. F-256
9/29/2014

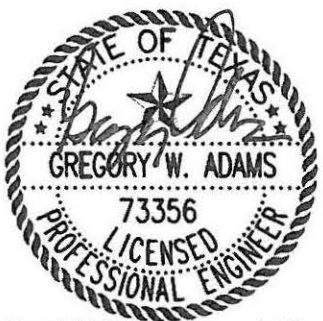
Prepared by

BIGGS & MATHEWS ENVIRONMENTAL
1700 Robert Road, Suite 100 • Mansfield, Texas 76063 • 817-563-1144

TEXAS BOARD OF PROFESSIONAL ENGINEERS
FIRM REGISTRATION NO. F-256

TEXAS BOARD OF PROFESSIONAL GEOSCIENTISTS
FIRM REGISTRATION NO. 50222

CONTENTS



Biggs & Mathews Environmental, Inc.
Firm Registration No. F-256
9/29/2014

1 INTRODUCTION

30 TAC §330.63(h) and §330.457

This facility closure plan provides the information required by 30 TAC §330.63(h) and §330.457. The closure plan includes drawings that depict the final constructed contour plan of the entire landfill, surface water entering and exiting the landfill, and the location of the 100-year floodplain. The closure plan also includes the procedures to be taken for ongoing closure of the facility and following final acceptance of waste, and a closure schedule. Cross sections showing the final grades are provided in Attachment D2 – Cross Sections. The elevation of the deepest excavation, maximum elevation of waste, and maximum elevation of final cover are provided in Attachment D, page D-5, Table D-2.

2 FINAL COVER SYSTEM

30 TAC §330.457

2.1 Final Cover System Design

2.1.1 West and North Disposal Areas

The final cover system in the West and North Disposal Areas will be a composite cover system consisting of an intermediate cover layer, an infiltration layer, a flexible membrane cover, a drainage layer, and an erosion layer. Final cover has been constructed over 18.1 acres of the West Disposal Area and details of the cover are documented in the Final Cover Evaluation Reports (FCERs). Approval dates are shown on Appendix H2, Drawing H2.2.

The final cover plans are included in Appendix H2, Drawings H2.2 and H2.3 and the final cover details are provided in Drawings H2.5 and H2.6. The components of the final cover system are listed from top to bottom in Table H-1.

The final cover will be seeded or sodded immediately following the application of the final cover in order to minimize erosion. The vegetation will be native and introduced grasses. Temporary cold weather vegetation will be established if required. Irrigation will be employed as needed until vegetation is established. Erosion control measures such as silt fences and straw bales will be used to minimize erosion until the vegetation is established. Areas that experience erosion or do not readily vegetate will be repaired, reseeded or sodded until vegetation is established, or the soil will be replaced with soil that will support the grasses.

Table H-1
New Boston Landfill
Components of the West and North Disposal Areas Final Cover System

Cover System Component	Description	Minimum Thickness
West and North Disposal Areas Final Cover		
TOPSLOPE		
Erosion Layer	Soil that is capable of sustaining native plant growth	24 inches
Cushion Layer	Geotextile	8 oz
Flexible Membrane Cover	Smooth LLDPE geomembrane	40 mil nominal
Infiltration Layer	Compacted soil with a coefficient of permeability less than or equal to 1×10^{-5} cm/sec	18 inches
SIDESLOPE OPTION A		
Erosion Layer	Soil that is capable of sustaining native plant growth	24 inches
Drainage Layer	Double-sided geocomposite	0.2 inches nominal
Flexible Membrane Cover	Textured LLDPE geomembrane	40 mil nominal
Infiltration Layer	Compacted soil with a coefficient of permeability less than or equal to 1×10^{-5} cm/sec	18 inches
SIDESLOPE OPTION B		
Erosion Layer	Soil that is capable of sustaining native plant growth	24 inches
Drainage Layer	Geotextile over studded geomembrane	8 oz
Flexible Membrane Cover	Textured LLDPE geomembrane with studs on top	40 mil nominal
Infiltration Layer	Compacted soil with a coefficient of permeability less than or equal to 1×10^{-5} cm/sec	18 inches

2.1.2 South Disposal Area

The final cover system in the South Disposal Area will consist of an infiltration layer and an erosion control layer. The final cover plan is included in Appendix H2, Drawing H2.3 and the final cover details are provided in Drawing H2.6. The components of the final cover system are listed from top to bottom in Table H-2.

The final cover will be seeded or sodded immediately following the application of the final cover in order to minimize erosion. The vegetation will be native and introduced grasses. Temporary cold weather vegetation will be established if required. Irrigation will be employed as needed until vegetation is established. Erosion control measures such as silt fences and straw bales will be used to minimize erosion until the vegetation is established. Areas that experience erosion or do not readily vegetate will be repaired, reseeded or sodded until vegetation is established, or the soil will be replaced with soil that will support the grasses.

Table H-2
New Boston Landfill
Components of the South Disposal Area Final Cover System

Cover System Component	Description	Minimum Thickness
Erosion Layer	Soil that is capable of sustaining native plant growth	24 inches
Infiltration Layer	Compacted soil with a maximum coefficient of permeability less than or equal to 1×10^{-7} cm/sec	18 inches

2.2 Installation Methods and Procedures

The final cover system will be constructed, tested and documented in accordance with 30 TAC §330.457 and Attachment D8 – Final Cover Quality Control Plans (FCQCP).

3 CLOSURE PROCEDURES

30 TAC §330.457

3.1 Closure Sequence

Composite final cover has already been constructed over 18.1 acres of the West Disposal Area. The New Boston Landfill will continue to conduct ongoing closure of the landfill throughout the active life of the landfill. The procedure allows for successive closure of fill areas by placement of final cover, construction of drainage and erosion control features, and establishment of vegetative cover. This procedure will be followed until all sectors have been closed. All areas, regardless of the time of closure, will be closed in accordance with the applicable regulations and the closure plan, and a FCER will be submitted documenting closure activities.

3.2 Closure During Active Life

As described above, the final cover will be constructed as fill areas achieve the design grades. Should closure of the landfill become necessary at any time during the active life of the landfill, the following steps shall be taken:

- The final waste received will be placed and properly compacted.
- The Citizen's Convenience Center, Truck Wheel Wash, large item storage area and recyclable materials staging area will be closed and dismantled. All waste, waste residue and demolition materials from these facilities will be disposed in the landfill. The leachate storage facility will remain operational through the post closure period.
- Excavations will be filled with suitable material, and the site will be graded to promote runoff and prevent ponding.
- The top of the landfill will be regraded and reshaped as needed to provide the proper slope for positive drainage.
- The final cover system will be constructed consistent with the details included in Appendix H2.
- During the first growing season following application of final cover, the site will be vegetated with appropriate grasses to minimize erosion.
- A surface water management system will be constructed to minimize erosion.
- A closure certification will be prepared by a registered professional engineer and submitted to the TCEQ for approval.

- All proper notices and documentations will be filed with the appropriate agencies and governmental bodies.

3.2.1 Estimate of Largest Area Requiring Final Cover

The largest area requiring final cover at any time during the active life of the landfill will be the portions of the West Disposal Area that have not received final cover plus the first sector in the North Disposal Area. The largest area is approximately 45.4 acres. The largest area requiring closure for the purposes of determining final closure construction cost is addressed in Attachment J – Cost Estimates for Closure and Postclosure Care and is shown on Drawing J.1.

3.2.2 Estimate of Maximum Inventory of Waste On Site

The estimate of maximum inventory of waste ever on site over the active life of the facility is approximately 16,834,000 cubic yards. This estimate represents the total volume available through this permit application and existing waste currently in place and is the total volume between the top of protective cover and bottom of final cover and includes waste and daily and intermediate cover soil. The calculations of the estimate of maximum inventory of waste are provided in Appendix H3.

4 CLOSURE SCHEDULE

30 TAC §330.457, §330.461

4.1 Final Cover Construction

During the active life of the landfill, final cover will be placed in phases as areas reach the design top of waste grades. Generally, the final cover will be placed in phases of 10 to 30 acres. Final cover placement over completed portions of the site will consist of the following steps:

- Survey controls will be implemented to control the filling of solid waste to the approved top of waste elevations.
- The final cover system layers will be constructed. Testing of the various components of the final cover system will be performed in accordance with Attachment D8.
- A final cover certification report and an as-built survey will be prepared by an independent registered professional engineer and submitted to the TCEQ for approval.
- The TCEQ-approved final cover certification report will be maintained in the site operating record and the final cover log will be updated to reflect the area where final cover has been placed. The TCEQ region office will also be notified.

4.2 Implementation of the Closure Plan

The closure plan will be implemented in accordance with 30 TAC §330.457(f) as outlined below.

- No later than 45 days prior to initiation of closure activities for the MSW landfill unit, Waste Management of Texas, Inc. (WMTX) will provided written notification to the TCEQ of the intent to close the unit and will place this notice of intent in the operating record.
- Closure activities for the unit will begin no later than 30 days after known final receipt of wastes, except as provided in Section 4.4.
- Closure activities for the unit will be completed within 180 days of initiation of closure activities, except as provided in Section 4.4.
- Following completion of closure activities for the unit, WMTX will comply with the postclosure care requirements specified in 30 TAC 330.463(b) and in the Postclosure Care Plan. WMTX will submit by registered mail to the TCEQ for review and approval, a documented certification signed by an independent licensed professional engineer, verifying that closure has been completed in

accordance with the closure plan. The submittal will include all applicable documentation necessary for certification of closure. Once approved, this certification will be placed in the operating record.

- Following receipt of the required closure documents and an inspection report from the TCEQ region office verifying proper closure of the MSW unit according to the approved closure plan, the executive director may acknowledge the termination of operation and closure of the unit and deem it properly closed.

4.3 Certification of Final Facility Closure

Certification of final facility closure will be accomplished in accordance with 30 TAC §330.461 as outlined below.

- No later than 90 days prior to initiation of final facility closure, a public notice of facility closure that contains the name, address, and physical location of the facility, the permit number, and the last date of intended receipt of waste will be placed in the newspaper of the largest circulation in the vicinity of the facility. WMTX will also make available an adequate number of copies of the approved final closure and postclosure plan for public access and review.

- WMTX will also provide written notification to the TCEQ of the intent to close the facility and place this notice of intent in the operating record.

- Following notification to the TCEQ of final facility closure, a minimum of one sign will be posted at the main entrance and all other frequently used points of access notifying all persons utilizing the facility of the closure date or date on which further receipt of waste is prohibited. In addition, barriers or gates will be installed at all access points following the closure date to adequately prevent unauthorized dumping of solid waste at the closed facility.

- Within 10 days after completion of final closure activities of the facility, a certified copy of an Affidavit to the Public (see Appendix H.1) will be submitted in accordance with §330.19 and §330.457(g) by registered mail to the TCEQ. In addition, a certified notation will be recorded on the deed to the facility or similar instruments that will in perpetuity notify any potential purchaser of the property that the land has been used as a landfill facility and the use of the land is restricted according to the provisions specified in §330.465 and in the Postclosure Care Plan. Within 10 days after completion of final closure activities of the facility, a certified copy of the modified deed will be submitted to the TCEQ and a copy will be placed in the operating record.

- Within 10 days after completion of final closure activities of the facility, a certification, signed by an independent licensed professional engineer, verifying that final facility closure has been completed in accordance with the approved closure plan will be submitted by registered mail to the TCEQ. The submittal will include all applicable documentation necessary for certification of final facility closure.

4.4 Provisions for Extending Closure Period

If the New Boston Landfill has remaining capacity in a landfill unit at the time of its closure, final closure activities will begin no later than one year after the most recent receipt of wastes. Any request for an extension beyond the one year deadline for the initiation of final closure will be submitted to the executive director for review and approval and will include all applicable documentation to demonstrate that the unit or site has the capacity to receive additional waste and that WMTX has taken and will continue to take all steps necessary to prevent threats to human health and the environment.

If necessary, a request for an extension of the completion of final closure activities will be submitted to the executive director for approval. This request will include all applicable documentation necessary to demonstrate that final closure will, of necessity, take longer than 180 days and all steps have been taken and will continue to be taken to prevent threats to human health and the environment.

5 CLOSURE COST ESTIMATE

30 TAC §330.503(a)

The estimated cost of hiring a third party to close the largest area of the landfill requiring final closure at any time during the active life of the unit is $4,176,758 in 2013 dollars. The detailed cost estimate included in Attachment J.

The cost estimate shows the cost of hiring a third party to close the largest waste fill area that could potentially be open in the year to follow and those areas that have not received final cover at any time during the active life of the site when the extent and manner of site operations would make closure the most expensive.

NEW BOSTON LANDFILL

APPENDIX H1
FIGURES

H1 Affidavit to the Public

Technically Complete September 12, 2014

Figure H1
AFFIDAVIT TO THE PUBLIC

STATE OF TEXAS

COUNTY OF _____

Before me, the undersigned authority, on this day personally appeared _____, who, after being by me duly sworn, upon oath states that he is the record owner of that certain tract or parcel of land lying and being situated in _____, Texas and being more particularly described as follows:

-insert legal description here-

NOTICE

The undersigned further states that from the year _____ to the year _____ there was operated on the aforesaid tract of land a Solid Waste Disposal Site. Specifically, such operation was conducted on that portion of the aforesaid tract described below.

(INSERT LEGAL DESCRIPTION)

Notice is hereby given that any future owner or user of the land described in the above legal description should consult with the Texas Commission on Environmental Quality prior to planning or initiating any activity involving disturbance of cover.

Further, the undersigned _____ was the operator of such solid waste disposal site.

WITNESS MY/OUR HAND(S) on this _____ day of _____, 20__.

_____
Owner

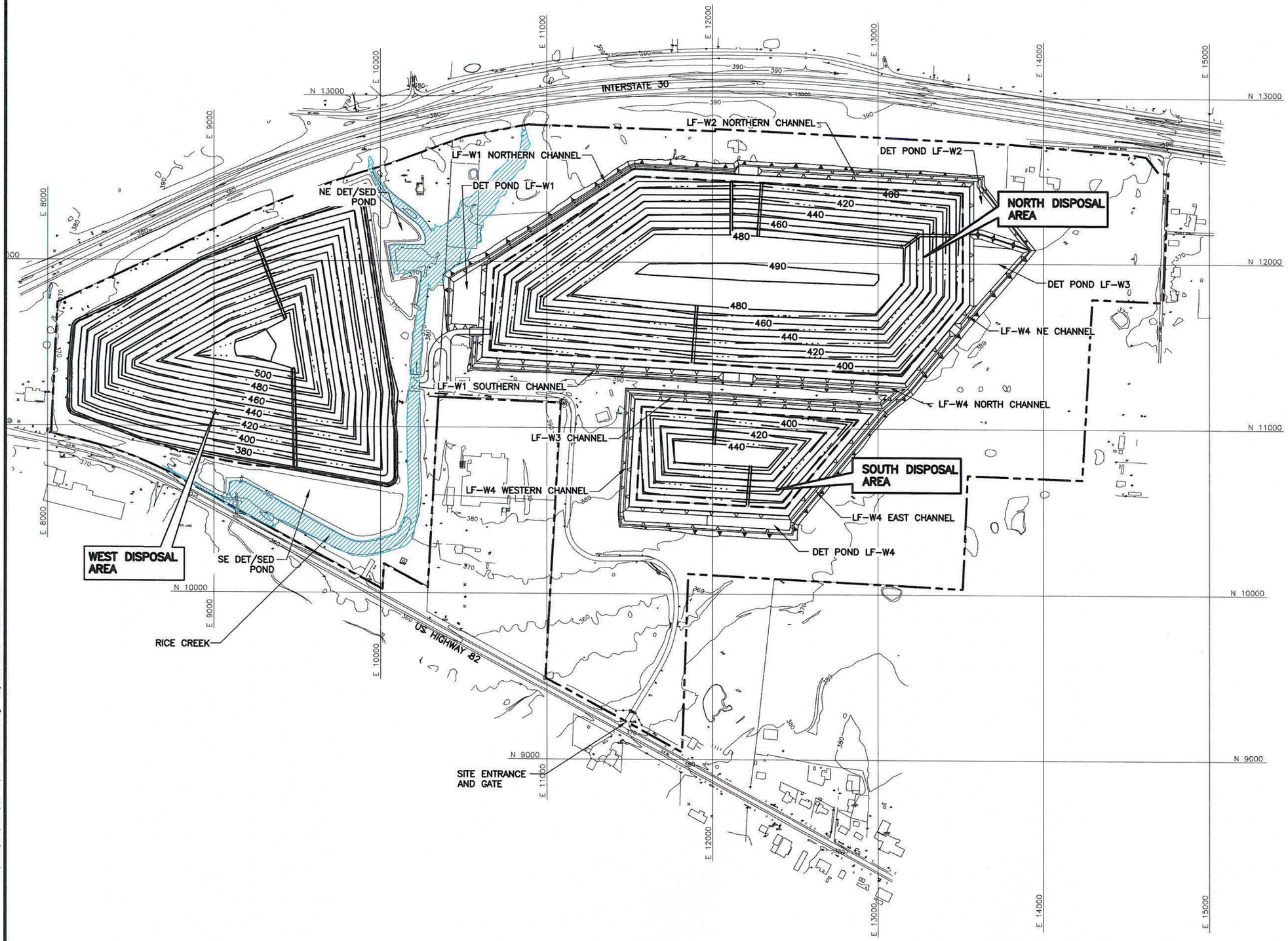
_____
Operator

SWORN TO AND SUBSCRIBED before me on this _____ day of _____, 20__.

NEW BOSTON LANDFILL

APPENDIX H2
FINAL COVER SYSTEM PLANS AND DETAILS

Technically Complete September 12, 2014



0 300 600
SCALE IN FEET

LEGEND

- PERMIT BOUNDARY
- LANDFILL FOOTPRINT
- 380 EXISTING 10' CONTOURS
- N 11000 SITE GRID
- 100– YEAR FLOODPLAIN
- LETDOWN CHUTE
- SWALE

NOTES:

1. EXISTING CONTOURS COMPILED BY AIR SURVEY FROM AERIAL PHOTOGRAPHY FLOWN MARCH 5, 2012.
2. PERMIT BOUNDARY, PROPERTY LINES AND EASEMENTS PROVIDED BY MTG ENGINEERS AND SURVEYORS, INC.
3. REFER TO DRAWINGS H2.2, H2.3 AND H2.4 FOR FINAL COVER PLANS.

STATE OF TEXAS
GREGORY W. ADAMS
73356
LICENSED
PROFESSIONAL ENGINEER
9/29/2014

ISSUED FOR PERMITTING PURPOSES ONLY

REVISIONS						
REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY
–	9/12/14	TECHNICALLY COMPLETE	GLW	GWA	GWA	GWA

LANDFILL COMPLETION PLAN

WASTE MANAGEMENT OF TEXAS, INC.
NEW BOSTON LANDFILL
PERMIT AMENDMENT APPLICATION

BIGGS & MATHEWS ENVIRONMENTAL
CONSULTING ENGINEERS
MANSFIELD
DALLAS ◆ WICHITA FALLS
817-563-1144

TBPE FIRM NO. F-256 | TBPG FIRM NO. 50222

DSN. KJW	DATE : 6/13	DRAWING	
DWN. MJW	SCALE : GRAPHIC	H2.1	
CHK. KJW	DWG : H2.1-LCPlan.dwg		

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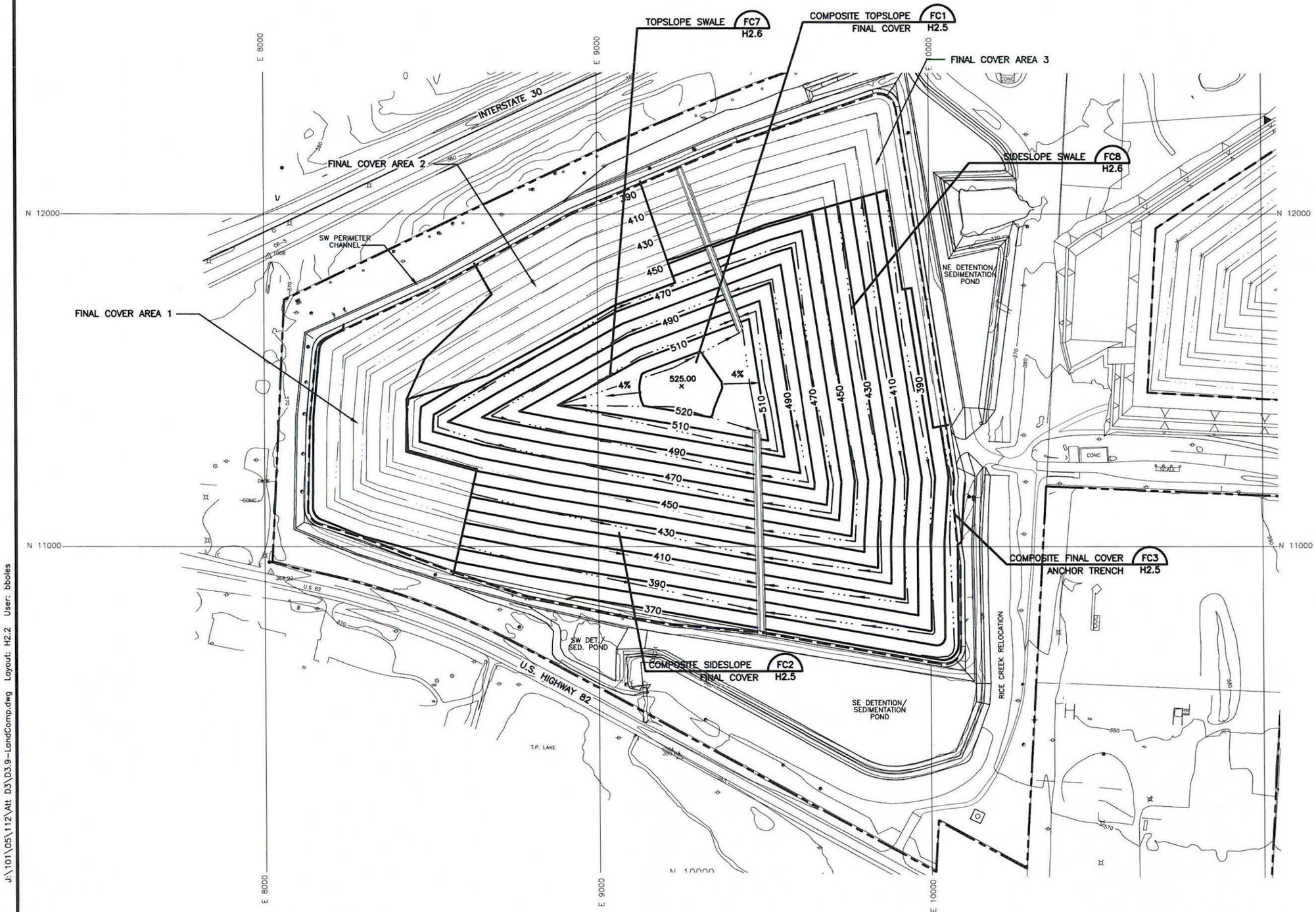

0 150 300
SCALE IN FEET

LEGEND

- PERMIT BOUNDARY
- 250 EXISTING 10' CONTOUR
- N 11000 SITE GRID
- 440 PROPOSED CONTOUR
- EXISTING SWALE
- PROPOSED SWALE
- LETDOWN CHUTE

NOTES:

1. EXISTING CONTOURS COMPILED BY AIR SURVEY FROM AERIAL SURVEY DATED MARCH 5, 2012.
2. PERMIT BOUNDARY PROVIDED BY MTG ENGINEERS AND SURVEYORS, INC.
3. PROPOSED CONTOURS DEPICT TOP OF FINAL COVER GRADES.

STATE OF TEXAS
GREGORY W. ADAMS
73356
LICENSED
PROFESSIONAL ENGINEER
9/29/2014

FINAL COVER PLAN
WEST DISPOSAL AREA

WASTE MANAGEMENT OF TEXAS, INC.
NEW BOSTON LANDFILL
PERMIT AMENDMENT APPLICATION

BIGGS & MATHEWS ENVIRONMENTAL
CONSULTING ENGINEERS
MANSFIELD • WICHITA FALLS
817-563-1144
TBPE FIRM NO. F-256 TBPG FIRM NO. 50222

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REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY
–	9/12/14	TECHNICALLY COMPLETE	GLW	GWA	GWA	GWA

DSN. GWA | DATE : 6/13
DWN. MJW | SCALE : GRAPHIC
CHK. GWA | DWG : D3.9-LandComp.dwg

DRAWING H2.2

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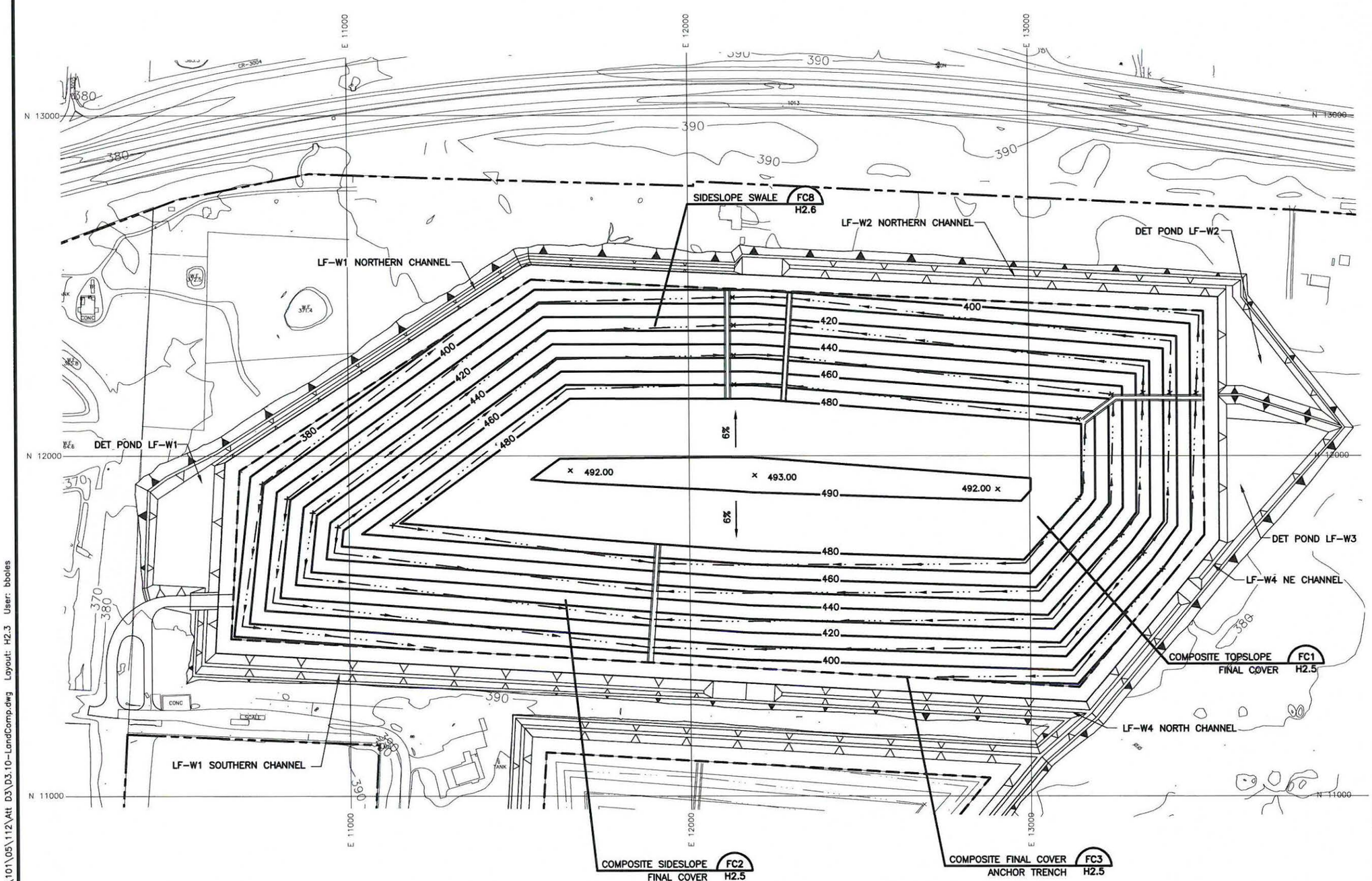

0 150 300
SCALE IN FEET

LEGEND

- PERMIT BOUNDARY
- LANDFILL FOOTPRINT
- 250 EXISTING 10' CONTOUR
- N 11000 SITE GRID
- 420 PROPOSED CONTOUR
- SWALE
- LETDOWN CHUTE

NOTES:

1. EXISTING CONTOURS COMPILED BY AIR SURVEY FROM AERIAL SURVEY DATED MARCH 5, 2012.
2. PERMIT BOUNDARY PROVIDED BY MTG ENGINEERS AND SURVEYORS, INC.
3. PROPOSED CONTOURS DEPICT TOP OF FINAL COVER GRADES.

STATE OF TEXAS
GREGORY W. ADAMS
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PROFESSIONAL ENGINEER
9/24/2014

FINAL COVER PLAN
NORTH DISPOSAL AREA

WASTE MANAGEMENT OF TEXAS, INC.
NEW BOSTON LANDFILL
PERMIT AMENDMENT APPLICATION

BIGGS & MATHEWS ENVIRONMENTAL
CONSULTING ENGINEERS
MANSFIELD • WICHITA FALLS
817-563-1144

TBPE FIRM NO. F-256 | TBPG FIRM NO. 50222

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REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY
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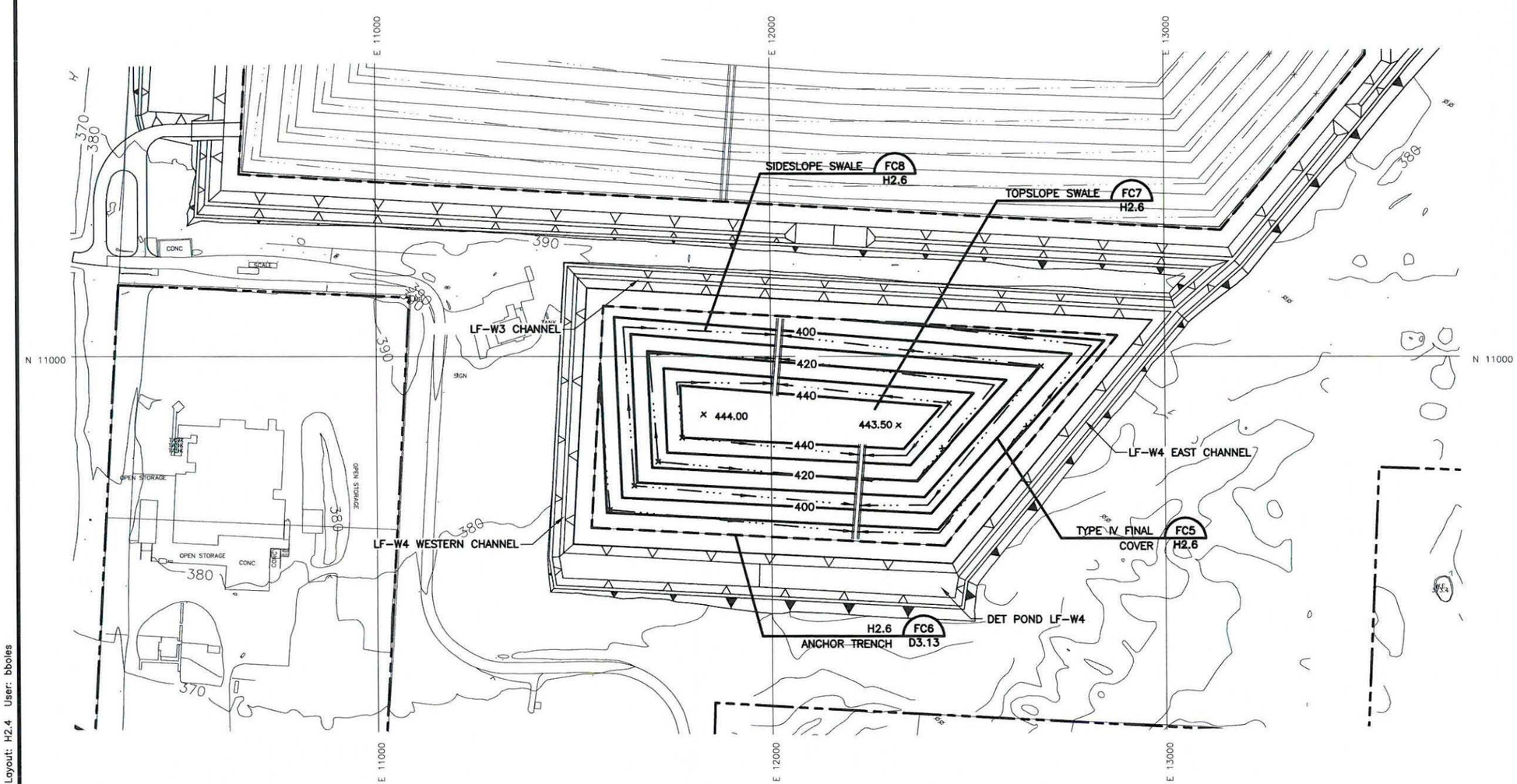

0 150 300
SCALE IN FEET

LEGEND

- PERMIT BOUNDARY
- LANDFILL FOOTPRINT
- 250 EXISTING 10' CONTOUR
- N 11000 SITE GRID
- 420 PROPOSED CONTOUR
- SWALE
- LETDOWN CHUTE

NOTES:

1. EXISTING CONTOURS COMPILED BY AIR SURVEY FROM AERIAL SURVEY DATED MARCH 5, 2012.
2. PERMIT BOUNDARY PROVIDED BY MTG ENGINEERS AND SURVEYORS, INC.
3. PROPOSED CONTOURS DEPICT TOP OF FINAL COVER GRADES.

STATE OF TEXAS
GREGORY W. ADAMS
73356
LICENSED
PROFESSIONAL ENGINEER
9/29/2014

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–	9/12/14	TECHNICALLY COMPLETE	GLW	GWA	GWA	GWA

FINAL COVER PLAN
SOUTH DISPOSAL AREA

WASTE MANAGEMENT OF TEXAS, INC.
NEW BOSTON LANDFILL
PERMIT AMENDMENT APPLICATION

BIGGS & MATHEWS ENVIRONMENTAL
CONSULTING ENGINEERS
MANSFIELD • WICHITA FALLS
817-563-1144
TBPE FIRM NO. F-256 TBPG FIRM NO. 50222

DSN. GWA	DATE : 6/13	DRAWING	
DWN. GLW	SCALE : GRAPHIC	H2.4	
CHK. GWA	DWG : D3.11-LandComp.dwg		

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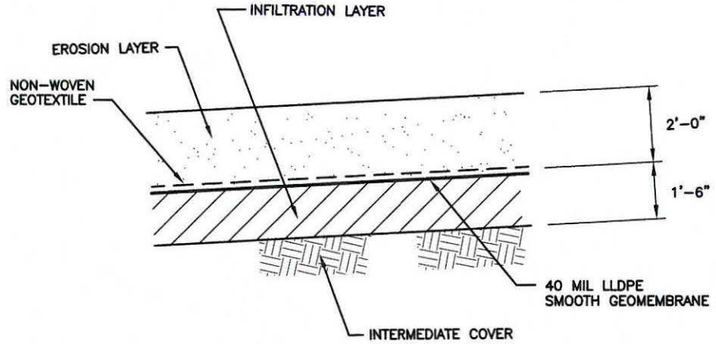
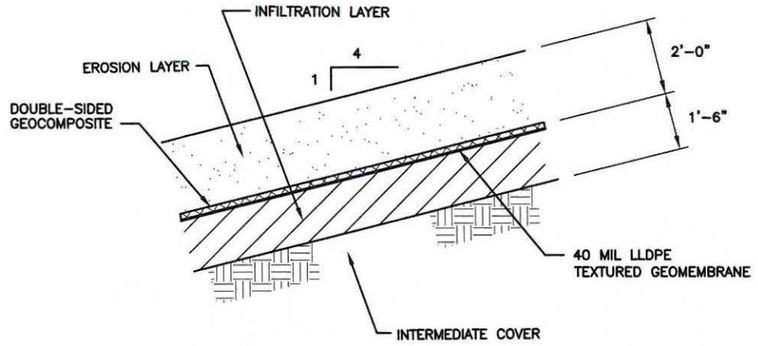
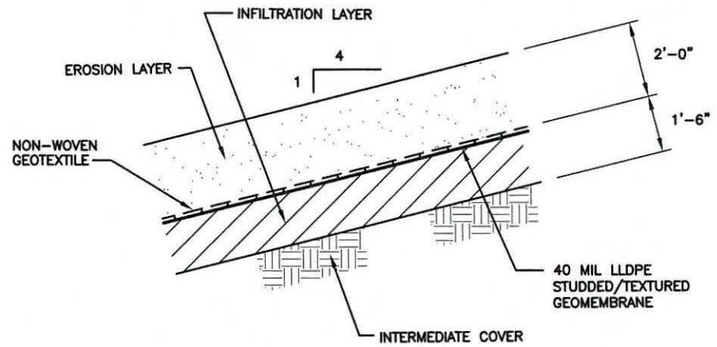




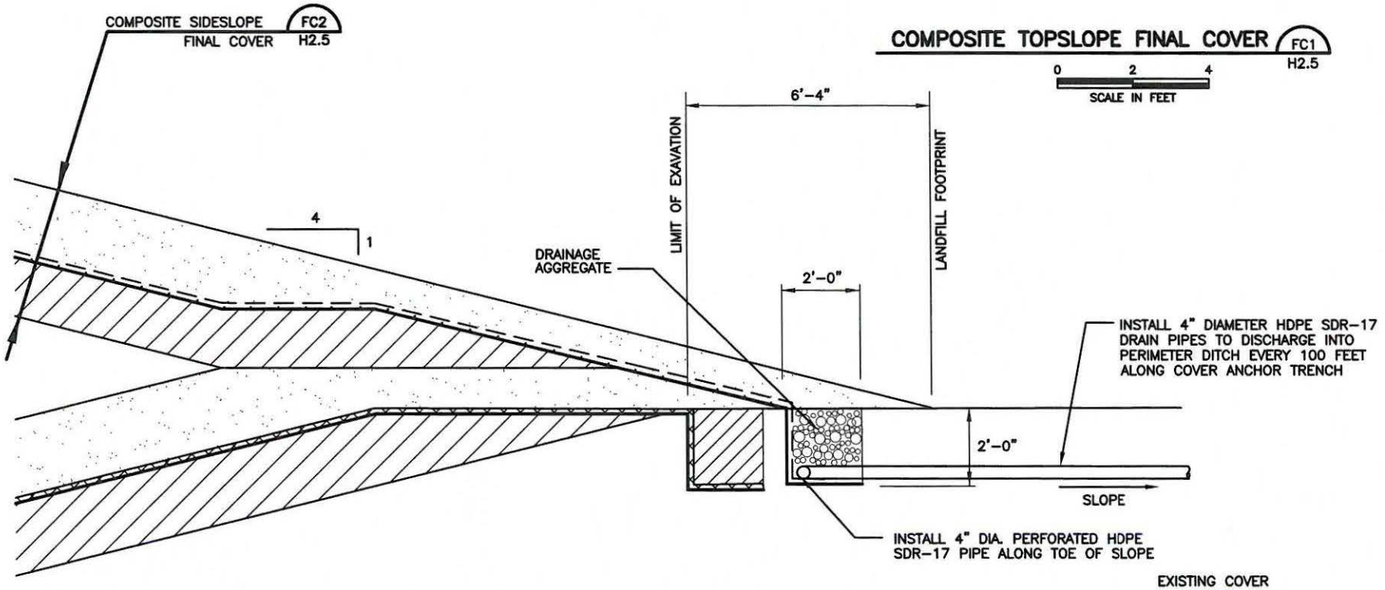
OPTION A



OPTION B

COMPOSITE SIDESLOPE FINAL COVER (FC2) H2.5

0 2 4
SCALE IN FEET

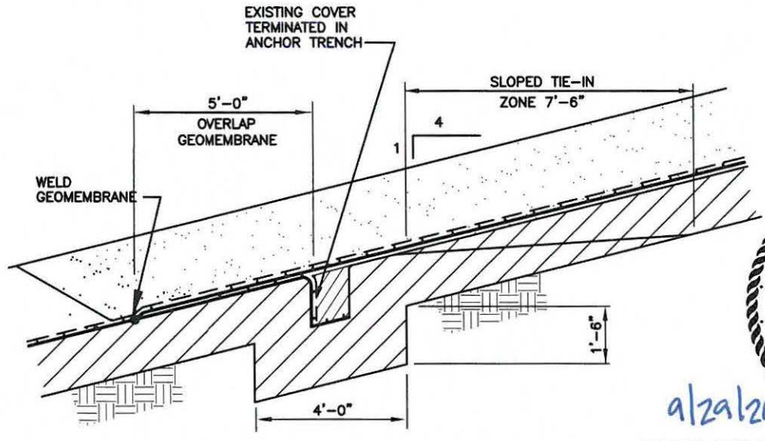


COMPOSITE TOPSLOPE FINAL COVER (FC1) H2.5

0 2 4
SCALE IN FEET

COMPOSITE FINAL COVER ANCHOR TRENCH (FC3) H2.5

0 2 4
SCALE IN FEET



COMPOSITE EXISTING SIDESLOPE FINAL COVER TIE-IN (FC4) H2.5

0 2 4
SCALE IN FEET

NOTE:

1. REFER TO ATTACHMENT D8 FOR COVER INSTALLATION AND MATERIAL REQUIREMENTS.

STATE OF TEXAS
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73356
LICENSED PROFESSIONAL ENGINEER
9/29/2014

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-	9/12/14	TECHNICALLY COMPLETE	MJW	GWA	GWA	GWA

FINAL COVER DETAILS

WASTE MANAGEMENT OF TEXAS, INC.
NEW BOSTON LANDFILL
PERMIT AMENDMENT APPLICATION

BIGGS & MATHEWS ENVIRONMENTAL
CONSULTING ENGINEERS
MANSFIELD • WICHITA FALLS
817-563-1144
TBPE FIRM NO. F-256 TBPG FIRM NO. 50222

DSN. GWA DATE : 6/13
DWN. MJW SCALE : GRAPHIC
CHK. GWA DWG : D3.12-Covdets.dwg

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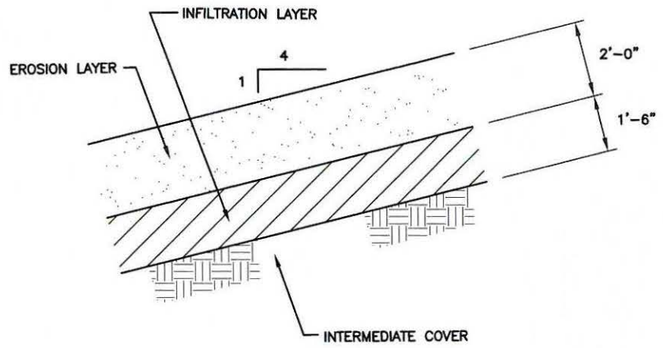

TYPE IV FINAL COVER FC5 H2.6

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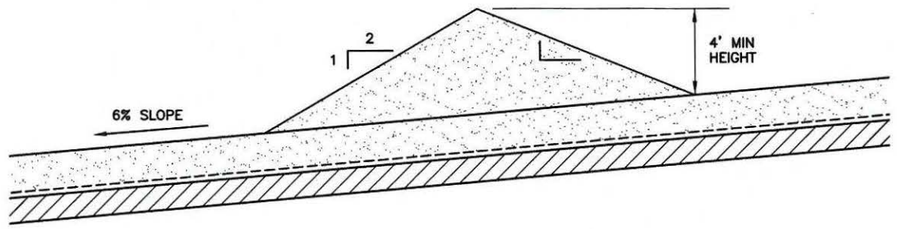
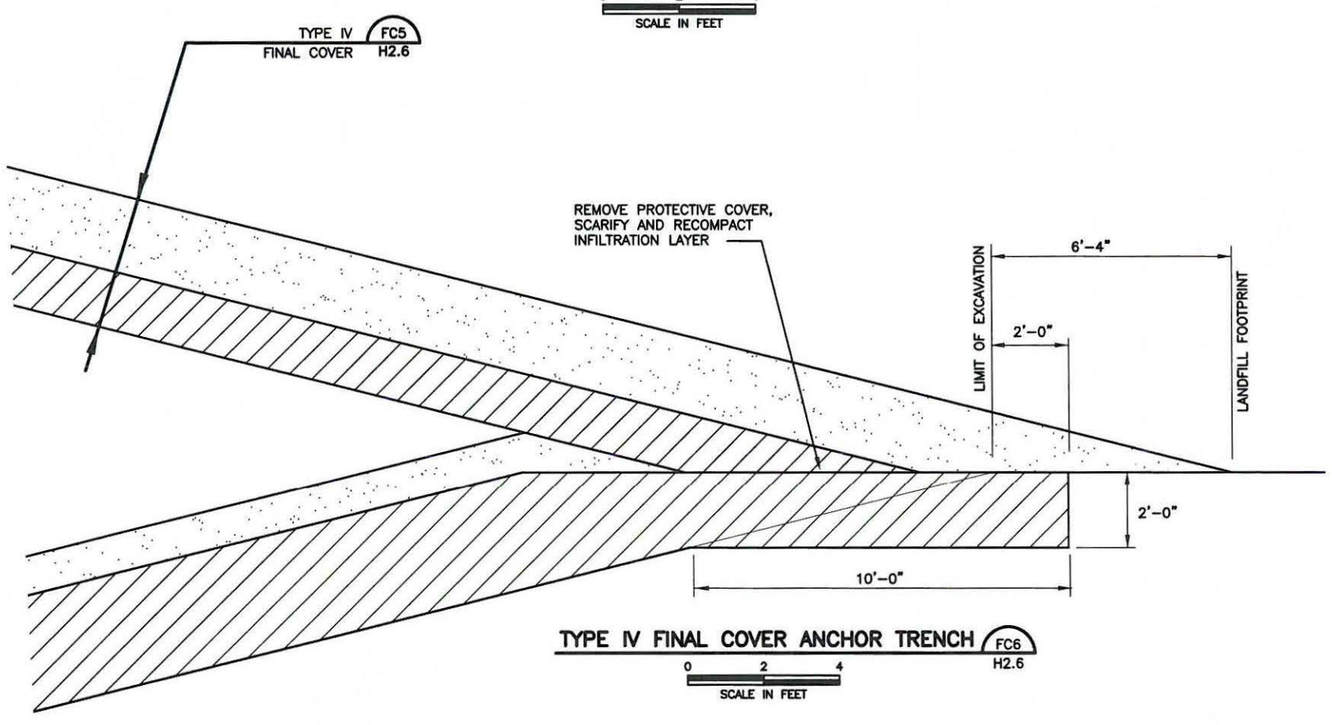


TOPSLOPE SWALE FC7 H2.6

0 4 8
SCALE IN FEET



TYPE IV FINAL COVER ANCHOR TRENCH FC6 H2.6

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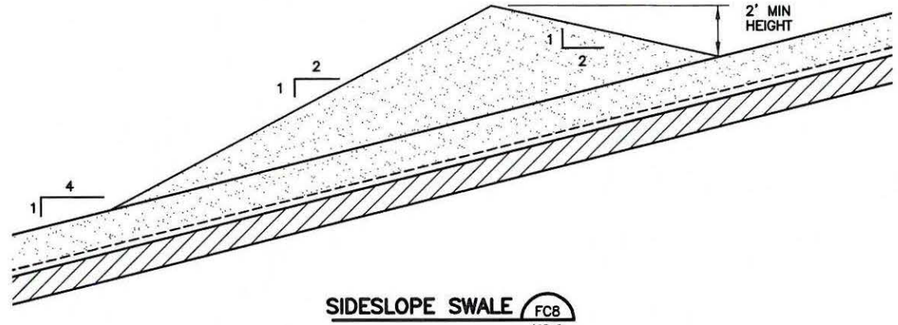
SCALE IN FEET



SIDESLOPE SWALE FC8 H2.6

0 4 8
SCALE IN FEET

STATE OF TEXAS
GREGORY W. ADAMS
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LICENSED
PROFESSIONAL ENGINEER
9/29/2014

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REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY
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FINAL COVER DETAILS

WASTE MANAGEMENT OF TEXAS, INC.
NEW BOSTON LANDFILL
PERMIT AMENDMENT APPLICATION

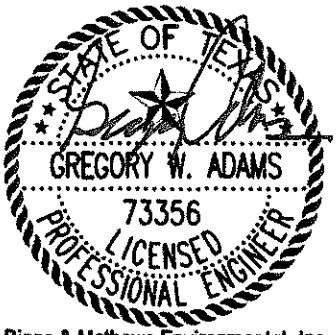
BIGGS & MATHEWS ENVIRONMENTAL
CONSULTING ENGINEERS
MANSFIELD • WICHITA FALLS
817-563-1144

TBPE FIRM NO. F-256 | TBPG FIRM NO. 50222

DSN. GWA	DATE : 6/13	DRAWING	H2.6
DWN. MJW	SCALE : GRAPHIC		
CHK. GWA	DWG : D3.12-Covdets.dwg		

NEW BOSTON LANDFILL

APPENDIX H3
MAXIMUM INVENTORY OF WASTE ONSITE



Biggs & Mathews Environmental, Inc.
Firm Registration No. F-256
9/29/2014

Pages H3-1 through H3-4

New Boston Landfill
MAXIMUM INVENTORY OF WASTE ON SITE

Required:

1. Estimate the total disposal capacity.
2. Estimate the maximun inventory of waste ever on site.

Assumptions:

1. The total disposal capacity is the volume between the top of the protective cover and the bottom of final cover and includes the waste and daily and intermediate cover soil.
2. The maximum inventory of waste ever on site equals the total disposal capacity.

Solution:

1. The total disposal capacity was calculated using Terramodel 3-dimensional computer software. Printouts of the calculations are included as pages H3-2 through H3-4.

Area	Disposal Capacity
West	6,500,000 cy
North	9,208,000 cy
South	1,126,000 cy
Total	16,834,000 cy

SURFACE TO SURFACE VOLUME REPORT

Trimble
5475 Kellenburger Road
Dayton, Ohio 45424-1099, USA
1-937-233-8921

Project: J:\101\05\112\Terramodel\511Design.pro
Report Generated: Friday, January 10, 2014 4:27:27 PM

Where the second surface is above the first the volume is reported as fill.
Where the second surface is below the first the volume is reported as excavation.

Shrinkage/swell factors: Excavation 1.0000 Fill 1.0000

First Surface Layer Name	Number of Points	Second Surface Layer Name	Number of Points
11014PSD	226	705TOWALL	436

Excavation Volume (Cu. Yd.)	Fill Volume (Cu. Yd.)
489.1	6,533,348.2

Net Difference: 6,532,859.1 Cu. Yd. Borrow

SURFACE TO SURFACE VOLUME REPORT

Trimble
5475 Kellenburger Road
Dayton, Ohio 45424-1099, USA
1-937-233-8921

Project: J:\101\05\112\Terramodel\511Design.pro
Report Generated: Friday, January 10, 2014 2:25:18 PM

Where the second surface is above the first the volume is reported as fill.
Where the second surface is below the first the volume is reported as excavation.

Shrinkage/swell factors: Excavation 1.0000 Fill 1.0000

First Surface Layer Name	Number of Points	Second Surface Layer Name	Number of Points
312PCNORTH	67	312TOWNORTH	35

Excavation Volume (Cu. Yd.)	Fill Volume (Cu. Yd.)
7,990.8	9,207,710.4

Net Difference: 9,199,719.6 Cu. Yd. Borrow

SURFACE TO SURFACE VOLUME REPORT

Trimble
5475 Kellenburger Road
Dayton, Ohio 45424-1099, USA
1-937-233-8921

Project: J:\101\05\112\Terramodel\511Design.pro
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Where the second surface is above the first the volume is reported as fill.
Where the second surface is below the first the volume is reported as excavation.

Shrinkage/swell factors: Excavation 1.0000 Fill 1.0000

First Surface Layer Name	Number of Points	Second Surface Layer Name	Number of Points
312PC	8	312TOW	10

Excavation Volume (Cu. Yd.)	Fill Volume (Cu. Yd.)
3,754.5	1,126,050.5

Net Difference: 1,122,296.0 Cu. Yd. Borrow

NEW BOSTON LANDFILL
BOWIE COUNTY, TEXAS
TCEQ PERMIT APPLICATION NO. MSW 576C

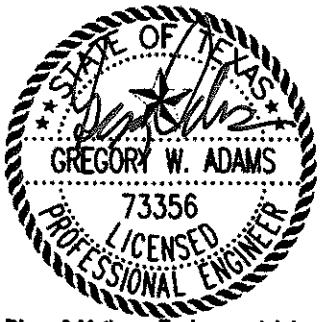
PERMIT AMENDMENT APPLICATION

PART III – FACILITY INVESTIGATION AND DESIGN
ATTACHMENT I
POSTCLOSURE PLAN

Prepared for

Waste Management of Texas, Inc.

Technically Complete September 12, 2014



Biggs & Mathews Environmental, Inc.
Firm Registration No. F-256
9/29/2014

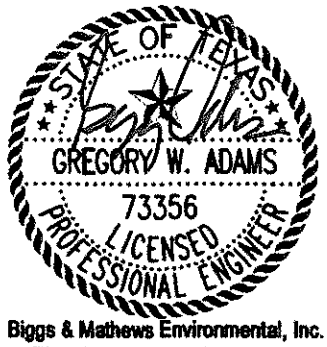
Prepared by

BIGGS & MATHEWS ENVIRONMENTAL
1700 Robert Road, Suite 100 • Mansfield, Texas 76063 • 817-563-1144

TEXAS BOARD OF PROFESSIONAL ENGINEERS
FIRM REGISTRATION NO. F-256

TEXAS BOARD OF PROFESSIONAL GEOSCIENTISTS
FIRM REGISTRATION NO. 50222

CONTENTS



Biggs & Mathews Environmental, Inc.
Firm Registration No. F-256
9/29/2014

1 INTRODUCTION

30 TAC §330.63(i)

This facility postclosure care plan provides the information required by 30 TAC §330.63(i), §330.463(b) and §330.465. The postclosure care plan includes the provisions for continued groundwater monitoring, landfill gas monitoring, leachate collection, and maintenance of the constructed final cover and drainage facilities for the duration of the 30-year postclosure period. The postclosure care plan also provides procedures to decrease or increase the postclosure care period, identifies the person responsible for postclosure care, and includes the provisions for certification at the completion of the postclosure care period.

2 POSTCLOSURE CARE ACTIVITIES

30 TAC §330.463(b) and §330.465

2.1 Monitoring and Maintenance

Following completion of all closure activities for the MSW landfill unit, the owner or operator shall comply with the post-closure care requirements specified in §330.463(b). Closure requirements are included in Attachment H – Closure Plan. Postclosure care maintenance will continue for a period of 30 years unless the TCEQ approves or requires a postclosure care period of a different duration. Postclosure care maintenance will consist, at a minimum, of the following requirements, to be carried out by Waste Management of Texas, Inc. (WMTX).

- Retain the right of entry and maintain all rights-of-way to the closed landfill.
- Conduct semiannual site inspections.
- Conduct maintenance or remediation activities, as needed, to maintain the integrity and effectiveness of the final cover, site vegetation, and stormwater drainage appurtenances. These activities may include regrading, placement of additional soil, seeding, and repair of erosion control features.
- Control surface runon and runoff in order to minimize the erosion of the final cover system. Maintenance may include regrading and cleaning of ditches and swales.
- Correct the effects of settlement, subsidence, ponded water, erosion, or other events or failures as these situations are detrimental to the integrity of the closed landfill. Corrective measures may include regrading, placement of additional soil, and seeding.
- Maintain the groundwater monitoring system and monitor groundwater in accordance with the requirements of §§330.401 – 330.421. In accordance with 30 TAC §330.407, the monitoring frequency will be semiannual. Parameters to be monitored will be those constituents listed in 30 TAC §330.419.
- Maintain and operate the leachate collection system in accordance with 30 TAC §330.331 and §330.333. However, WMTX reserves the right to request the approval of the executive director to allow WMTX to stop managing leachate if WMTX can demonstrate to the satisfaction of the executive director that leachate does not pose a threat to human health and the environment.
- Maintain and operate the landfill gas monitoring system in accordance with the requirements of §330.371. In accordance with 30 TAC §330.371, the minimum frequency will be quarterly. However, WMTX reserves the right to request TCEQ

approval of an alternate monitoring frequency. Such a request will be based on supporting data available at the time of the request.

2.2 Decreasing Postclosure Care Period

The length of the postclosure care maintenance period may be decreased by the TCEQ if WMTX submits a documented certification, signed by an independent registered professional engineer and including all applicable documentation necessary to support the certification, that demonstrates that the reduced period is sufficient to protect human health and the environment. Applicable documentation may include data from monitoring of groundwater, surface water, leachate levels, and landfill gas. The certified documentation must be reviewed and approved by the TCEQ prior to decreasing the length of the postclosure care maintenance period.

2.3 Increasing Postclosure Care Period

The length of the postclosure care maintenance period may be increased by the TCEQ if it is determined that the increased duration is necessary to protect human health and the environment. It is understood that WMTX will receive appropriate notification of any such proposed changes prior to the TCEQ's final determination.

2.4 Completion of Postclosure Care

Upon completion of the postclosure care maintenance period, WMTX will submit to the TCEQ documented certification signed by an independent licensed professional engineer and verifying that postclosure care maintenance has been completed in accordance with the approved postclosure plan. The submittal will include all documentation necessary for certification of completion of postclosure care maintenance. The certification will be placed in the site operating record upon approval. Certification of completion of the postclosure care maintenance period and voluntary permit revocation will be conducted in accordance with §330.465.

3 PERSON RESPONSIBLE FOR CONDUCTING POSTCLOSURE CARE ACTIVITIES

30 TAC §330.463(b)

At the time of the development of this document, the following person is responsible for the management of this landfill:

Director of Disposal Operations
Waste Management of Texas, Inc.
9708 Giles Rd.
Austin, Texas 78754
512-272-6243

Daily operational activities are directed by:

Landfill Manager
New Boston Landfill
1030 Highway 82 West
New Boston, Texas 75570
903-628-6595

The person responsible for conducting postclosure activities is subject to change. However, as part of the closure notification to TCEQ, as required by 30 TAC §330.463(b), WMTX will notify the TCEQ regarding the responsible person.

4 POSTCLOSURE LAND USE

30 TAC §330.957

4.1 Intended Use

There are no current planned postclosure uses for the New Boston Landfill. Should use of the closed landfill not associated with solid waste activities be considered, plans will be prepared and submitted to the TCEQ for review and approval.

4.2 Constraints on Postclosure Construction

There are no plans to construct buildings or other structures on the closed New Boston Landfill property. Nevertheless, any future construction activities on the closed landfill will be subject to the provisions of 30 TAC §§330.951 – 964, which require, among other things, prior approval of the TCEQ.

5 POSTCLOSURE CARE COST ESTIMATE

30 TAC §330.463(b)

The estimated cost of hiring a third party to conduct postclosure care activities in accordance with the postclosure plan is $4,124,664 in 2013 dollars. The detailed cost estimate provided in Attachment J.

NEW BOSTON LANDFILL
BOWIE COUNTY, TEXAS
TCEQ PERMIT APPLICATION NO. MSW 576C

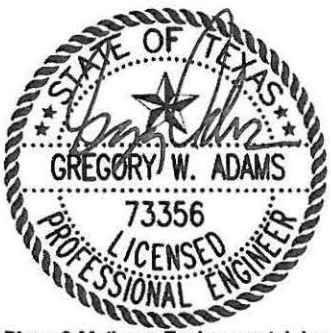
PERMIT AMENDMENT APPLICATION

PART III – FACILITY INVESTIGATION AND DESIGN
ATTACHMENT J
COST ESTIMATES FOR CLOSURE AND POSTCLOSURE CARE

Prepared for

Waste Management of Texas, Inc.

Technically Complete September 12, 2014



Biggs & Mathews Environmental, Inc.
Firm Registration No. F-256

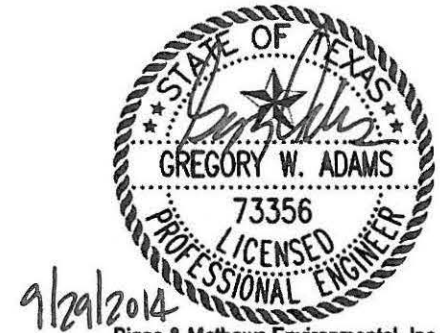
9/29/2014

Prepared by

BIGGS & MATHEWS ENVIRONMENTAL
1700 Robert Road, Suite 100 • Mansfield, Texas 76063 • 817-563-1144

TEXAS BOARD OF PROFESSIONAL ENGINEERS
FIRM REGISTRATION NO. F-256

TEXAS BOARD OF PROFESSIONAL GEOSCIENTISTS
FIRM REGISTRATION NO. 50222



Biggs & Mathews Environmental, Inc.
Firm Registration No. F-256

CONTENTS

LIST OF TABLES AND FIGURES

1 INTRODUCTION

30 TAC §330.63(j)

This cost estimate for closure and postclosure care provides the information required by 30 TAC §330.63(j) and §330.501 - 330.507.

2 CLOSURE COST ESTIMATE

30 TAC §330.503

This cost estimate shows the cost of hiring a third party to close the largest waste fill area that could potentially be open in the year to follow and those areas that have not received final cover in accordance with the final closure plan at any time during the active life of the site when the extent and manner of site operations would make closure the most expensive. Final cover has been installed over 18.1 acres of the West Disposal Area and details of the cover are documented in the Final Cover Evaluation Reports. Approval dates are shown on Drawing J.1. The largest area ever requiring final cover will include the remaining 35.8 acres in the West Disposal Area and the initial 9.6-acre cell in the North Disposal Area. The combined 45.4 acres requiring final closure are illustrated on Drawing J.1. The closure cost estimate includes the cost for evaluation, design, construction, contract administration, bonds, and legal fees.

Closure activities are outlined in Attachment H – Closure Plan. This cost estimate, in current dollars, generally follows the outline presented in the TCEQ "Cost Estimate Handbook for Closure and Postclosure Care," Version 1. A summary of the estimated closure costs is presented on Table J-1. Calculations and supporting data for the closure cost estimate are included in Appendix J1. The cost will be adjusted annually as indicated in Section 4.

3 POSTCLOSURE CARE COST ESTIMATE

30 TAC §330.507

The postclosure care period is 30 years for a Type I municipal solid waste facility. During this period, maintenance is required to assure the integrity and effectiveness of the final cover system and monitoring systems, erosion protection, and the stormwater drainage appurtenances. The estimated postclosure care cost is presented on Table J-2.

The postclosure care cost estimates are based on Attachment I – Postclosure Plan and provide a cost for the routine operation, maintenance and monitoring of the final cover system, gas monitoring system, groundwater monitoring system, and stormwater drainage appurtenances. This estimate for routine maintenance and monitoring predicts the cumulative cost throughout the 30-year postclosure care period. Calculations and supporting data for the postclosure care cost estimate are included in Appendix J2. The costs will be adjusted annually as indicated in Section 4.

4 COST ESTIMATE ADJUSTMENTS

30 TAC §330.503 and §330.507

During the active life of the unit, Waste Management of Texas, Inc. (WMTX) will annually adjust the cost estimates for inflation within 60 days prior to the anniversary date of the establishment of the financial instrument(s). The adjustment may be made by recalculating the maximum costs of closure in current dollars, or by using an inflation factor derived from the most recent *Implicit Price Deflator for Gross National Product* published by the United States Department of Commerce in its Survey of Current Business. The inflation factor is the result of dividing the latest published annual deflator by the deflator for the previous year. The first adjustment is made by multiplying the closure and postclosure care cost estimate by the inflation factor. The result is the adjusted closure and postclosure care cost estimate. Subsequent adjustments are made by multiplying the latest adjusted closure and postcosure care estimate by the latest inflation factor.

An increase in the closure or postclosure care cost estimate and the amount of financial assurance will be made if changes to the final closure or postclosure care plan or the landfill conditions increase the maximum cost. A request for an increase in the cost estimate and financial assurance will be submitted as a permit modification. The closure and postclosure care cost will be evaluated annually, to determine if an increase in the closure or postclosure care cost is required as a result of continued landfill development.

A reduction in the closure or postclosure care cost estimate and the amount of financial assurance may be requested if the cost estimate exceeds the maximum costs of closure at any time during the remaining life of the unit or postclosure care remaining over the postclosure care period. WMTX will submit written notice to the executive director of the detailed justification for the reduction of the cost estimates and the amount of financial assurance. A request for reduction in the cost estimate and financial assurance will be submitted as a permit modification.

5 FINANCIAL ASSURANCE

§§330.503 and 330.507

Financial assurance for closure and postclosure care for the facility will be established in accordance with 30 TAC Chapter 37, Subchapter R as related to Financial Assurance for Municipal Solid Waste Facilities. The evidence of financial assurance for the facility is provided in Appendix J3.

TABLES

Table J-1
Closure Cost Estimate

No.	ITEM		COST
1.0	**Engineering Costs**		
1.1	Topographic Survey	$	10,620.80
1.2	Boundary Survey	$	6,638.00
1.3	Site Evaluation	$	9,957.00
1.4	Development of Plans	$	45,400.00
1.5	Administration	$	11,000.00
1.6	Inspection and Testing	$	272,400.00
1.7	Groundwater Consultant	-	
1.8	Permit Compliance Package	$	15,000.00
	Engineering Total	$	371,015.80
2.0	**Construction Costs**		
2.1	Final Cover System		
2.1.1	Infiltration Layer	$	374,550.00
2.1.2	Flexible Membrane Cover	$	1,044,200.00
2.1.3	Drainage Layer	$	794,500.00
2.1.4	Erosion Layer	$	499,400.00
2.2	LFG Control System	$	240,000.00
2.3	Vegetation	$	113,500.00
2.4	Site Grading and Drainage	$	236,080.00
2.5	Site Fencing and Security	$	-
2.6	Leachate Collection System	$	-
2.7	Monitor Wells	$	-
2.8	Gas Probes	$	8,000.00
2.9	Storage and Transfer Units	$	15,000.00
	Construction Total	$	3,325,230.00
	Engineering and Construction Total	$	3,696,245.80
	Contingency	$	369,624.58
3.0	**Administrative Costs**		
3.1	Contract Performance Bond	$	73,924.92
3.2	TCEQ Contract Admin/Legal Fees	$	36,962.46
	Total	$	4,176,757.75

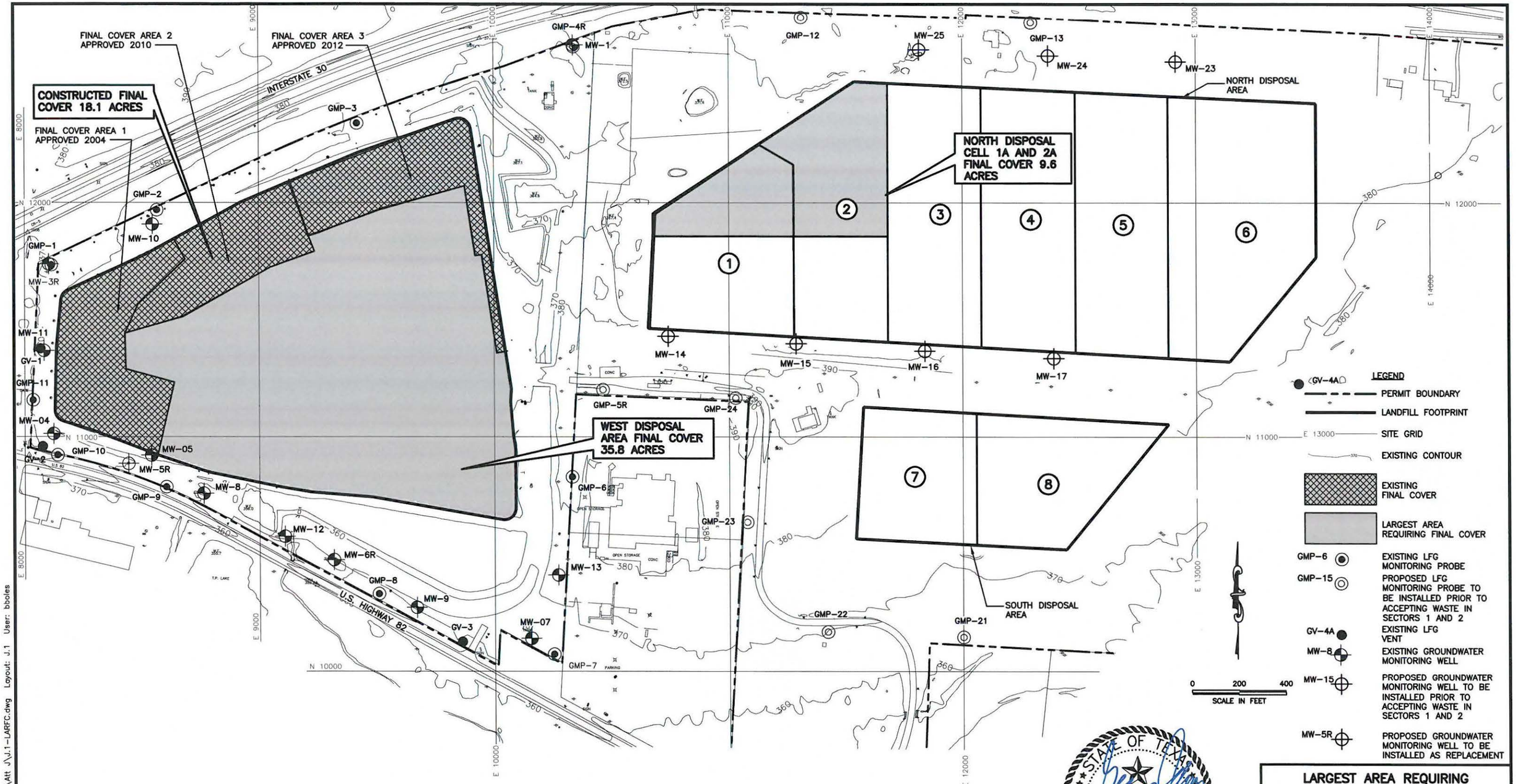
***This closure cost estimate was developed in 2013 dollars.**

Table J-2
Postclosure Care Cost Estimate

No.	ITEM	ANNUAL COST
1.0	Engineering Costs	$ 78,492.00
2.0	Construction / Maintenance Costs	$ 15,875.00
3.0	Leachate Disposal Costs	$ 4,332.00
4.0	Landfill Gas Management Costs	$ 15,875.00
	Subtotal	$ 114,574.00
	10% Contingency	$ 11,457.40
5.0	Administration	$ 11,457.40
	Annual Postclosure Costs	**$ 137,488.80**
	Total Postclosure Costs	**$ 4,124,664.00**

***This postclosure cost estimate was developed in 2013 dollars.**

DRAWINGS



NOTES:

1. EXISTING CONTOURS COMPILED BY AIR SURVEY FROM AERIAL SURVEY FLOWN MARCH 5, 2012.
2. PERMIT BOUNDARY PROVIDED BY MTG ENGINEERS AND SURVEYORS, INC.

LARGEST AREA REQUIRING FINAL COVER	
WEST DISPOSAL AREA	35.8 ACRES
NORTH DISPOSAL AREA	9.6 ACRES
TOTAL	45.4 ACRES

STATE OF TEXAS
GREGORY W. ADAMS
73356
LICENSED
PROFESSIONAL ENGINEER
9/29/2014

ISSUED FOR PERMITTING PURPOSES ONLY

REVISIONS						
REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY
–	9/12/14	TECHNICALLY COMPLETE	GLW	GWA	GWA	GWA

LARGEST AREA REQUIRING FINAL COVER

WASTE MANAGEMENT OF TEXAS, INC.
NEW BOSTON LANDFILL
PERMIT AMENDMENT APPLICATION

BIGGS & MATHEWS ENVIRONMENTAL
CONSULTING ENGINEERS
MANSFIELD ◆ WICHITA FALLS
817-563-1144
TBPE FIRM NO. F-256
TBPG FIRM NO. 50222

DSN.	GWA	DATE : 6/13	DRAWING J.1
DWN.	MJW	SCALE : GRAPHIC	
CHK.	GWA	DWG : J.1-LARFC.dwg	

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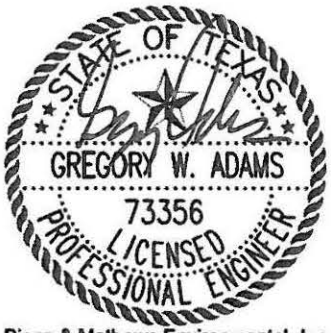
NEW BOSTON LANDFILL

APPENDIX J1
CLOSURE COST ESTIMATE CALCULATIONS



Biggs & Mathews Environmental, Inc.
Firm Registration No. F-256
9/29/2014

Includes pages J1-1 through J1-5

CLOSURE COST ESTIMATE CALCULATIONS

30 TAC §330.503

The largest area ever requiring final cover is 45.4 acres. This area is illustrated on Drawing J.1. The total area of the landfill requiring final cover will depend upon the stage of development at the time of closure. The closure cost estimate is based on Attachment H – Closure Plan. The following sections describe the line items of the cost estimate calculations.

1.0 ENGINEERING COSTS

The engineering costs include surveying and evaluation of the entire 331.9 acres having to be closed. However, the development of construction plans and construction quality assurance testing is limited to the area requiring final cover construction, as indicated by Drawing J.1.

1.1 Topographic Survey

A topographic survey will be required to determine the existing grades of the landfill. The topographic survey will be used to evaluate permit compliance and to design the grading, final cover system, and drainage system. The cost of the topographic survey is calculated on a lump sum basis.

1.2 Boundary Survey

A boundary survey is required for the filing of the affidavit of closure and deed record of any area of the site that has received waste. Other activities include publication of the public notice of closing activities. The cost of the boundary survey is calculated on a lump sum basis.

1.3 Site Evaluation

A site evaluation will be performed to identify waste disposal areas, analyze drainage and erosion protection, and to determine other site operational features that are not in compliance with the permit. The site evaluation also includes analysis of groundwater samples, gas probes, and review of site operating record. The cost of the site evaluation is based on the entire permit boundary.

1.4 Development of Plans

The final closure plan will be revised to reflect the changes to the final grading and drainage plans, specifications for vegetation, and design of any other improvements to bring the site into compliance with the permit. Construction plans, specifications, and contract documents will be prepared in suitable detail to allow the project to be

competitively bid. The cost of development of plans is based on the largest area requiring closure.

1.5 Administration

The consultant will advertise the project, receive the bids, evaluate the bids, award the closure construction contract and administer the contract during construction. The cost of administration is calculated based on the lump sum basis.

1.6 Closure Inspection and Testing

Closure inspection and testing includes observations by the professional of record during closure construction, thickness and permeability verifications, and preparation of a closure certification report. The cost of inspection and testing is based on the largest area requiring closure.

1.7 Groundwater Consultant

The groundwater monitoring well system has been developed in Attachment F – Groundwater Sampling and Analysis Plan. It is not anticipated that revisions will be necessary. The cost of a groundwater consultant is not required.

1.8 Permits

The consultant will prepare plans, specifications, and other documents necessary for compliance with applicable federal and state laws and requirements for the proper closure of the site (i.e., Stormwater Pollution Prevention Plan). The cost of permits is calculated based on the lump sum basis.

2.0 CONSTRUCTION COSTS

Construction costs include construction and final closure costs for 45.4 acres as shown on Drawing J.1.

2.1 Final Cover System

The forced final closure scenario assumes that the largest area requiring final cover will include the remainder of the West Disposal Area and the initial sector in the North Disposal Area. Both areas will require the installation of the composite final cover system. The closure plan provides for two optional composite final cover systems. This cost estimate assumes that the more expensive Sideslope Option A will be installed. Option A consist of an 18-inch thick infiltration layer, a double sided geocomposite drainage layer on the sideslopes and an 24-inch thick erosion layer.

2.1.1 Infiltration Layer

An 18-inch-thick infiltration layer, consisting of a clay material with a maximum permeability of 1×10^{-5} cm/sec, will be constructed over the intermediate cover. The

quantity of material required for the infiltration layer is based on the largest area requiring closure.

2.1.2 Flexible Membrane Cover

A 40-mil LLDPE flexible membrane cover will be installed above the infiltration layer. The quantity of material required for the flexible membrane cover is based on the largest area requiring closure.

2.1.3 Drainage Layer

A double-sided geocomposite drainage layer will be installed as the drainage layer on sideslopes. Although not required on the topslopes, it is included for conservatism. The quantity of material required for the geocomposite is based on the largest area requiring closure.

2.1.4 Erosion Layer

A 24-inch-thick erosion layer, with the top 6 inches capable of sustaining plant growth, will be placed over the geocomposite. The quantity of material required for the erosion layer is based on the largest area requiring closure.

2.2 Landfill Gas Control System

An active LFG control system and LFG flare system has been constructed and is in operation in the West Disposal Area. An active LFG control system will be required in the North Disposal Area.

2.3 Vegetation

Vegetative erosion protection will be established over the surface of the completed cover and general fill. The costs are based on seeding with native grasses and the application of appropriate fertilizer. The quantity for vegetation requirements is based on the largest area requiring closure.

2.4 Site Grading and Drainage

Site grading and drainage includes the final grading at the site, drainage improvements on the landfill cap, and sedimentation controls. The quantity of site grading will depend on the largest area requiring closure.

2.5 Site Fencing and Security

Site fencing and security for the entire landfill exists at the permit boundary. No expenses will be incurred for this item.

2.6 Leachate Collection System Completion

At the time of closure, the LCS will have been installed in existing cells. No expenses will be incurred for this item.

2.7 Groundwater Monitoring Well Installation

Groundwater monitoring wells will have been installed during site development. No additional groundwater monitoring wells will be required to be installed.

2.8 Landfill Gas Probe Installation

Although most of the landfill gas monitoring probes will have been installed during site development, two additional landfill gas monitoring probes will be installed.

2.9 Storage and Transfer Units

Storage and transfer units include the large item storage area, reusable materials staging area, citizen's convenience area, truck wheel wash, and the leachate storage tank. All waste materials that are processed or stored will be disposed at the active working face prior to closure. The citizen's drop-off area containers will be cleaned. The leachate storage tank will remain on site to collect generated leachate during postclosure conditions.

3.0 ADMINISTRATIVE COSTS

3.1 Contract Performance Bond

The cost of a performance bond is based on 2 percent of the total cost of engineering and construction.

3.2 TCEQ Administration of Contracts and Legal Fees

An amount based on 1 percent of the total cost of engineering and construction has been included to account for TCEQ administration of contracts and legal fees.

New Boston Landfill
CLOSURE COST ESTIMATE

Required: Estimate the cost to hire a third party to conduct final closure activities.

References:
1. Texas Natural Resources Conservation Commmission, *Cost Estimate Handbook for Closure and Postclosure Care,* Version 1, August 1993.
2. *2012 RS Means Heavy Construction Cost Data,* 26th Annual Edition.
3. Construction costs from recent similar construction projects and cost estimates from heavy construction contractors.

Solution:

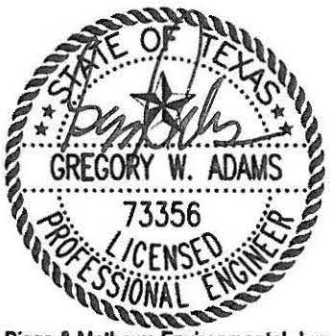
Final closure will require construction of final cover over	**45.4**	total acres
Final closure will require administrative closure of	**331.9**	acres
Final closure will require the installation of	**0**	monitor wells
Final closure will require the installation of	**2**	gas probes
Final closure will require the installation of	**9.6**	acres of LFG Control System

No.	ITEM	QTY	UNIT	UNIT COST	TOTAL COST
1.0	**Engineering Costs**				
1.1	Topographic Survey	331.9	ac	$ 32.00	$ 10,620.80
1.2	Boundary Survey	331.9	ac	$ 20.00	$ 6,638.00
1.3	Site Evaluation	331.9	ac	$ 30.00	$ 9,957.00
1.4	Development of Plans	45.4	ac	$ 1,000.00	$ 45,400.00
1.5	Administration	1	LS	$ 11,000.00	$ 11,000.00
1.6	Inspection and Testing	45.4	ac	$ 6,000.00	$ 272,400.00
1.7	Groundwater Consultant	0	LS	-	-
1.8	Permit Compliance Package	1	LS	$ 15,000.00	$ 15,000.00
	Engineering Total				$ 371,015.80
2.0	**Construction Costs**				
2.1	Final Cover System				
2.1.1	Infiltration Layer	45.4	ac	$ 8,250.00	$ 374,550.00
2.1.2	Flexible Membrane Cover	45.4	ac	$ 23,000.00	$ 1,044,200.00
2.1.3	Drainage Layer	45.4	ac	$ 17,500.00	$ 794,500.00
2.1.4	Erosion Layer	45.4	ac	$ 11,000.00	$ 499,400.00
2.2	LFG Control System	9.6	ac	$ 25,000.00	$ 240,000.00
2.3	Vegetation	45.4	ac	$ 2,500.00	$ 113,500.00
2.4	Site Grading and Drainage	45.4	ac	$ 5,200.00	$ 236,080.00
2.5	Site Fencing and Security	0	ac	$ -	$ -
2.6	Leachate Collection System	0	lf	$ -	$ -
2.7	Monitor Wells	0	ea	$ 5,000.00	$ -
2.8	Gas Probes	2	ea	$ 4,000.00	$ 8,000.00
2.9	Storage and Transfer Units	1	LS	$ 15,000.00	$ 15,000.00
	Construction Total				$ 3,325,230.00
	Engineering and Construction Total				$ 3,696,245.80
	Contingency	10	%		$ 369,624.58
3.0	**Administrative Costs**				
3.1	Contract Performance Bond	2.0	%		$ 73,924.92
3.2	TCEQ Contract Admin/Legal Fees	1.0	%		$ 36,962.46
	Total				**$ 4,176,757.75**

***This closure cost estimate was developed in 2013 dollars.**

NEW BOSTON LANDFILL

APPENDIX J2
POSTCLOSURE CARE COST ESTIMATE CALCULATIONS



Biggs & Mathews Environmental, Inc.
Firm Registration No. F-256

9/29/2014

Includes pages J2-1 through J2-3

POSTCLOSURE CARE COST ESTIMATE CALCULATIONS

30 TAC §330.63(j) and §330.507

The postclosure care period is 30 years for a Type I municipal solid waste facility. Postclosure cost estimates were developed for the combined areas with final cover in place and largest area requiring closure of 63.8 acres as depicted on Drawing J.1. The postclosure care cost estimate is based on Attachment I – Postclosure Plan. The following sections describe the line items of the postclosure cost estimate calculations.

1.0 ENGINEERING COSTS

1.1 Postclosure Plan

The postclosure plan provides a schedule for routine maintenance of the final cover system, the LCS, and the gas and groundwater monitoring systems. The Postclosure Plan is presented in Attachment I.

1.2 Site Inspections

Annual site inspections will be performed. Site inspections will identify areas experiencing settlement or subsidence, erosion or other drainage related problems, and will note the condition of the LCS, gas control, gas monitoring system, and groundwater monitoring system.

1.3 Correctional Plans and Specifications

Correctional plans and specifications include the costs for a consultant to prepare construction plans and specifications to correct problems identified during the site inspections. This cost is dependent upon the quality of care taken during the closure of the site and ongoing maintenance during previous postclosure care years. The cost may be significantly higher during earlier postclosure care years and be reduced to zero cost during the end of the postclosure care period.

1.4 Site Monitoring

Semiannual groundwater sampling and analysis will be performed for the groundwater monitoring wells. Quarterly gas monitoring will also be performed for the landfill gas monitoring probes utility trench vents and on-site buildings.

2.0 CONSTRUCTION/MAINTENANCE COSTS

Postclosure construction/maintenance will be required to correct problems identified during the site inspections and as specified by the correctional plans and specifications. These costs will also include ongoing site maintenance, cover and drainage maintenance, and annual seeding and mowing costs. Included in this item is the

plugging of the groundwater monitoring wells and gas monitoring probes at the end of the postclosure care period. Also included in this cost is the cleaning and removal of the leachate storage tanks at the end of the postclosure care period.

3.0 LEACHATE DISPOSAL

During the postclosure care period, the volume of leachate being generated should decrease substantially due to the completion of the final cover system. From Attachment D6, Appendix D6-B, an average leachate generation rate of 2,274 gallons per acre per year was used over the postclosure care period to determine the volume of leachate generated during the period. Multiplying the average leachate generation rate by 63.5 acres yields about 144,400 gallons per year with a disposal rate of $0.03 per gallon for disposal costs through an existing connection to a sanitary sewer system and POTW. An existing storage tank will provide temporary leachate storage in the event that the direct connection is not functional.

4.0 LANDFILL GAS MANAGEMENT SYSTEM

The installed active LFG control system will require routine O&M. The annual O&M cost for the active system is assumed to be $250.00 per acre. This cost includes correcting problems identified during site inspections, ongoing maintenance of the active system, and repair of the system as necessary. This cost accounts for the installed active LFG control system over the combined 63.5 acres for the area with final cover in place and largest area requiring final cover.

5.0 ADMINISTRATION

The cost for a third party to administer postclosure care activities is assumed at 10 percent of the annual postclosure costs.

New Boston Landfill
POSTCLOSURE COST ESTIMATE

Required: Estimate the cost to hire a third party to conduct postclosure care activities.

References: 1. Texas Natural Resources Conservation Commmission, *Cost Estimate Handbook for Closure and Postclosure Care*, Version 1, August 1993.

Solution:

Postclosure care period =	**30**	years
Permit area =	**331.9**	acres
Waste footprint[1] =	**63.5**	acres
Number of monitor wells =	**19**	
Number of gas probes =	**17**	
Number of gas vents =	**4**	
Number of gas probes and gas vents =	**21**	

No.	ITEM	ANNUAL QTY	UNIT	UNIT COST	TOTAL COST
1.0	**Engineering Costs**				
1.1	Postclosure Plan	NA	LS	$ -	$ -
1.2	Site Inspections	331.9	ac	$ 55.00	$ 18,254.50
1.3	Correctional Plan and Specifications	63.5	ac	$ 125.00	$ 7,937.50
1.4.1	Groundwater Monitoring[2]	38	event	$ 1,100.00	$ 41,800.00
1.4.2	Landfill Gas Monitoring[3]	84	event	$ 125.00	$ 10,500.00
2.0	**Construction / Maintenance Costs**	63.5	ac	$ 250.00	$ 15,875.00
3.0	**Leachate Disposal**	144,400	gal	$ 0.03	$ 4,332.00
4.0	**Landfill Gas Management**	63.5	ac	$ 250.00	$ 15,875.00
	Subtotal				$ 114,574.00
	Contingency	10	%		$ 11,457.40
5.0	**Administration**	10	%		$ 11,457.40
	Annual Postclosure Cost				$ 137,488.80
	Total Postclosure Cost				**$ 4,124,664.00**

***This postclosure cost estimate was developed in 2013 dollars.**

[1]The waste footprint includes the largest area requiring final cover (45.4 acres) and constructed final cover (18.1 acres).

[2]Number of wells times 2 events per year.

[3]Number of gas probes and vents times 4 events per year.

NEW BOSTON LANDFILL

APPENDIX J3
EVIDENCE OF FINANCIAL ASSURANCE

Technically Complete September 12, 2014

WASTE MANAGEMENT

800 Gessner Road, Suite 1100
Houston, TX 77024-4257
(713) 647-5542
(713) 647-5549 Fax

Mr. Richard A. Hyde, P.E.
Executive Director
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas 78711-3087

Re: New Boston Landfill
Bowie County, Texas
Permit Amendment Application
TCEQ Permit Amendment Application No. MSW 576C

Dear Mr. Hyde:

This letter is to provide Evidence of Financial Responsibility pursuant to 30 TAC §330.503(b) and §330.507(b) of the Municipal Solid Waste Management Regulations with respect to the above-referenced project.

Waste Management of Texas, Inc. agrees to provide financial assurance for this permit in accordance with the financial assurance schedule developed in Part III, Attachment J - Cost Estimates for Closure and Postclosure Care, or other amount specified by the Texas Commission on Environmental Quality (TCEQ).

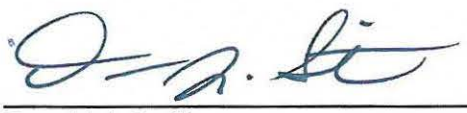
In accordance with §37.8031 the assurance will be provided by, but is not limited to, one or more of the following:

1. Trust Fund
2. Surety Bond Guaranteeing Payment or Performance
3. Letter of Credit
4. Insurance
5. Corporate Guarantee

After this permit amendment application is approved by TCEQ, Waste Management of Texas, Inc. will file the required financial assurance. A copy of the required documentation will be submitted to the executive director of the TCEQ within 60 days from issuance of this permit. The financial assurance will indicate the TCEQ as beneficiary and shall remain in full force and effect throughout the life of the permit.

ATTEST:

Waste Management of Texas, Inc.



Donald J. Smith
President

WASTE MANAGEMENT INC.

1001 Fannin, Suite 4000
Houston, TX 77002
(713) 512-6200
(866) 239-7964 Fax

July 25, 2013

UPS Standard

Ms. Deborah Wisneski (512) 239-6262
Texas Commission on Environmental Quality
Financial Assurance Section MC-184
12100 Park 35 Circle, Building A
Austin, Texas 78753

RE: Financial Assurance

Dear Deborah:

Enclosed are Bond Riders for each landfill listed below increasing closure and post-closure amounts to reflect inflation adjustment of 1.8%. For your reference the instruments are grouped by the legal entity name, which is shown on the cover page and a summary sheet listing the specific instrument(s) on file for each facility is attached to the respective rider.

Also enclosed are revised Schedule A and Exhibit A for the Standby Trust Agreements on file with the TCEQ. These documents are attached last in each group.

Facilities For USA Waste of Texas Landfills, Inc.	**MSW Permit No.**
Addicks-Fairbanks Landfill	1301
Fairbanks North Houston Landfill	1565-A
Greenshadow Landfill	1540
Hawthorne Park C&D	2185
Koenig Street Transfer Station	1483-A

Facilities For Western Waste of Texas, L.L.C.	**MSW Permit No.**
City of Conroe Type I Landfill	81-A
New Boston Landfill	576
Newton County Landfill	2242

Facilities For USA Waste Landfill Operations and Transfer, Inc.	**MSW Permit No.**
Sam Houston Recycling Center	1471

Facilities For Western Waste Industries	MSW Permit No.
Texarkana Transfer Station	1022

Facilities for Cougar Landfill, Inc.	MSW Permit No.
Cougar Landfill	1921

If you have any questions, please feel free to call me at (713) 512-6282.

Sincerely,

Donna L. Meals AFSB, ARM
Director, Financial Assurance

Enclosures

/ls

cc: Paula Carboni, WMI (File the enclosed documents in operating record)
Heather Lehrmann, WMI (File the enclosed documents in operating record)
Drew Shafer, WMI (File the enclosed documents in operating record)

Western Waste of Texas, L.L.C.

NEW BOSTON LANDFILL, #576

8/1/2013	Lexon #1005405/5009897
Closure	$3,704,890.58
Post-Closure	$1,749,838.68
Total	$5,454,729.26

Facility Name: New Boston Landfill
MSW Permit No. 576

Bond No. 1005405 / 5009897

RIDER

To be attached to and form a part of Closure/Post Closure Bond, No. 1005405 / 5009897

dated the 8th day of March , 2004 issued by
LEXON Insurance Company and Bond Safeguard Insurance Company
10002 Shelbyville Road, Suite 100, Louisville, KY 40223 as Surety, on behalf of

Western Waste of Texas, LLC, 1030 Highway 82 West, New Boston, TX 75570 , as Principal,

in the penal sum of Three Million and 00/100
Dollars ($ 3,000,000.00), and in favor of Texas Commission on Environmental Quality
12100 Park 35 Circle, Building A, Austin, TX 78753

In consideration of the premium charged for the attached bond, it is hereby agreed that the attached bond be amended as follows:

This rider will change the Principal name from Western Waste of Texas, LLC to Western Waste of Texas, L.L.C.
This rider will adjust the bond amount as follows:

Current Closure Amount:	$3,906,387.66
New Closure Amount:	$3,704,890.58
Current Post-Closure Amount:	$1,646,233.34
New Post-Closure Amount:	$1,749,838.68
Total Penal Sum:	$5,454,729.26

Provided, However, that the attached bond shall be subject to all its agreements, limitations and conditions except as herein expressly modified, and further that the liability of the Surety under the attached bond and the attached bond as amended by this rider shall not be cumulative.

This rider shall become effective as of the 1st day of August , 2013

Signed, sealed and dated this 18th day of June , 2013

WITNESS: Laura Sudbeth

PRINCIPAL { Western Waste of Texas, L.L.C.
By Donna L. Meals
Donna L. Meals, Authorized Representative

WITNESS: Dawson West

LEXON Insurance Company
By Jackie C. Koestel
Jackie C. Koestel , Attorney-in-Fact

WITNESS: Dawson West

Bond Safeguard Insurance Company
By Sandra L Fusinetti
Sandra L. Fusinetti , Attorney-in-Fact

POWER OF ATTORNEY

Lexon Insurance Company

LX - 067590

KNOW ALL MEN BY THESE PRESENTS, that **LEXON INSURANCE COMPANY**, a Texas Corporation, with its principal office in Louisville, Kentucky, does hereby constitute and appoint:

Brook T. Smith, Mark A. Guidry, Raymond M. Hundley, Jason D. Cromwell, James H. Martin, Sandra L. Fusinetti, ****

Deborah Neichter, Jill Kemp, Jackie C. Koestel, Sheryon Quinn, Dawson West, Bonnie J. Wortham, Amy Meredith, Lynnette Long, Barbara Duncan **********

its true and lawful Attorney(s)-In-Fact to make, execute, seal and deliver for, and on its behalf as surety, any and all bonds, undertakings or other writings obligatory in nature of a bond.

This authority is made under and by the authority of a resolution which was passed by the Board of Directors of **LEXON INSURANCE COMPANY** on the 1st day of July, 2003 as follows:

Resolved, that the President of the Company is hereby authorized to appoint and empower any representative of the Company or other person or persons as Attorney-In-Fact to execute on behalf of the Company any bonds, undertakings, policies, contracts of indemnity or other writings obligatory in nature of a bond not to exceed $ 7,500,000.00 Seven million five hundred thousand dollars ********** dollars, which the Company might execute through its duly elected officers, and affix the seal of the Company thereto. Any said execution of such documents by an Attorney-In-Fact shall be as binding upon the Company as if they had been duly executed and acknowledged by the regularly elected officers of the Company. Any Attorney-In-Fact, so appointed, may be removed for good cause and the authority so granted may be revoked as specified in the Power of Attorney.

Resolved, that the signature of the President and the seal of the Company may be affixed by facsimile on any power of attorney granted, and the signature of the Assistant Secretary, and the seal of the Company may be affixed by facsimile to any certificate of any such power and any such power or certificate bearing such facsimile signature and seal shall be valid and binding on the Company. Any such power so executed and sealed and certificate so executed and sealed shall, with respect to any bond of undertaking to which it is attached, continue to be valid and binding on the Company.

IN WITNESS THEREOF, **LEXON INSURANCE COMPANY** has caused this instrument to be signed by its President, and its Corporate Seal to be affixed this 21st day of September, 2009.

LEXON INSURANCE COMPANY A TEXAS INSURANCE COMPANY

LEXON INSURANCE COMPANY

BY _____

David E. Campbell
President

ACKNOWLEDGEMENT

On this 21st day of September, 2009, before me, personally came David E. Campbell to me known, who being duly sworn, did depose and say that he is the President of **LEXON INSURANCE COMPANY**, the corporation described in and which executed the above instrument; that he executed said instrument on behalf of the corporation by authority of his office under the By-laws of said corporation.

"OFFICIAL SEAL"
MAUREEN K. AYE
Notary Public, State of Illinois
My Commission Expires 09/21/13

_____

Maureen K. Aye
Notary Public

CERTIFICATE

I, the undersigned, Assistant Secretary of **LEXON INSURANCE COMPANY**, A Texas Insurance Company, DO HEREBY CERTIFY that the original Power of Attorney of which the foregoing is a true and correct copy, is in full force and effect and has not been revoked and the resolutions as set forth are now in force.

Signed and Sealed at Woodridge, Illinois this 18th Day of June, 2013.

LEXON INSURANCE COMPANY A TEXAS INSURANCE COMPANY

_____

Philip G. Lauer
Assistant Secretary

"WARNING: Any person who knowingly and with intent to defraud any insurance company or other person, files an application for insurance or statement of claim containing any materially false information, or conceals for the purpose of misleading, information concerning any fact material thereto, commits a fraudulent insurance act, which is a crime and subjects such person to criminal and civil penalties."

POWER OF ATTORNEY

AO 43937

Bond Safeguard INSURANCE COMPANY

KNOW ALL MEN BY THESE PRESENTS, that **BOND SAFEGUARD INSURANCE COMPANY**, an Illinois Corporation with its principal office in Woodridge, Illinois, does hereby constitute and appoint: Brook T. Smith, Raymond M. Hundley, Jason D. Cromwell, James H. Martin,***** Myrtie F. Henry, Deborah Neichter, Jill Kemp, Jackie C. Koestel, Sheryon Quinn, Dawson West, Bonnie J. Wortham, Amy Meredith, Lynnette Long, Barbara Duncan, Sandra L. Fusinetti***

its true and lawful Attorney(s)-In-Fact to make, execute, seal and deliver for, and on its behalf as surety, any and all bonds, undertakings or other writings obligatory in nature of a bond.

This authority is made under and by the authority of a resolution which was passed by the Board of Directors of **BOND SAFEGUARD INSURANCE COMPANY** on the 7th day of November, 2001 as follows:

Resolved, that the President of the Company is hereby authorized to appoint and empower any representative of the Company or other person or persons as Attorney-In-Fact to execute on behalf of the Company any bonds, undertakings, policies, contracts of indemnity or other writings obligatory in nature of a bond, $ 9,500,000.00 Nine million five hundred thousand dollars **

which the Company might execute through its duly elected officers, and affix the seal of the Company thereto. Any said execution of such documents by an Attorney-In-Fact shall be as binding upon the Company as if they had been duly executed and acknowledged by the regularly elected officers of the Company. Any Attorney-In-Fact, so appointed, may be removed for good cause and the authority so granted may be revoked as specified in the Power of Attorney.

Resolved, that the signature of the President and the seal of the Company may be affixed by facsimile on any power of attorney granted, and the signature of the Assistant Secretary, and the seal of the Company may be affixed by facsimile to any certificate of any such power and any such power or certificate bearing such facsimile signature and seal shall be valid and binding on the Company. Any such power so executed and sealed and certificate so executed and sealed shall, with respect to any bond or undertaking to which it is attached, continue to be valid and binding on the Company.

IN WITNESS THEREOF, **BOND SAFEGUARD INSURANCE COMPANY** has caused this instrument to be signed by its President, and its Corporate seal to be affixed this 7th day of November, 2001.

BOND SAFEGUARD INSURANCE COMPANY

BOND SAFEGUARD INSURANCE COMPANY — AN ILLINOIS INSURANCE COMPANY

BY____________________
David E. Campbell
President

ACKNOWLEDGEMENT

On this 7th day of November, 2001, before me, personally came David E. Campbell to me known, who being duly sworn, did depose and say that he is the President of **BOND SAFEGUARD INSURANCE COMPANY**, the corporation described in and which executed the above instrument; that he executed said instrument on behalf of the corporation by authority of his office under the By-laws of said corporation.

"OFFICIAL SEAL"
MAUREEN K. AYE
Notary Public, State of Illinois
My Commission Expires 09/21/13

____
Maureen K. Aye
Notary Public

CERTIFICATE

I, the undersigned, Assistant Secretary of **BOND SAFEGUARD INSURANCE COMPANY**, An Illinois Insurance Company, DO HEREBY CERTIFY that the original Power of Attorney of which the foregoing is a true and correct copy, is in full force and effect and has not been revoked and the resolutions as set forth are now in force.

Signed and Sealed at Woodridge, Illinois this 18th Day of June, 2013

BOND SAFEGUARD INSURANCE COMPANY — AN ILLINOIS INSURANCE COMPANY

____
Philip G. Lauer
Assistant Secretary

"WARNING: Any person who knowingly and with intent to defraud any insurance company or other person, files an application for insurance or statement of claim containing any materially false information, or conceals for the purpose of misleading, information concerning any fact material thereto, commits a fraudulent insurance act, which is a crime and subjects such person to criminal and civil penalties."

Standby Trust Agreement Dated March 1, 2001
Western Waste of Texas, LLC, Grantor

Schedule "A"
(Revised 8/1/13)

1.	Facility:	City of Conroe Landfill Montgomery County Conroe, Texas 77301
	Permit No.:	MSW 81-A
	Closure:	$601,376.12
	Post-Closure:	$3,426,942.17
	Total Bond:	$4,028,318.29
2.	Facility:	New Boston Landfill 1030 Highway 82 West New Boston, Texas 75570
	Permit No.:	MSW 576
	Closure:	$3,704,890.58
	Post-Closure:	$1,749,838.68
	Total Bond:	$5,454,729.26
3.	Facility:	Newton County Landfill 5 Miles North of Highway 12 on Highway 87 Deweyville, Texas 77626
	Permit No.:	MSW 2242
	Closure:	$9,930,004.65
	Post-Closure:	$4,159,004.54
	Total Bond:	$14,089,009.19

NEW BOSTON LANDFILL
CITY OF NEW BOSTON
BOWIE COUNTY, TEXAS
TCEQ PERMIT NO. MSW 576C

PERMIT AMENDMENT APPLICATION

PART IV – SITE OPERATING PLAN

Prepared for

Waste Management of Texas, Inc.

Revised September 2014

9/29/2014

Biggs & Mathews Environmental, Inc.
Firm Registration No. F-256

Prepared by

BIGGS & MATHEWS ENVIRONMENTAL

1700 Robert Road, Suite 100 • Mansfield, Texas 76063 • 817-563-1144

TEXAS BOARD OF PROFESSIONAL ENGINEERS
FIRM REGISTRATION NO. F-256

TEXAS BOARD OF PROFESSIONAL GEOSCIENTISTS
FIRM REGISTRATION NO. 50222

Biggs & Mathews Environmental, Inc.
Firm Registration No. F-256

CONTENTS

Biggs & Mathews Environmental, Inc.
Firm Registration No. F-256

CONTENTS (CONTINUED)

Biggs & Mathews Environmental, Inc.
Firm Registration No. F-256

CONTENTS (CONTINUED)

LIST OF ACRONYMS

ADC - Alternative Daily Cover

ADCOP - Alternative Daily Cover Operating Plan

CFR - Code of Federal Regulations

DOT - Department of Transportation

EPA - U.S. Environmental Protection Agency

FWS - U.S. Fish and Wildlife Service

GLER - Geosynthetics Liner Evaluation Report

LCS - Leachate Collection System

LFG - Landfill Gas

MSDS - Material Safety Data Sheets

msl - Mean Sea Level

MSW - Municipal Solid Waste

non-RACM - Nonregulated Asbestos-Containing Material

OSHA - Occupational Health and Safety Administration

PCBs - Polychlorinated Biphenyls

POTW – Publicly Owned Treatment Works

RACM - Regulated Asbestos-Containing Material

RCRA - Resource Conservation and Recovery Act

SLER - Soil Liner Evaluation Report

SOP - Site Operating Plan

SPCC – Spill Prevention Control and Countermeasures

SWPPP – Stormwater Pollution Prevention Plan

TAC - Texas Administrative Code

TCEQ - Texas Commission on Environmental Quality

TxDOT - Texas Department of Transportation

WWTP - Wastewater Treatment Plant

TABLES AND FIGURES

Tables

Figures

1 INTRODUCTION

30 TAC §§330.65, 330.121, 330.123, 330.127

1.1 Introduction

This Site Operating Plan (SOP) has been prepared for the New Boston Landfill consistent with 30 TAC §330.65 and contains the information required by §330.127. This SOP includes provisions for site management and site operating personnel to meet the general and site-specific requirements included in: 1) Subchapter D, §§330.121 through 330.179, relating to Operation Standards for Municipal Solid Waste Landfill Facilities and 2) Subchapter E, §§330.201 through 330.249, relating to Operational Standards for Municipal Solid Waste Storage and Processing Units for the day-to-day operation of the facility. This SOP will be retained on site throughout the active life of the facility and throughout the postclosure care maintenance period.

The New Boston Landfill is an existing Type I Municipal Solid Waste Management facility owned and operated by Waste Management of Texas, Inc. (WMTX). The New Boston Landfill is located in Bowie County west of the city of New Boston, Texas. The landfill address is 1030 W US Highway 82, New Boston, TX. The primary function of the facility is Type I and Type IV municipal solid waste disposal. The major classifications of solid waste to be accepted at the facility include Type I and Type IV municipal solid waste, special waste, and Class 2 and 3 industrial wastes. Support facilities include a site entrance road, gatehouse, scales, office equipment and maintenance building, material storage area, citizen's convenience center and truck wheel wash.

The West Disposal Area is permitted to accept Type I and Type IV municipal solid waste and has both Subtitle D and pre-Subtitle D lined areas. All of the areas within the West Disposal Area have been constructed and approved by the TCEQ. The West Disposal Area is currently active and will continue to be active as the first cells in the North Disposal Area are developed.

The North Disposal Area will be permitted to accept Type I and Type IV municipal solid waste and will have standard Subtitle D liners, leachate collection and cover systems for Type I waste. The South Disposal Area will be permitted to accept only Type IV solid waste and will have standard Subtitle D liners and cover systems for Type IV waste.

The New Boston Landfill provides waste disposal for individuals, businesses, and communities in Bowie, Cass, Marion, Morris, Red River and Titus counties in Texas, and Miller County in Arkansas. The facility receives waste from public and private haulers. The New Boston Landfill has a waste acceptance rate of 151,600 tons per year or about 486 tons per day, as averaged over the past five years. Based on projected waste acceptance rates, the landfill estimates that the maximum waste acceptance rate will reach 177,000 tons per year or about 568 tons per day. This SOP includes provisions for accommodating waste receipts of up to 249,600 tons per year or about 800 tons per day.

This SOP provides guidance for site management and site operating personnel for daily operation of the New Boston Landfill. This SOP also includes provisions for site management and site operating personnel to meet the general and site-specific requirements for the waste acceptance rate established in the permit.

1.2 General

The operational requirements are defined in the approved Part III, Facility Investigation and Design and Part IV, Site Operating Plan (SOP). The following documents are operational requirements and are part of the site operating record.

Operational requirements are included in the following:

- Municipal Solid Waste Disposal Permit No. 576C
- Part III – Facility Investigation and Design
  - Attachment A – Site Development Plan Narrative
  - Attachment B – General Facility Design
  - Attachment C – Facility Surface Water Drainage Report
  - Attachment D – Waste Management Unit Design
  - Attachment E – Geology Report
  - Attachment F – Groundwater Monitoring Plan
  - Attachment G – Landfill Gas Management Plan
  - Attachment H – Closure Plan
  - Attachment I – Postclosure Plan
  - Attachment J – Cost Estimate for Closure and Postclosure Care
- Part IV – Site Operating Plan

1.3 Pre-Operation Notice

In accordance with §330.123, the facility will provide notice of construction of a new waste disposal area (sector) or cell in the form of a Soil Liner Evaluation Report (SLER) and a Geosynthetics Liner Evaluation Report (GLER) to the executive director for review 14 days prior to the placement of waste. The executive director has 14 days to provide a verbal or written response. If no response has been received by the end of the 14th day following the executive director's receipt of the report, the operator may begin placing waste. The provisions of this section are not applicable to the initial opening of a municipal solid waste landfill.

2 RECORDKEEPING REQUIREMENTS

30 TAC §330.125

2.1 Documents

The New Boston Landfill will maintain the operating record for the facility on site. Consistent with §330.125(a), copies of documents that are part of the approved permitting process that are considered part of the site operating record are listed in Table 2-1.

2.2 Analytical Data

In accordance with §330.125(b), the New Boston Landfill will record and retain in the site operating record any and all records for those items listed in Table 2-1 within seven working days following completion or receipt of analytical data.

2.3 Site Operating Record

In accordance with §330.125(c), the New Boston Landfill will place the items included in Table 2-1 into the site operating record within the specified time period. The New Boston Landfill will maintain the site operating record in an organized format, where information is easily locatable and retrievable. The site operating record will be furnished to the executive director upon request, and will be made available on site for inspection by the executive director.

2.4 Record Retention

In accordance with §330.125(a), a copy of the permit, the approved site development plan, the site operating plan, the final closure plan, the postclosure care maintenance plan, the landfill gas management plan, and any other required plan or other related document; and in accordance with §330.125(b)(1) all location restrictions documentations; and in accordance with §330.125(b)(9) copies of all correspondence and responses related to operation of the facility, modifications to the permit, approvals, and other matters pertaining to technical assistance will be maintained at the facility; and in accordance with §330.125(d) for the life of the facility including the postclosure care period.

Other recordkeeping documents identified in §330.125(b) will be maintained at the facility for five years, at which time the information and records will be transferred to a third-party document storage facility, and in accordance with §330.125(d) where it will remain for the life of the facility including postclosure care period. Identification of the third-party document storage facility will be maintained in the site operating record at the facility and maintained at the facility for the life of the facility and the postclosure care period. Upon request, records stored at the third-party document storage facility will be retrieved within 72 hours and furnished to the executive director within 72 hours of retrieval for inspection.

2.5 Personnel Training Records and Licenses

In accordance with §330.125(e), the New Boston Landfill will maintain personnel training records in accordance with §335.586(d) and (e). Personnel training requirements will be consistent with Section 3 – Personnel and Training of this SOP. Personnel training records for current facility personnel will be maintained and retained until closure of the facility. Records of former employees will be maintained for three years from the date the employee last worked at the facility. Personnel training records may accompany personnel transferred within Waste Management. Records for each facility employee will include name, job title, job description, introductory training, continuing training, and documentation of training. In accordance with §330.125(f), the facility will maintain personnel operator licenses as required by 30 TAC Chapter 30 Subchapter F, relating to municipal solid waste facility supervisors. Personnel training records and personnel operator licenses will be maintained in the site operating record as listed in Table 2-1.

2.6 Alternative Schedules

In accordance with §330.125(g), the executive director may set alternative schedules for recordkeeping and notification requirements as specified in §330.125(a)-(f), except for notification requirements contained in §330.545 or landowners whose property overlies any part of the plume of contamination, if contaminants have migrated off site as indicated.

2.7 Annual Waste Acceptance Rate

As listed in Table 2-1, the New Boston Landfill will maintain as part of the site operating record documentation of the annual waste acceptance rate for the facility in accordance with §330.125(h). Records will include maintaining the quarterly solid waste summary reports and the annual solid waste summary report as required by §330.675. The annual waste acceptance rate, as established by the sum of the previous four quarterly summary reports, will be evaluated by the New Boston Landfill to determine if the waste acceptance rate exceeds the rate estimated in the permit application. Should an increase in waste acceptance be established, the facility will determine if the increase is due to a temporary occurrence. Should the waste acceptance rate exceed that established in the permit application, and not be due to a temporary occurrence, a permit modification would be prepared and filed within 90 days of the exceedance in accordance with then applicable TCEQ regulations to propose changes, if necessary, to manage the increased waste acceptance rate to protect human health and the environment. An increase in the waste acceptance rate that is determined to be a temporary occurrence does not require the submittal of a permit modification. This section is not intended to make an estimated waste acceptance rate a limiting parameter of the permit.

The New Boston Landfill has a waste acceptance rate of 151,600 tons per year or about 486 tons per day, as averaged over the past five years. Based on projected waste acceptance rates, the landfill estimates that the maximum waste acceptance rate will reach 177,000 tons per year or about 568 tons per day. This SOP includes provisions for accommodating waste receipts of up to 249,600 tons per year or about 800 tons per day.

Table 2-1
New Boston Landfill
Records to be Maintained in the Site Operating Record

Records to be Maintained in the Site Operating Record	Frequency	Rule Citation
Municipal Solid Waste Disposal Permit No. 576C	Submittal of Permit Amendment Application	§330.125(a)
Part I – Site and Applicant Information	Submittal of Permit Amendment Application	§330.125(a)
Part II – Existing Conditions and Character of the Facility and Surrounding Area	Submittal of Permit Amendment Application	§330.125(a) and §330.125(b)(1)
Part III – Facility Investigation and Design	Submittal of Permit Amendment Application	§330.125(a)
Attachment A – Site Development Plan Narrative	Submittal of Permit Amendment Application	§330.125(a)
Attachment B – General Facility Design	Submittal of Permit Amendment Application	§330.125(a)
Attachment C – Facility Surface Water Drainage Report	Submittal of Permit Amendment Application	§330.125(a)
Attachment D – Waste Management Unit Design	Submittal of Permit Amendment Application	§330.125(a)
Attachment E – Geology Report	Submittal of Permit Amendment Application	§330.125(a)
Attachment F – Groundwater Monitoring Plan	Submittal of Permit Amendment Application	§330.125(a)
Attachment G – Landfill Gas Management Plan	Submittal of Permit Amendment Application	§§330.125(a) and 330.159
Attachment H – Closure Plan	Submittal of Permit Amendment Application	§§330.125(a) and 330.125(b)(6)
Attachment I – Postclosure Plan	Submittal of Permit Amendment Application	§§330.125(a) and 330.125(b)(6)
Attachment J – Cost Estimate for Closure and Postclosure Care	Submittal of Permit Amendment Application	§§330.125(a) and 330.125(b)(7)
Part IV – Site Operating Plan	Submittal of Permit Amendment Application	§330.125(a)
State and Federal Regulations	Submittal of Permit Amendment Application	§330.125(a)
Location Restriction Demonstrations	Submittal of Permit Amendment Application	§330.125(b)(1)
Inspection records, training procedures and notification procedures related to excluding the receipt of prohibited waste	Per occurrence	§330.125(b)(2)
Results from gas monitoring events	Quarterly	§§330.125(b)(3) and 330.159
Remediation plans relating to explosive and other gases	Per occurrence	§§330.125(b)(3) and 330.159
Unit design documentation for the placement of leachate or gas condensate in the landfill	Per occurrence	§330.125(b)(4)
Groundwater monitoring and corrective action demonstrations, certifications, findings, monitoring, testing and analytical data	As required	§330.125(b)(5)
Closure and postclosure monitoring, testing, and analytical data	As required	§330.125(b)(6)
Cost estimates and financial assurance documentation for closure and postclosure	Annually	§330.125(b)(7)

Table 2-1
New Boston Landfill
Records to be Maintained in the Site Operating Record
(Continued)

Records to be Maintained in the Site Operating Record	Frequency	Rule Citation
Facility operation, permit modification, approvals, and technical assistance correspondence and responses	Per occurrence	§330.125(b)(9)
Special waste manifests, shipping documents, trip tickets, and all other documents relating to special waste	Per occurrence	§330.125(b)(10)
Other documents specified in the permit or by the executive director	As required	§330.125(b)(12)
Personnel training records in accordance with §335.586(d)-(e)	As needed	§330.125(e)
Personnel operator licenses	As needed	§330.125(f)
Records to document the annual waste acceptance rate including quarterly solid waste summary reports and annual solid waste summary reports	Quarterly and annually	§330.125(h)
Load inspection records	Per occurrence	§330.127(5)(B)
Fire occurrence notices	Per occurrence	§330.129
Inspection records and training procedures relating to fire prevention and site safety	As needed	§330.129
Access control breach and repair notices	Per occurrence	§330.131
All site inspection and maintenance documentation noted in Section 8.27 – Site Inspection and Maintenance Schedule	As required	N/A
A record of each unauthorized material removal event	Per occurrence	§330.133(b)
A record of alternate operating hours	As required	§330.135(d)
Water, crude oil and/or natural gas well location and plugging reports	Within 30 days of discovery	§330.161(a)-(c)
Cover inspection records	As required	§330.165(h)
Updated site plan of RACM disposal area	As required	§330.171(c)(3)(B)
RACM acceptance records including the location, depth and volume of each load	Per occurrence	§330.171(c)(3)(B)
RACM contingency plan compliance documentation	Prior to the acceptance of RACM	§330.171(c)(3)(H)
Leachate and contaminated water off-site disposal records	Per occurrence	N/A

3 PERSONNEL AND TRAINING

30 TAC §§330.127(1), (3), (4)

3.1 Personnel

The New Boston Landfill will be staffed with qualified individuals experienced with municipal solid waste disposal operations and earthmoving construction projects. See Figure 3.1 – Organizational Chart for the personnel organization. Refer to Table 3-1 for a summary of job descriptions, minimum qualifications, and required training for landfill personnel.

The landfill manager is responsible for overall facility management and is designated as the contact person for regulatory compliance matters. The landfill manager is responsible for assuring that adequate personnel and equipment are available to provide facility operation in accordance with the Facility Investigation and Design, SOP, and the TCEQ regulations. The landfill manager is responsible for daily operations, administers the facility's SOP, and also serves as the emergency coordinator. The landfill manager may designate other personnel to assist with the daily site operating requirements. The landfill manager, at a minimum, will meet the requirements for a Class A operator's license. The landfill manager will obtain and maintain the applicable required municipal solid waste operator license consistent with the requirements of §§30.201, 30.207, and 30.210 through 30.214. The landfill manager may obtain the applicable required license as a provisional license, consistent with the requirements of §30.211.

The lead operator is responsible for actual landfill operations. The equipment operators receive direction from the lead operator on a daily basis regarding waste disposal operations including the active working face, excavation operations, and placement of daily and intermediate cover. The lead operator will report to the landfill manager. The lead operator, at a minimum, will have experience in earthmoving operations and have the ability to be trained in municipal solid waste disposal operations. The lead operator, at a minimum, will have experience in landfill operations and experience in municipal solid waste disposal operations and earthmoving operations. The lead operator may obtain and maintain the applicable required municipal solid waste operator license consistent with the requirements of §§30.201, 30.207, and 30.210 through 30.214. The lead operator may obtain the applicable required license as a provisional license, consistent with the requirements of §30.211.

The gate attendant(s), stationed at the site entrance, is primarily responsible for maintaining complete and accurate records of vehicles and solid waste entering the facility. The gate attendant will be trained in site safety procedures, to visually check for unauthorized wastes, to weigh vehicles, measure waste volumes if necessary, and to collect waste disposal fees. The gate attendant will be present all hours the New Boston Landfill is open to the public. The gate attendant will report to the landfill manager. The gate attendant, at a minimum, will have a basic understanding of accounting principles, and basic communication skills.

Equipment operator(s) are responsible for the safe operation of the equipment. As the personnel most closely involved with the actual landfill operation, these employees are responsible for being alert to potentially dangerous conditions, or careless and improper actions on the part of non-employees and other persons while on the premises. Equipment operators monitor and direct unloading vehicles, visually observe for unauthorized wastes, and are also responsible for maintenance, construction, litter abatement, and general site cleanup. The equipment operators will intervene as necessary to prevent accidents and report unsafe conditions immediately to the landfill manager. Equipment operators report to the lead operator. Equipment operators, at a minimum, must be experienced in the operation of heavy equipment, experienced in earthmoving operations, and demonstrate the ability to be trained in municipal solid waste disposal operations. Equipment operators will have a minimum of six months of experience in heavy equipment operation or on-the-job training by the lead operator, and training by the landfill manager in SOP requirements for daily cover and unauthorized waste. Equipment operators may also be trained in bird control activities.

Other site personnel or laborer(s) may be employed from time to time in categories such as maintenance, construction, litter abatement, and general site cleanup. Site personnel may be permanent or part-time.

Supplemental regional personnel whom are available to the New Boston Landfill include the Director of Disposal Operations, Environmental Manager, Engineering Manager, Special Wastes Approval Manager, and landfill gas system monitoring staff. These supplemental personnel assist the landfill manager with environmental monitoring and compliance, engineering and facility construction activities, and special waste acceptance evaluations. The supplemental personnel are not assigned exclusively to the New Boston Landfill and are not involved in daily operations.

3.2 General Instructions

New Boston Landfill personnel should have a basic understanding of the contents of this SOP. The landfill manager should have a basic knowledge of the approved Part III – Facility Investigation and Design. New Boston Landfill personnel will follow the general instructions provided in the SOP and the Facility Investigation and Design. Refer to Section 8.27 – Site Inspection and Maintenance Schedule for a listing of operational tasks required.

3.3 Training

The two major objectives of the personnel training program at the New Boston Landfill are:

1. To thoroughly train appropriate employees in the proper performance of their individual job duties, which pertain to solid waste management.

2. To prepare appropriate employees to implement the proper emergency procedures effectively, if necessary.

To accomplish these objectives, both on-the-job training and formal instruction in solid waste management procedures, safety, emergency procedures, and facility operations procedures are provided to personnel involved with the handling, transportation, and disposal of solid waste. Personnel will receive training appropriate to individual needs as well as specific job duties and responsibilities. These personnel will be trained to perform their duties safely and in accordance with the applicable requirements for solid waste management. The training program will be designed to enable facility personnel to respond effectively to emergencies by familiarizing personnel with emergency procedures and equipment. Personnel must successfully complete the in-house training program within six months of employment or assignment to this facility. Additional supervision will be provided to personnel during training, and personnel activities will be limited during the training period.

The personnel training program includes familiarization with regulations applying to generators of unauthorized, regulated hazardous, and prohibited PCB wastes and provides general descriptive characteristics of unauthorized, regulated hazardous, and prohibited PCB wastes. Appropriate New Boston Landfill personnel will be trained to recognize unauthorized, regulated hazardous and prohibited PCB wastes in the incoming loads and to help prevent their disposal at the landfill. Personnel training will be performed by individuals experienced in solid waste management procedures and operations, safety, and related subjects.

The training program will also ensure that personnel, as appropriate for their position, are familiar with emergency procedures, emergency equipment, and emergency systems, including:

- Using, inspecting, repairing and replacing facility emergency and monitoring equipment
- Communications or alarm systems
- Response to fires or explosions
- Response to groundwater contamination incidents
- Shutdown of operations

The training will be specific to the duties, tasks, and responsibilities of each employee's position as indicated in Table 3-1. Experienced employees, or supervisors, who are knowledgeable of the requirements for satisfactory job performance, will provide on-the-job training and monitor the employee's progress. On-the-job training is progressive, typically beginning with demonstrations, and then followed by closely supervised practice. When the employee has demonstrated the ability to understand and perform the job and its related safety and emergency response functions, the supervisor acknowledges the satisfactory completion of the employee's on-the-job training by making an appropriate entry in the training records.

In addition to formal training, successful completion of the appropriate on-the-job training activities by an employee is required to fill an operator position. When an existing employee is transferred or promoted to a new position with training requirements that differ from the previous position, that employee will receive the additional training required.

Training will include both introductory and continuing training. Introductory training (four hours minimum) provided to the site manager, gate attendant, and equipment operator will include safety training, emergency training, and training required to perform specific personnel assigned tasks. The frequency of continuing education and training activities will vary according to job title and position. Landfill personnel will be provided an annual review (two hours minimum) of the initial training required for the position. Proof of training, including continuing training, will be maintained at the landfill and will be available for inspection by TCEQ personnel. Training records will be maintained as part of the Site Operating Record as described in Section 2.5.

Figure 3.1

Organizational Chart

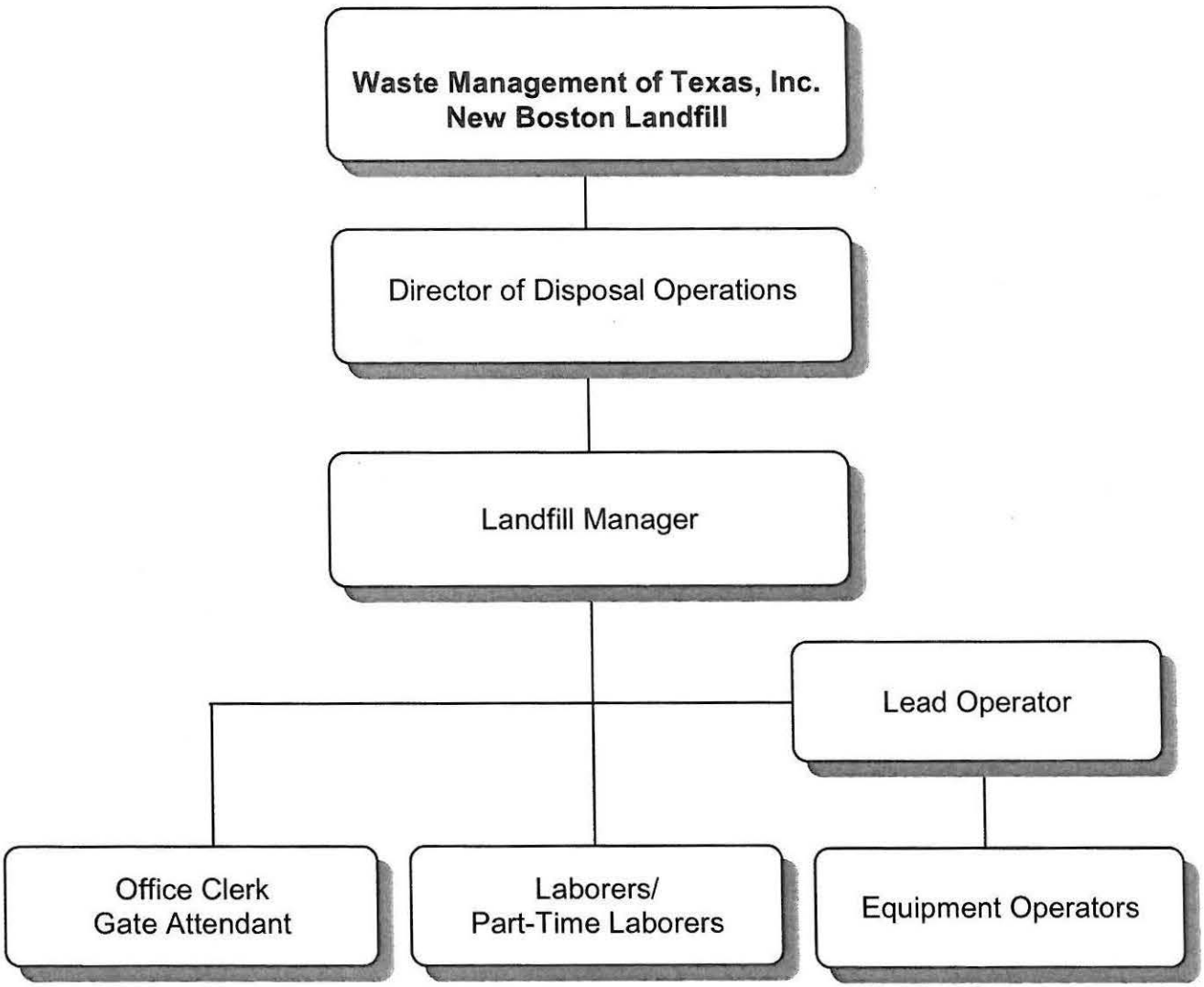


Table 3-1
New Boston Landfill
Site Personnel Summary[1]

Position	Summary of Job Description	Minimum Qualifications	Required Training
Landfill Manager	The landfill manager is responsible for: • Daily operations, administration of facility's Facility Investigation and Design, SOP, bird control, site safety, waste inspections and serving as the emergency coordinator. • Assuring that adequate personnel and equipment are available to provide facility operation in accordance with this SOP, the Facility Investigation and Design, TCEQ regulations, and other applicable local, state or federal regulations. • Overall facility management and is the designated contact person for regulatory compliance matters. • Hiring and terminating other facility personnel. • Maintaining the site operating record and required logs. • Designating other personnel to assist with the daily site operating requirements as related to bird control, waste inspections and other appropriate activities.	• Maintains a license consistent with the requirements of §§30.201, 30.207, and 30.210 through 30.212	• Site Orientation • Site Operations • Endangered Species • Hazardous Waste Identification • Safety • Fire Prevention • Load Inspection • Prohibited Wastes • Emergency Response • SPCC • SWPPP • Litter Control • Random Inspections • Bird Control

Table 3-1
New Boston Landfill
Site Personnel Summary[1]
(Continued)

Position	Summary of Job Description	Minimum Qualifications	Required Training
Lead Operator	The lead operator is responsible for: • Actual landfill operations. • Directing the equipment operators on a daily basis regarding waste disposal operations including the working face, excavation operations, and placement of daily and intermediate cover. • Personnel safety during waste and cover construction. • Other tasks as required by the landfill manager.	• Trained by the landfill manager in SOP requirements • Ability to be trained in bird control, site safety, and waste inspections	• Site Orientation • Site Operations • Endangered Species • Hazardous Waste Identification • Safety • Fire Prevention • Load Inspection • Prohibited Wastes • Emergency Response • SPCC • SWPPP • Litter Control • Random Inspections • Bird Control

Table 3-1
New Boston Landfill
Site Personnel Summary[1]
(Continued)

Position	Summary of Job Description	Minimum Qualifications	Required Training
Gate Attendant	The gate attendant is responsible for: • Being stationed at the site entrance. • Maintaining complete and accurate records of vehicles and solid waste entering the facility. • Visually checking for unauthorized wastes. • Weighing vehicles or measuring waste volumes (if necessary). • Collecting waste disposal fees. • Directing vehicles to the working face. • Controlling site access. • Providing general customer direction and information. • Reviewing manifests and other shipping documents. • Reviewing and confirming special waste documents. • Other tasks as required by the landfill manager.	• Basic understanding of accounting principles • Basic communication skills	• Site Orientation • Endangered Species • Hazardous Waste Identification • Safety • Fire Prevention • Load Inspection • Prohibited Wastes • Emergency Response • SPCC • Random Inspections

Table 3-1
New Boston Landfill
Site Personnel Summary[1]
(Continued)

Position	Summary of Job Description	Minimum Qualifications	Required Training
Equipment Operator	The equipment operators are responsible for: • The safe operation of equipment. • Being alert for potentially dangerous conditions, or careless and improper actions on the part of non-employees and other persons while on the premises. • Monitoring and directing unloading vehicles. • Performing random load inspections. • Maintenance, construction, litter abatement, and general site cleanup. • Intervening as necessary to prevent accidents and report unsafe conditions immediately to the landfill manager or lead operator. • Other tasks as required by the landfill manager.	• Minimum six months of experience in heavy equipment operation or on-the-job training by the lead operator • Ability to be trained in municipal solid waste disposal operations • Trained by the landfill manager in SOP requirements for daily cover and unauthorized waste • May be trained in bird control activities	• Site Operations • Site Orientation • Endangered Species • Hazardous Waste Identification • Safety • Fire Prevention • Load Inspection • Prohibited Wastes • Emergency Response • SPCC • SWPPP • Litter Control • Random Inspections • Bird Control
Laborers	The Laborers are responsible for: • Collecting litter. • Directing vehicles at the working face. • Other tasks as needed including but not limited to maintenance, construction, litter abatement, and general site cleanup.	• Ability to be trained in completing the assigned tasks	• Site Orientation • Endangered Species • Safety • Fire Prevention • Emergency Response • Litter Control • SPCC • SWPPP

[1] More detailed job descriptions along with written descriptions of the type and amount of introductory and continued training provided to each employee will be maintained in the site operating record.

4 EQUIPMENT

30 TAC §330.127(2)

Sufficient equipment will be provided to conduct site operations in accordance with the design and permit conditions.

The following list of equipment is expected to be routinely available for use at the facility. Equipment requirements may vary in accordance with the method of landfill operations or the waste acceptance rate at any given time. Additional equipment will be provided as required for increasing volumes of incoming solid waste. Other equivalent types of equipment by other manufacturers may be substituted on an as-needed basis. The minimum number of pieces of equipment to be provided for daily operations, based on estimated waste acceptance rates is listed in Table 4-1 and Table 4-2. Additional information regarding the annual waste acceptance rate is provided in Section 2.7.

The equipment size, number, type, and manufacturer will vary during site operations based on operational practices and the annual waste acceptance rate.

Compactors are typically used for spreading and compacting the refuse and also for compacting the cover material and fire control. Dozers are typically used for soil movement and placement, to place and remove intermediate cover, for emergency waste compaction, and for fire control. Scrapers or excavators and haul trucks are typically used for excavating both the cover material used in site operations and soil from the future disposal areas and for fire control. The landfill will use either scrapers or an excavator and haul trucks for soil excavation and movement. The motor grader is typically used for road maintenance, ditching, surface water control, and final grading of the completed fill areas. The water truck will be used for dust control, moisture conditioning of soil materials as necessary, fire control measures at the working face, haul water for irrigation, and to supply construction water. The water truck will not be used to haul contaminated water. A farm tractor with various attachments will be used for certain tasks. Tasks include mud removal from site roads, mowing vegetative cover and other vegetative growth, site maintenance, erosion control placement, litter control, and other miscellaneous tasks. A farm tractor and pickup truck(s) will be used as needed for miscellaneous maintenance, litter control and personnel use. Backup equipment will be provided from other WMTX facilities, contractors, or local rental companies in the event of a breakdown, or maintenance to avoid interruption of waste services.

Additional equipment utilized to conduct site operations includes fuel storage tanks, leachate storage tanks, pumps, and other miscellaneous personnel equipment. Fuel storage tanks are maintained on site for landfill equipment. Storage tank location is properly contained and maintained. Additional portable fuel tanks may also be used. Leachate storage tanks are provided for the temporary storage of leachate. Various pump types and sizes will be used to facilitate pumping of stormwater, construction

water, irrigation water, and contaminated water. Other types of equipment include, but are not limited to, survey instruments, bird control devices, safety equipment, and training equipment.

Equipment operators may perform routine cleaning of landfill equipment using low-volume, high-pressure spray equipment at the active working face of the landfill over Subtitle D lined areas. The equipment spraying consists of blowing landfill equipment radiators clean of dust and debris – a manufacturer's recommendation – allowing the equipment to continue operating through the day without accumulated dust and material creating overheating problems. Liquids containing refuse will be handled in the same manner as contaminated water is handled (see Section 8.25).

Table 4-1
Equipment Dedicated to the New Boston Landfill[1]
West and North Disposal Areas

Equipment[3]	Typical Size[4]	Number[5]	Function
		Less than 800 tpd	
Compactor(s)	CAT 826, 836	1	Trash compaction, fire control
Dozer(s)	CAT D6 or larger	1	Soil movement and placement, fire control
Scraper(s)[2]	CAT 621F	1	Soil excavation and hauling, fire control
Excavator[2] and Haul Truck(s)[2]	CAT 330C 10 to 40 ton	1 1	Soil excavation, fire control Soil hauling, fire control
Motor Grader	CAT 120A, 12G	1	Roadway maintenance
Farm Tractor	35 HP	1	Miscellaneous maintenance
Maintenance Truck(s)	½ ton	1	Facility equipment maintenance
Pickup Truck(s)	½ ton	1	Personnel use, litter control, maintenance
Water Truck(s)	2,000 gallons	1	Dust control, earthfill compaction, fire control
Pump(s)	10 to 500 gpm	1	Stormwater pumping

[1] The manufacturers of the equipment and miscellaneous vehicles may vary.

[2] Soil excavation will be conducted with scraper(s) or with an excavator and haul truck(s). The landfill will determine appropriate excavation equipment as landfill is developed.

[3] Backup equipment will be provided from other WMTX facilities, contractors, or local rental companies in the event of equipment breakdown or maintenance to avoid interruption of waste services.

[4] Typical size is minimum size to be provided.

[5] The number stated is the minimum number for each piece of equipment to be provided.

Table 4-2

Equipment Dedicated to the New Boston Landfill[1]

South Disposal Area

Equipment[3]	Typical Size[4]	Number[5] Concurrent Operations[6]	Number[5] South Area Only[7]	Function
		Less than 800 tpd	Less than 800 tpd	
Compactor(s)	CAT 826, 836	1	1	Trash compaction, fire control
Dozer(s)	CAT D6 or larger	1	1	Soil movement and placement, fire control
Scraper(s)[2]	CAT 621F	1	1	Soil excavation and hauling, fire control
Excavator[2] and Haul Truck(s)[2]	CAT 330C 10 to 40 ton	1 1	1 1	Soil excavation, fire control Soil hauling, fire control
Motor Grader	CAT 120A, 12G	0	1	Roadway maintenance
Farm Tractor	35 HP	0	1	Miscellaneous maintenance
Maintenance Truck(s)	½ ton	0	1	Facility equipment maintenance
Pickup Truck(s)	½ ton	0	1	Personnel use, litter control, maintenance
Water Truck(s)	2,000 gallons	0	1	Dust control, earthfill compaction, fire control
Pump(s)	10 to 500 gpm	0	1	Stormwater pumping

[1] The manufacturers of the equipment and miscellaneous vehicles may vary.

[2] Soil excavation will be conducted with scraper(s) or with an excavator and haul truck(s). The landfill will determine appropriate excavation equipment as landfill is developed.

[3] Backup equipment will be provided from other WMTX facilities, contractors, or local rental companies in the event of equipment breakdown or maintenance to avoid interruption of waste services.

[4] Typical size is minimum size to be provided.

[5] The number stated is the minimum number for each piece of equipment to be provided.

[6] The additional equipment required for operation of the South Disposal Area if operation of the South Disposal Area is conducted concurrently with operation of the West and/or North Disposal Areas.

[7] The equipment required for South Disposal Area operations only.

5 DETECTION AND PREVENTION OF DISPOSAL OF PROHIBITED WASTES

30 TAC §330.127(5)

5.1 General

The New Boston Landfill, in accordance with §330.127(5), has established procedures for the detection and prevention of the disposal of prohibited wastes, including regulated hazardous waste, as defined in 40 CFR Part 261, and polychlorinated biphenyls (PCB) waste as defined in 40 CFR Part 761 unless authorized by the United States Environmental Protection Agency (EPA). The detection and prevention program will include training site personnel to know in detail what the regulated wastes are, how to perform a random inspection, how to control site access, what training will be provided for site personnel, and what procedures are required in the event of identification of prohibited wastes. The detection and prevention program includes the following steps:

- Random inspections of incoming loads.
- Records of all inspections.
- Training for appropriate facility personnel to recognize prohibited waste, regulated hazardous waste, and PCB waste.
- Notification to the TCEQ executive director of any incident involving the receipt or disposal of regulated hazardous waste or PCB waste at the landfill.
- Provisions for remediation of the incident.
- Identification and sampling to ensure no free liquids (as determined by the paint filter test), including unstabilized sludges, will be disposed of prior to stabilization.
- Refer to Appendix IVB – Special Waste Acceptance Plan for identification of prohibited wastes.

5.2 Load Inspection Procedure

A properly trained and qualified staff person at the working face will visually observe all incoming waste loads. All vehicles, including compactor vehicles, will be visually observed as waste is discharged at the working face. Should any indication of prohibited waste be detected, or as directed by the landfill manager, appropriate facility personnel will attempt to stop vehicle unloading to allow facility personnel to conduct a thorough evaluation of the load. The driver will be directed to an area located near the working face over an approved lined area, where the balance of the load will be discharged from the vehicle. Facility personnel will break up the waste pile and inspect the material for any prohibited waste. Known prohibited waste will be placed back into

the vehicle and the driver will be instructed to depart the site. Should any regulated hazardous waste be detected, the entire load will be refused and recoverable materials will be loaded back into the waste hauling vehicle.

In addition to the above procedure, incoming loads will be inspected on a random basis. The landfill manager will be responsible for determining the random inspection schedule, with a minimum of six inspections per week performed by properly trained and qualified personnel. The driver of the randomly selected load will be notified at the gatehouse or at the working face and instructed to proceed as above to a load inspection area located over an approved lined area. Additional waste screening will take place as described in Section 8.2 of this SOP.

5.3 Recordkeeping

The landfill manager is required to maintain and include in the site operating record the following:

- Load inspection reports for randomly inspected loads
- Records of regulated hazardous or PCB waste notifications
- Personnel training records

Load inspection reports, recorded on standardized forms, will be completed for each inspected load. The reports will include at a minimum the date and time of inspection, the name and address of the hauling company and driver, the type of vehicle, the size and source of the load, contents of the load, indicators of prohibited waste, and results of the inspection. A copy of a typical load inspection report form is included in Appendix IVA of this SOP.

The TCEQ will be notified whenever regulated hazardous or PCB waste is detected. Records of the notification will be kept in the site operating record and will include the date and time of notification, the individual contacted, and the information reported.

Personnel training records will be maintained in the site operating record and will include evidence of successful completion of the training, type of training received, and the name of the instructor.

5.4 Training

The landfill manager, equipment operators, and gate attendant will maintain a thorough understanding of this SOP and will be trained in the following areas:

- Customer notification and load inspection procedures
- Identification of regulated hazardous, PCB, and prohibited waste
- Waste handling procedures

- Health and safety
- Recordkeeping

Documentation of training will be placed in the site operating record.

5.5 Notification

The TCEQ executive director will be notified of any incident involving the receipt or disposal of regulated hazardous waste or PCB waste at the landfill. Records of notifications will be maintained in the site operating record including date and time of notification, the individual contacted, and the information reported.

5.6 Managing Prohibited Wastes

Known prohibited wastes detected during the inspection will be returned immediately to the hauler. If the hauler is not available, the waste will be safely stored until provisions for removal can be arranged.

If regulated hazardous or PCB wastes are detected, the TCEQ will be notified. As soon as is practical, the hauler will be required to remove the hazardous waste from the site.

6 GENERAL INSTRUCTIONS

30 TAC §330.127(6)

6.1 General Site Safety

Site safety will be promoted by properly trained personnel using well maintained equipment to perform standard work procedures. Site safety will be enhanced by limiting access to the active areas to only authorized personnel. In the event of an emergency, planned emergency response procedures will be followed.

Well maintained equipment is vital to the safe conduct of daily landfilling operations. Therefore, all site equipment will be maintained in proper working order and all safety guards, backup alarms, and engine kill switches will be operational. Equipment operators will perform an equipment check at the beginning of each workday. Problems will be reported to the landfill manager. Fire extinguishers and first aid kits will be inspected monthly by facility personnel. Records of all inspections will be maintained as part of the site operating record.

Access to the site will be limited to authorized personnel as described in Section 8 of this SOP. Access is controlled by a combination of signs and physical barriers. Site personnel should be alert to the entrance of authorized or unauthorized personnel into prohibited areas.

In the event of an emergency, site personnel will assess the situation, notify the landfill manager or designated supervisor, and take appropriate actions such as rendering aid, calling for assistance, or closing access to the emergency scene. Emergency numbers will be posted beside the telephone in the site office.

These include:

Office	Phone
Ambulance	911
New Boston Volunteer Fire Dept.	911 or 903-628-5787
New Boston Police Dept.	911 or 903-628-3771
Bowie County Sheriff's Office	911 or 903-798-3149

6.2 Preparedness and Prevention Measures

Preparedness and prevention measures have been developed to minimize both frequency and severity of accidents and emergency situations threatening human health. Preparedness and prevention measures depend largely on the attentiveness and state of readiness of facility personnel. Preparedness and prevention measures have been

developed for one general category and two specific areas of the site: the gatehouse and the on-site access routes. These preparedness and prevention measures are detailed in the following sections.

6.2.1 General

General preparedness and prevention measures that will be followed are:

- Employee breaks or rest periods will be provided to minimize fatigue, improve awareness, and thereby reduce accident potential.
- Access controls will provide for the safety of non-landfill personnel.
- Routine preventive maintenance of equipment will be provided.
- Daily and weekly site inspections of the working areas will be performed by a management representative.
- Appropriate personnel safety equipment will be kept on site and maintained in good repair. Site personnel will be furnished with hard hats, dust and hearing protection, and safety glasses as needed.
- Adequate turning area for hauling vehicles will be provided.
- Scavenging and unauthorized salvaging will not be allowed and individuals will be required to stay close to their vehicles for their own protection.
- Waste unloading will be restricted to designated areas only.
- Site personnel will be alert for possible hazardous or other unauthorized wastes.
- Nonapproved wastes will be controlled or contained and removed as necessary.
- Smoking is not allowed on the active areas of the landfill.

6.2.2 Gatehouse

Preventative measures that will be followed in the gatehouse include the following:

- Visually screen incoming waste loads for unauthorized wastes.
- Monitor to see that all waste loads are adequately covered, or otherwise protected or contained.

- Visually observe incoming vehicles for evidence of improper operation, faulty equipment, or other conditions that could be hazardous to personnel or other persons on site.
- Maintain access to appropriate emergency equipment and first-aid supplies.
- Provide emergency telephone numbers that are conspicuously posted in the gatehouse.
- Display signs warning transporters that wastes including regulated hazardous wastes and other nonallowable special wastes are prohibited.

6.2.3 Landfill Entrance Road, Haul Road, and Access Road

Landfill entrance road, haul road and access road preventative measures include the following:

- Display speed limit, directional, and other precautionary signs.
- Speed limit is posted at 15 mph on site roads.
- Provide road passable for two-way traffic.
- Maintain roadway free from obstructions.
- Enforce requirements for safe operation of vehicles on site.

7 FIRE PROTECTION PLAN

30 TAC §330.129

7.1 Fire Prevention Procedures

The following steps will be taken regularly by designated landfill personnel to prevent fires:

- Open burning of waste is prohibited at all times.
- Incoming loads with burning waste will be prevented from being dumped in the active area of the landfill. The gate attendant and equipment operators will be alert for signs of burning waste such as smoke, steam, or heat being released from incoming waste loads.
- Should an incoming load with burning waste be observed at the gatehouse or active working face, the gate attendant or equipment operator will direct the driver to a designated area away from the active working face to unload. The burning waste will then be extinguished with water, fire extinguishers, or will be covered with soil to smother the fire.
- Fuel spills will be contained and cleaned up immediately.
- Dead trees, brush, or vegetation adjacent to the active waste disposal area will be removed immediately, and grass and weeds mowed so that forest, grass, or brush fires cannot spread to the landfill.
- Smoking is not allowed on the active working face, refueling area, and other fire sensitive areas of the landfill. Smoking will be allowed by the landfill manager in designated areas only.
- The site will be equipped with fire extinguishers in appropriate locations. Each fire extinguisher will be fully charged and ready for use at all times. Each extinguisher will be inspected on an annual basis and recharged as necessary. These inspections will be performed by a qualified service company, and all extinguishers will display an updated inspection tag. Inspection and recharging will be performed following each use. At a minimum, the gatehouse, citizen's convenience center/recycling facility, equipment and maintenance area, and all landfill equipment and vehicles will be equipped with fire extinguishers.
- A common firefighting technique that can be quickly employed to fight a landfill fire is smothering with soil. The faster that soil can be placed over the fire, the more effective this method will be in controlling and extinguishing the fire. The stockpiled daily or weekly cover may be used for firefighting purposes.

- A stockpile of earthen material will be maintained so that it is available at all times to extinguish a fire. Two separate soil stockpiles will be provided. One stockpile will be provided adjacent to the working face, and a second soil stockpile will be provided within 2,500 feet of the active working face. The landfill equipment conducting daily waste filling operations will be suitable for placement of additional soil from the earthen stockpile for fire control.

- The total volume of earthen material available from the two stockpiles will be sized to cover the working face with a minimum 6-inch layer of earthen material. The minimum size of each soil stockpile is provided in the table below, based on the size of working face. Earthen material stockpile will be provided based on the following table:

Size of Working Face		Area of Working Face			Total Size of Stockpile
		Sq Ft	Cu Ft	Cu Yd	
L	W	L x W	Sq ft x 0.5	Cu ft / 27	Cu yd x 1.15
150	100	15,000	7,500	278	320
150	125	18,750	9,375	347	400
150	150	22,500	11,250	417	480

- Based on achievable production rates, the landfill equipment identified in Table 4-1 is sufficient to cover the active working face with a minimum 6-inch soil layer from an earthen material stockpile within one hour of detecting a fire, as demonstrated in the following table:

Equipment	Capacity	Production Rate[1]	Material Rate
Excavator	3 cy/load	240 load/hr	720 cy/hr
Haul Trucks[2]	16 cy/load	30.0 load/hr	480 cy/hr
Scraper	20 cy/load	30.0 load/hr	600 cy/hr
Dozer[3]	3.5 cy/load	150 load/hr	525 cy/hr
Compactor[3]	3.5 cy/load	150 load/hr	525 cy/hr

[1] Includes time to load at soil stockpile, travel to active working face, and unload soil at active working face.

[2] Haul truck calculations are based on haul distance of 1/4 mile and average hourly speed of 15 mph.

[3] Dozer and compactor material rates are below the rates published by Horace K. Church in Excavation Handbook, McGraw-Hill, Inc., New York, 1981.

- Multiple earthen stockpiles will be maintained such that the minimum amount of earthen material required for suppression of a fire at the active working face will always be within approximately 1/4 mile of the active working face.

- The active working face will be limited to the total capacity of the dozer and compactor capacity and the excavator and haul truck capacity unless larger equipment or additional capacity is provided.

7.2 Specific Fire-Fighting Procedures

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

- If a fire occurs on a vehicle or piece of equipment, the equipment operator should bring the vehicle or equipment to a safe stop. If the safety of personnel will allow, the vehicle must be parked away from fuel supplies, uncovered solid wastes, and other vehicles. The engine should be shut off and the brake engaged to prevent movement of the vehicle or piece of equipment. Fire extinguishers should be used to extinguish the fire if possible, without risk to the equipment operator.

- Incoming loads with burning waste will be prevented from being unloaded in the active working face of the landfill. The gate attendant and equipment operators will be alert for signs of hot loads, such as smoke, steam, or heat being released from incoming waste loads. Should a load with burning waste be observed at the gate or active working face, the gate attendant or equipment operator will direct the driver to a designated area away from the active working face to unload. The load will be covered with soil to smother the fire.

- If a fire is in the working face, the burning area should be isolated or pushed away from the active working face before the fire can spread to other areas of the working face. If isolating or pushing the fire is not feasible or unsafe, the working face should immediately be covered with earthen material from the stockpile to smother the fire.

- If a fire occurs at the reclaimed asphalt pavement or shingles recyclable materials staging area, the burning area should be isolated or pushed away from the staging area before the fire can spread to other areas within the staging area. The material on fire will be immediately covered with earthen material from the stockpile to smother the fire.

- If a fire occurs at the citizen's collection station/recycling facility, landfill personnel should use fire extinguishers to extinguish the fire, if possible. The general rules for fires will be implemented as included in Section 7.3 to protect landfill personnel or visitors.

- Firefighting methods include smothering with soil, separating burning material from other waste, and spraying with water from the water truck or water

pumped from nearby ponds or streams. If detected soon enough, a small fire may be fought with a handheld fire extinguisher. Fire extinguishers will be located at the gatehouse, citizen's convenience center/recycling facility, equipment and maintenance area, and all landfill equipment and vehicles. Under this circumstance, the fire area should also be watered or otherwise controlled to ensure that the fire is out.

7.3 General Rules for Fires

The following rules will be implemented in the event of a fire at the New Boston Landfill:

- Immediately contact the gatehouse and landfill manager.
- Equipment operators will be equipped with two-way radios or cell phones.
- Alert other facility personnel.
- Assess extent of fire, possibilities for the fire to spread, and alternatives for extinguishing the fire.
- If it appears that the fire can be safely fought with available fire-fighting devices until arrival of the Fire Department, attempt to contain or extinguish the fire.
- If landfill personnel cannot extinguish the fire, contact the New Boston Volunteer Fire Department by calling 911 or 903-628-5787.
- Upon arrival of Fire Department personnel, direct them to the fire and provide assistance as appropriate.
- Do not attempt to fight the fire alone.
- Do not attempt to fight the fire without adequate personal protective equipment.
- Be familiar with the use and limitations of fire-fighting equipment available on site.

7.4 Fire Protection Training

Landfill personnel will be trained in the contents of Section 7 – Fire Protection Plan in accordance with Section 3.3 – Training. Landfill personnel will maintain a thorough understanding of this SOP and will be trained in fire prevention and fire control as defined in this section. The following topics will be addressed:

- Identification of burning waste, smoke, steam, or heat being released from incoming waste loads
- Procedures to prevent and contain fuel spills

- Fire prevention
- Fire safety
- Firefighting procedures with fire extinguishers, soil, and water as appropriate
- Notification procedures should a landfill fire be observed

In addition, information will be provided to the local fire department regarding waste disposal operations, fire sources, and firefighting techniques related to landfills. Documentation of training will be placed in the site operating record in accordance with Section 2.5.

7.5 TCEQ Notification

The New Boston Landfill will make every reasonable effort to contact the TCEQ regional office immediately upon detection of a fire, if the fire is not extinguished within 10 minutes of detection. At a minimum, the TCEQ regional office will be contacted no later than 4 hours by phone, and in writing within 14 days. The notification will include a description of the fire and resulting response.

8 OPERATIONAL PROCEDURES

30 TAC §§330.131 – 330.175

8.1 Access Control

Public access to the landfill will be controlled by the perimeter fence located along the permit boundary or property boundary. Access to the landfill from U.S. Highway 82 is limited to the entrance road through the gatehouse area. The gate attendant controls access and monitors all vehicles entering and exiting the site.

8.1.1 Site Security

Site security measures are designed to prevent unauthorized persons from entering the site, to protect the facility and its equipment from possible damage caused by trespassers, and to prevent disruption of facility operations caused by unauthorized site entry.

Unauthorized entry into the site is minimized by controlling access to the landfill site with the perimeter fence and the entrance gate. A perimeter fence is located along the permit boundary on the east, west, north, and south sides of the site. Perimeter fencing consisting of barbed wire, woven wire, wooden fencing, plastic fencing, pipe fencing, or other suitable material may also be provided. A gate constructed of suitable fencing materials is located on the entrance road. Entrance to the landfill is monitored by the gate attendant during site operating hours at the gatehouse. Outside of operating hours, the gate located on the entrance road will be locked.

Entry to the active portion of the site will be restricted to designated personnel, approved waste haulers, and properly identified persons whose entry is authorized by site management. Visitors may be allowed on the active area only when accompanied by a site representative.

8.1.2 Traffic Control

Access to the landfill will be provided via the entrance road from U.S. Highway 82. Signs will be located along the entrance road directing traffic to the gatehouse. The gate attendant will restrict site access to authorized vehicles and direct these vehicles appropriately.

Waste hauling vehicles will be directed to appropriate fill areas by signs located along the landfill haul road and access road. These vehicles will deposit their loads and depart the site. Private, commercial, or public solid waste vehicles will not be allowed access to any areas other than the active portion of the landfill. Site personnel will provide traffic directions as necessary to facilitate safe movement of vehicles.

Within the site, signs will be placed along the landfill haul road and access road at a frequency adequate for users to be able to understand where disposal areas are and

which roads are to be used. Roads not being used for access to disposal areas will be blocked or otherwise marked for no entry.

8.1.3 Inspection and Maintenance

The perimeter fence and gate will be inspected twice monthly. Refer to Section 8.27 of this SOP for site inspection and maintenance schedule. Maintenance will be performed as necessary. Should a breach be detected during inspection or at any other time, every effort will be made to make repairs within 8 hours of detection. Notification is not required if permanent repair is made within 8 hours. Should repair require more than 8 hours, the TCEQ regional office will be notified of the breach within 24 hours. Temporary repair will be performed within 24 hours of detection and permanently repaired within the time specified to the regional office following notification.

8.2 Unloading of Waste

The landfill is authorized to receive Type I and Type IV municipal solid waste, special wastes allowable under §330.171, and Class 2 and 3 industrial wastes allowable under §330.173. The categories of wastes that are prohibited at this site by state and federal regulations are discussed in Section 1.3 of the Special Waste Acceptance Plan in Appendix IVB of this SOP. Special wastes will be handled at this landfill in accordance with TCEQ regulations and with Section 8.21 – Disposal of Special Wastes, Section 8.22 – Disposal of Industrial Waste, Appendix IVB – Special Waste Acceptance Plan, and Appendix IVC – Regulated Asbestos-Containing Material Plan of this SOP. Various unloading, disposal and processing areas are shown in Part III, Attachment B, Appendix B1, Drawing B.3.

Trained personnel will monitor the incoming waste on the trucks at the gatehouse and at each unloading area/active working face. Trained personnel will be on duty at each active working face during waste acceptance hours to direct and observe waste unloading.

Trained personnel at each active working face will have the authority and responsibility to reject loads which contain prohibited wastes with approval of the landfill manager. These personnel will also have the authority to require the hauler or transporter to remove prohibited waste immediately upon discovery. Should suspected prohibited waste be identified, the working face personnel will immediately notify the landfill manager. The landfill manager may direct staff to remove or manage prohibited waste appropriately, should the responsible hauler or transporter not be identified.

Solid waste unloading will be controlled to prevent disposal in locations other than those specified by site management. The West Disposal Area and the North Disposal Area will be utilized for placement of Type I municipal solid waste, special wastes allowable under §330.171, industrial wastes allowable under §330.173 and Type IV wastes. The South Disposal Area will be utilized for the placement of Type IV waste, special wastes allowable under §330.171, and those industrial wastes allowable at Type IV landfills under §330.173. Brush, construction or demolition wastes, and/or rubbish that are free of putrescible and household waste may be disposed of in the South Disposal Area. In

accordance with 30 TAC §330.3, the following definitions apply to the types of waste that may be disposed of in the South Disposal Area:

- **Brush** – Cuttings or trimmings from trees, shrubs, or lawns and similar materials.

- **Construction or demolition waste** – Waste resulting from construction or demolition projects; includes all materials that are directly or indirection the byproducts of construction work or that result from demolition of buildings and other structures, including, but not limited to, paper, cartons, gypsum board, wood, excelsior, rubber, and plastics.

- **Rubbish** – Nonputrescible solid waste (excluding ashes), consisting of both combustible and noncombustible waste materials. Combustible rubbish includes paper, rags, cartons, wood, excelsior, furniture, rubber, plastics, brush, or similar materials; noncombustible rubbish includes glass, crockery, tin cans, aluminum cans, and similar materials that will not burn at ordinary incinerator temperatures (1,600 °F to 1,800 °F)

Any waste deposited in an unauthorized area will be promptly removed and disposed of properly at the active working face. Control will also be used to confine the active working face to a minimum width consistent with the rate of incoming waste, while allowing for safe and efficient operation. The maximum size of the unloading area will be approximately 1/2-acre with a maximum width of approximately 150 feet.

The following describes the working face(s) on a per disposal area basis, (i.e. West Disposal Area, North Disposal Area and South Disposal Area). A maximum of two working faces may be used during any specific time period, but typically one working face will be used except during inclement weather. The two active working faces include one working face for disposal of municipal solid waste for the Type I West and North Disposal Areas and one working face for disposal of Type IV wastes for the Type IV South Disposal Area. The size of the working faces will be limited by the availability and capacity of site equipment to place cover soil, and the location of soil stockpiles, including those adjacent to the working face.

On days when RACM is accepted, the RACM unloading and disposal area will not be larger than 50 feet by 50 feet. Control will be used to confine the RACM area to a minimum width consistent with the rate of incoming RACM, while allowing for safe and efficient operation. RACM disposal is further discussed in Appendix IVC – Regulated Asbestos-Containing Material Plan.

The citizen's convenience area for waste drop-off is located near the equipment maintenance and storage area. The citizen's convenience area will include roll-off containers for waste and recycled goods and an area for large items/white goods. The citizen's convenience area will not be larger than 50 feet by 250 feet. Control will be used to confine this area to a minimum area consistent with the rate of incoming waste while allowing for safe and efficient operation. The citizen's convenience area is further discussed in Section 8.26.3.

The large item storage area for large items and white goods may be provided near the active working face. The maximum size of the large item storage area will be 300 feet by 300 feet. Control will be used to confine the large item storage area to an area consistent with the rate of incoming large items and white goods while allowing for safe and efficient operation. The large item storage area is further discussed in Section 8.9 and Section 8.26.1.

Any prohibited waste that is not discovered until after it is unloaded shall be returned to the vehicle that delivered the waste. The generator shall be responsible for the proper transportation and disposal of this rejected waste. An effort shall first be made to identify the entity that deposited the prohibited waste and have them return to the site and properly transport and dispose of the waste. In the event that the transporter of the prohibited waste cannot be located or refuses to remove the prohibited waste from the site, facility personnel will properly manage the prohibited waste and arrange for its off-site disposal at an authorized facility. A record of unauthorized waste removal will be maintained in the site operating record.

The South Disposal Area of the New Boston Landfill will not accept wastes from completely enclosed containers or enclosed vehicles in accordance with §330.133(h) except as specified in Section 8.20. In addition, the New Boston Landfill will provide the following during all periods of operation:

- A written procedure retained on site to ensure that containers with any putrescible wastes are not accepted. This might include or be a combination of a manifest system, surcharges, contractual agreements with transporters, or other acceptable means. This written procedure will be made available for review by the executive director. The procedure will be followed and will be modified as necessary to accomplish its purpose.

- A written procedure retained on site for the removal of any putrescible wastes and other prohibited waste to an approved disposal facility will specify the means to be used for removal of putrescible wastes illegally disposed of at the site. In all cases, such wastes will be removed from the active working face immediately upon discharge and returned to the offending transporter's vehicle or placed in suitable collection bins and will not be allowed to remain on the site in the collection bins for more than 24 hours. The equipment necessary to meet the chosen alternative will be specified and will be on site and operable during operating hours. This written procedure will be made available for review by the executive director. The procedure will be followed and will be modified as necessary to accomplish its purpose.

- Trained personnel at the active working face will inspect each load that is dumped at the site and 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.

- A procedure whereby the transporter certificates required by 30 TAC Section 330.7(c) will be retained at the landfill and be available for inspection by the executive director.

Signs with directional arrows and portable traffic barricades will help to restrict traffic to designated disposal locations. Signs will be placed along the access route to the current disposal area or other designated disposal areas that may be established. In addition, rules for waste disposal and prohibited waste will be prominently displayed on signs at the site entrance. Refer to Section 5 of this SOP for additional waste handling procedures.

8.3 Facility Operating Hours

The New Boston Landfill is authorized for waste acceptance from 7:00 a.m. to 7:00 p.m., Monday through Saturday. The site is closed on Sunday. The New Boston Landfill may conduct waste acceptance, filling, construction, earthmoving, or other activities anytime within the facility waste acceptance hours. The New Boston Landfill is authorized for site operations from 5:00 a.m. to 9:00 p.m., Monday through Saturday. Site operations include construction, earthmoving, monitoring, and other non-waste acceptance operations. In addition to §330.135(a), the permit may include alternative operating hours of up to five days in a calendar-year period to accommodate special occasions, special purpose events, holidays, or other special occurrences; and that the commission's regional offices may allow additional temporary waste acceptance or operating hours to address disasters, other emergency situations, or other unforeseen circumstances that could result in the disruption of waste management services in the area. The New Boston Landfill will notify the TCEQ regional office and will record waste acceptance hours outside of posted hours in the site operating plan.

In accordance with §330.137, the New Boston Landfill will post the facility operating hours on the site sign.

8.4 Site Sign

A sign will be displayed at the gated entrance to the site. This sign will measure at least 4 feet by 4 feet, and have lettering of at least 3 inches in height. The sign will state the name of the site, type of site, hours and days of operation, and the TCEQ permit number. An emergency 24-hour contact phone number and the local emergency fire department phone number will also be included. The emergency contact phone number will reach an individual with the authority to obligate the facility at all times the facility is closed. The site sign will be readable from the facility entrance.

8.5 Control of Windblown Solid Waste and Litter

The working face will be maintained and operated in a manner to minimize windblown solid waste. Windblown material and litter will be collected and properly managed to control unhealthy, unsafe, or unsightly conditions by the following methods:

- Waste transportation vehicles using this facility will be required to use adequate covers or other means of containment to secure the loads. The adequacy of covers or containment of incoming wastes will be checked at the gatehouse. A sign will be prominently displayed at the gatehouse stating that all loads shall be properly covered.

- The active working face will be limited to as small an area as practical for the safe operation of the incoming waste hauling vehicles, and operation of compaction equipment, and delivery and placement of daily cover soils.

- Daily cover will be applied as frequently as needed, to assist with the control of windblown waste.

- The facility will provide litter control fences, as necessary, at appropriate locations near the working face and elsewhere. The litter control fences will be constructed of wire or plastic mesh screens attached to portable frames or temporary fences. The litter control fence will be of sufficient height and will be located as close as practical to the active area to control windblown waste and litter.

- Windblown waste and litter along the entrance road, the gatehouse area, within the permit boundary, and that has accumulated along the permit boundary will be collected once a day during facility operations and returned to the active working face. Refer to Section 8.27 of this SOP for the site inspection and maintenance schedule.

- Should windblown waste or litter escape the facility control measures and cross the permit boundary onto adjacent property, the facility will contact the adjacent property owners to seek permission for litter pick-up.

- Screening barriers such as temporary berms, trees, and visual screening berms may also serve as additional wind breaks.

8.6 Easements and Buffer Zones

8.6.1 Easements

In accordance with §330.141(a), solid waste unloading, storage, disposal, or facility operations will not occur within any easement, buffer zone, or right-of-way that crosses the site. No solid waste disposal will occur within 25 feet of any utility line or pipeline easement, unless otherwise authorized by the TCEQ. All easements will be clearly marked as specified in Section 8.7 of this SOP. Pipelines and utility easements will be marked with posts extending a minimum of 6 feet above ground surface at intervals that do not exceed 300 feet. Easements are shown in Part II, Appendix IIA, on Drawing IIA.14 – Site Layout Plan.

8.6.2 Buffer Zones

The buffer zone is defined as the area between the permit boundary and the limit of waste disposal activities and solid waste processing activities, unless otherwise authorized. No solid waste unloading, storage, disposal, or processing operations will occur within any buffer zone. The buffer zones will provide for safe passage for fire-fighting and other emergency vehicles. The distance from the permit boundary to all solid waste unloading, storage disposal, or processing operations for the expansion area exceed the minimum buffer distance of 125 feet. The active permitted waste disposal area (West Disposal Area), as discussed, will not have additional height increase or additional waste disposal capacity. The existing leachate storage tank and existing citizen's convenience center buffer distances are greater than 50 feet. As such, the existing buffer distances comply with the requirements of §330.543 (b)(2). Buffer zones are shown in Part II, Appendix IIA, on Drawing IIA.14 – Site Layout Plan. All buffer zones will be clearly marked as specified in Section 8.7 of this SOP.

8.7 Landfill Markers and Benchmark

Landfill markers will be installed to clearly mark significant features as described in §330.143(b). The markers will be steel or wooden posts (or other TCEQ approved material) and will extend at least 6 feet above the ground surface. The markers will not be obscured by vegetation and will be placed in sufficient numbers to clearly show the required boundaries. Markers that are removed or destroyed will be replaced within 15 days of their removal, completion of construction project, or destruction. Landfill markers will be inspected monthly and will be maintained and repaired within 15 days as required. The landfill markers will be maintained so that they are visible during operating hours. Refer to Section 8.27 of this SOP for site inspection and maintenance schedule. Markers will be repainted as needed to retain visibility. Guidelines for type, placement, and color coding of markers are provided in §330.143(b). The required landfill markers are described in the following table.

Landfill Markers

Marker	Color	Descriptions
Site Boundary	Black	The boundary markers will be placed at each corner of the site and along each boundary line at intervals no greater than 300 feet. Fencing may be placed within these markers as required.
Buffer Zone	Yellow	The buffer zone markers will be placed along each buffer zone boundary at all corners and between corners at intervals of 300 feet.
Easements	Green	Easement and right-of-way markers will be placed along the centerline of an easement and along the boundary of a right-of-way at each corner within the site and at the intersection of the site boundary.
Grid System	White	The landfill grid system will encompass at least the area expected to be filled within the next three-year period. Markers will be spaced no greater than 100 feet apart measured along perpendicular lines. Intermediate markers will be installed if necessary to allow visibility from opposite boundaries.
SLER/GLER	Red	The SLER markers will be placed so that all areas for which a SLER has been submitted and approved by the Commission are readily determinable. These markers will be located so that they are not destroyed during operations or until operations extend into the next area and will provide site workers immediate knowledge of the extent of approved disposal areas. The location of the markers will be tied into the landfill grid system and reported on each SLER submitted.
Floodplain	Blue	Flood protection markers will be placed a maximum of 300 feet apart or closer if necessary to retain visual continuity. The markers will be installed for any area within a solid waste disposal facility that is within the 100-year floodplain.

A permanent benchmark has been established within the permit boundary in an area that is readily accessible and will not be used for disposal. The benchmark is a United States Coast and Geodetic Survey benchmark consistent of a bronze survey marker stamped with the elevation and survey date and set in concrete. The location of the permanent benchmark is identified in Part II, Appendix IIA, on Drawing IIA.13.

8.8 Materials Along the Route to the Site

Consistent with §330.145, the New Boston Landfill will take steps to encourage that vehicles hauling waste to the site are enclosed or provided with a tarpaulin, net, or other means to properly secure the load. These steps are necessary to prevent the escape of any part of the load by blowing or spilling. The landfill will post signs at the entrance gate and gatehouse notifying haulers of this requirement and will enforce this rule by applying surcharges or other similar measures. The landfill manager may report habitual offenders to local law enforcement officers. The New Boston Landfill will provide for the cleanup of waste materials spilled along and within the right-of-way of the regular delivery routes within two miles of the site when the facility is in operation. Cleanup of

the spilled materials will be performed once per day for the following regular delivery routes:

- U.S. Highway 82 (US82) – two miles in each direction from the site entrance road
- Interstate Highway 30 (IH30) Frontage Roads – 1-1/2 miles in each direction from the intersection of IH30 and US82 along IH30 frontage roads

These delivery routes are shown in Part II, Appendix IIA, on Drawing IIA.1. The New Boston Landfill will consult with officials of TxDOT concerning the cleanup of state highways and right-of-ways consistent with §330.145.

8.9 Disposal of Large Items

A storage area for large items and white goods may be provided near the active working face. The large items and white goods include items such as ovens, dishwashers, freezers, air conditioners, and other large items. These items will be recycled every 180 days or less or disposed of at the working face within 180 days of acceptance at the facility.

Large items that are not recycled will be disposed of at the working face. Care will be taken during disposal of large items to ensure that: (1) large items are excluded from the initial 5 feet of waste placed over the protective cover of a liner, (2) large items are placed such that they do not interfere with continued waste filling, and (3) that other smaller municipal solid waste is placed and compacted around them.

Refrigerators, freezers, air conditioning units, or other items containing chlorinated fluorocarbon (CFC) refrigerant will be handled in accordance with 40 Code of Federal Regulations (CFR) §82.156(f), as amended. Refrigerators, freezers, air conditioning units, or other items containing CFC will not be accepted unless the CFC contained in the item has been captured and sent to an approved CFC disposal site or recycling facility and the generator or transporter provides written certification that the CFC has been evacuated from the unit and that it was not knowingly allowed to escape into the atmosphere. The gate attendant will verify that the refrigerant has been evacuated from the appliance or shipment of appliances prior to disposal. Such verification must include a signed statement from the person from whom the appliance or shipment of appliances is obtained that all refrigerant that had not leaked previously has been recovered from the appliance or shipment of appliances in accordance with 40 CFR §82.156(g) or (h), as applicable. This statement must include the name and address of the person who recovered the refrigerant and the date the refrigerant was recovered or a contract that the refrigerant will be removed prior to delivery. The New Boston Landfill will notify persons who may deliver such items of the requirement to verify evacuation of refrigerant by signage or letter. Items such as electrical equipment, which contains PCBs, will be excluded from waste fill. Procedures for detecting and excluding PCBs are provided in Section 5.

8.10 Odor Management Plan

The New Boston Landfill will manage odors associated with waste acceptance and disposal operations consistent with this Odor Management Plan. This plan addresses sources of odors and includes general instructions to control odors or sources of odors.

Measures to control odors and sources of odors may include, but are not limited to, the following items:

- The facility will accept wastes that may generate odors including stabilized liquid waste, Type I municipal solid waste, and dead animals. The stabilized liquid wastes are required to pass a paint filter test prior to disposal at the active working face.

- Other sources of odors may include ponded water, decomposition of wastes, leachate, contaminated water, and landfill gas (LFG).

- Wastes that are considered to generate significant odors are usually classified as special wastes. Refer to Section 8.21 – Disposal of Special Wastes for waste disposal procedures for these wastes.

- Unloading of these wastes at the active working face will be consistent with procedures established in Section 8.2 – Unloading of Waste, which limits the active working face to a minimum width, allowing prompt placement of daily cover or approved alternative daily cover (ADC) over wastes that may produce odors.

- Spills of these odor producing wastes will be managed by collecting and transporting these wastes to the active working face for prompt disposal and placement of daily cover.

- Daily cover consisting of a minimum of 6 inches of soil or approved ADC will be placed over these wastes at the end of the working day consistent with procedures established in Section 8.18 – Landfill Cover.

- Waste that is determined to require additional procedures, such as dead animals or sludges will be isolated within the active working face and immediately covered with a minimum of 3 feet of other solid waste or a minimum of 2 feet of soil upon receipt. Additional daily cover soil will be placed if needed.

- Sludges that pass the paint filter test may be mixed with other absorptive wastes to minimize odors. Waste with strong odors may be placed at the active working face in a manner that allows immediate cover placement.

- Ponded water at the site will be controlled as detailed in Section 8.19 of this SOP. Odors will be eliminated through removal of ponded water and regrading of areas consistent with Section 8.18 – Landfill Cover.

- Leachate and contaminated water will be managed and removed in accordance with Part III, Attachment D6 – Leachate and Contaminated Water Plan. Leachate is discharged by direct connection to the City of New Boston publicly owned treatment works (POTW). Leachate may be treated at an on-site or off-site treatment facility. Leachate may also be recirculated in accordance with the leachate and contaminated water plan.

- Landfill gas will be managed and removed in accordance with Part III, Attachment G – Landfill Gas Management Plan. Landfill gas is conveyed to the flare(s). Odor reduction of landfill gas may be achieved by adjustments to the existing gas extraction system or by the installation of additional gas extraction wells.

8.11 Disease Vector Control

The need for vector control (control of rodents, flies, mosquitoes, birds, etc.) will be minimized through daily site operations. Activities designed to control on-site populations of disease vectors include minimization of the size of the active working face; placement and compaction of daily, intermediate, and final cover; adherence to the ponded water plan; and following the detailed procedures described in this SOP. The New Boston Landfill will conduct daily inspections as required by Section 8.27 – Site Inspection and Maintenance Schedule to observe waste disposal operations and to remove areas that may be conducive to insects and rodents. These areas will be promptly eliminated in accordance with procedures established in this SOP. Should daily site operations not control vectors, a licensed professional will apply pesticides to ensure that proper chemicals are used and that they are properly applied.

8.12 Site Access Roads

The entrance road provides access from U.S. Highway 82 to the gatehouse and landfill haul road for waste hauling vehicles, operating personnel, and visitors. The entrance road is more than 3,200 feet to the haul road and is an all-weather surface constructed of asphalt pavement. Other internal landfill roads will be constructed with a crushed-stone surface or other suitable material. The all-weather surface entrance, access, and internal roads will provide mud control for the waste hauling vehicles prior to exiting the site and returning to public access roads. It is not anticipated that mud or other debris will be tracked onto U.S. Highway 82 given the length of the entrance road and its all-weather surface. During wet weather conditions the landfill manager will routinely inspect the site and implement measures to further minimize mud tracking onto public access roads, as necessary. Mud will be removed periodically from the paved entrance road to prevent mud accumulation and slippery conditions. Should mud or other associated debris be tracked onto U.S. Highway 82, the material will be removed daily.

The truck wheel wash is located along the entrance road, as shown in Part III, Attachment D1 – Landfill Unit Design – Site Layout Plan, on Drawing D1.8. The truck wheel wash is a concrete drive through structure. The accumulated mud is periodically removed from the truck wheel wash and placed in the active working face.

The landfill haul roads and access roads will be maintained to minimize dusty conditions by periodic spraying from a water truck. During dry weather conditions the landfill manager will routinely inspect the site and establish a frequency, if necessary, to spray the access roads with water to prevent nuisance conditions from developing. Grading equipment will be used as needed to control or remove mud accumulations on internal roads including the entrance road. Stockpiles of crushed stone concrete rubble, masonry demolition debris, or other similar material will be available for use in maintaining passable internal access roads, including regrading to minimize depressions, ruts, and potholes. Grading equipment will be used monthly or as needed to regrade the site access roads. Refer to Section 8.27 of this SOP for site inspection and maintenance schedule. The site entrance road, landfill haul road, and access roads will be maintained in a clean and safe condition. Litter and debris will be picked up daily and returned to the active working face.

8.13 Salvaging and Scavenging

Salvaging will not be allowed to interfere with prompt sanitary disposal of solid waste or to create public health nuisances. Salvaged materials will be considered as potential recycled materials. Salvaged items will be removed from the site often enough to prevent the items from becoming a nuisance, to preclude the discharge of pollutants from the area, and to prevent an excessive accumulation of the material at the site. Special wastes received at the site will not be salvaged. Pesticide, fungicide, rodenticide, or herbicide containers will not be salvaged unless they are salvaged through a state-supported recycling program. Scavenging is the uncontrolled and unauthorized removal of materials at any point in the solid waste management system. No scavenging will be allowed at this site. Scavenging will be prevented through perimeter fencing, site access controls, vector controls, odor controls, daily cover, and monitoring by facility personnel.

8.14 Endangered Species Protection

Development of the landfill shall be conducted to avoid and minimize potential impacts to endangered or threatened species. The facility and the operation of the facility will 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.

A detailed threatened and endangered species survey and assessment was conducted by a qualified biologist at Halff Associates. Coordination with the United States Fish and Wildlife Service (USFWS) and the Texas Parks and Wildlife Department (TPWD) regarding the locations and specific data relating to endangered and threatened species in Texas is provided in Part II, Appendix IIE – Endangered or Threatened Species Documentation.

A review of the TPWD Natural Diversity Database (NDD) was conducted for existing records regarding threatened and endangered species, candidates for listing as threatened or endangered species, sensitive natural communities, and other features of concern known or suspected to occur in the proposed permit boundary area.

Based on the NDD file review, agency correspondence, and multiple field investigations, it can be concluded that suitable habitat for threatened, endangered, and candidate species within the proposed permit boundary area is limited to the wood stork and timber rattlesnake. Both species are state-listed threatened species; neither species has a federal designation in Texas. For the wood stork, the likelihood of occurrence is conditional on the basis that this species migrates, and their broad migratory range overlaps features on the site that may be suitable as a stopover site. The best habitat for these species occurs in the north/central pond/wetland complex that will not be impacted by the landfill activities. A forested area, which includes a forested wetland, along the northern edge of the expansion area could be considered suitable habitat for the timber rattlesnake. Clearing of these areas will be done in accordance with a species protection plan which is included as Appendix IVE. No impacts to threatened or endangered species are anticipated as a result of construction or operation of the New Boston Landfill expansion.

8.15 Landfill Gas Control

The control and monitoring of landfill gas for the New Boston Landfill will be in accordance with Part III, Attachment G, which was developed in accordance with §330.371. The gas management plan provides for inclusion of applicable documentation, including monitoring records for the landfill gas monitoring probes, in the site operating record, and for submittal to the executive director. Gas monitoring records will be maintained in the site operating record.

8.16 Oil, Gas, and Water Wells

8.16.1 Water Wells

There are no water wells within the permit boundary of the New Boston Landfill Should water wells be discovered during facility development, the New Boston Landfill will provide written notification to the executive director of their location. Within 30 days of finding any water wells, the New Boston Landfill will provide a copy of the well plugging report as well as written certification to the executive director of the TCEQ that all such wells have been capped, plugged, and closed in accordance with all applicable rules and regulations of the TCEQ or other applicable state agency. Should an abandoned water well be discovered during site development and facility operation, a permit modification will be submitted to the executive director if revisions to the liner installation plan are required as a result of well abandonment.

8.16.2 Oil and Gas Wells

There is one known dry hole (i.e., a plugged well that never produced oil or gas) located within the permit boundary of the New Boston Landfill but outside of the waste footprint, as depicted in Part III, Attachment E, Appendix E4, on Figure E4-2. Plugging reports are provided in Appendix E4, Figures E4-3 through E4-9. If additional oil or gas wells are located, the landfill will provide written notification to the TCEQ's executive director of their location within 30 days of discovery of the wells. For crude oil or natural gas wells, or other wells associated with mineral recovery, the landfill will provide the executive

director of the TCEQ and the appropriate state agency with written certification that all such wells have been properly capped, plugged, and closed in accordance with all applicable rules and regulations of the Railroad Commission of Texas within 30 days after the well has been plugged. Should an oil or gas well be discovered during site development and facility operation, a permit modification will be submitted to the executive director if revisions to the liner installation plan are required as a result of well abandonment.

8.17 Compaction

Compaction of incoming waste provides more efficient use of available space and reduces the amount of settling after the fill is complete. Compaction of the waste will be accomplished by repeated passages of a landfill compactor weighing in excess of 40,000 pounds over the waste material. The site dozer will be used to compact waste should the compactor be temporarily out of service for repairs. Adequate compaction will be accomplished to minimize future consolidation and settlement, and provide for the proper application of intermediate and final cover. The incoming waste will be spread in layers and thoroughly compacted by repeated passages of compaction equipment.

The landfill manager or designee will be present during the placement of the first 5 feet of waste over the liner system. The landfill manager or designee will verify and document that the initial 5 feet of waste does not contain large bulky items that could damage the liner system or that cannot be compacted to the required density. Waste ballast must be compacted to a density of not less than 1,200 lb/cy or 44 pcf.

The landfill will document that the waste used for ballast has been compacted with repeated passes of a wheeled compactor that weighs in excess of 40,000 pounds. The form to be used by the landfill is provided by TCEQ.

8.18 Landfill Cover

8.18.1 Soil Management

Management of soil for use in and around the landfill area will be an ongoing process at the New Boston Landfill. In general, soil for use as daily cover, weekly cover, intermediate cover, final cover, and other uses will be available adjacent to the active area. Soil will be obtained from excavation that is ongoing as part of the initial development of future landfill cells or from other suitable sources. This on-site material will be available near the working face (the exact distance varying daily, weekly, etc., depending on the exact stage of development).

In addition to this available material located on the landfill property, a stockpile of material will be kept available adjacent to the working face. The stockpile will consist of soil that has not previously come in contact with waste, and will be of sufficient volume to provide at least one application of 6 inches of protective cover over the working face. As this stockpile is used, it will be replenished. The soil may also be used in emergency situations for fire control, as discussed in Section 7.

8.18.2 Daily Cover

All solid waste disposed of in the West Disposal Area and North Disposal Area will be covered at the end of each operating day. Cover material will be soil not previously mixed with solid waste or an alternative daily cover (ADC) approved by TCEQ. When soil is used, at least 6 inches of well compacted soil cover material that has not been previously mixed with garbage, rubbish, or other solid waste will be placed over all solid waste received during that same day, if ADC is not used. Refer to Section 8.18.5 for authorized ADC materials and placement procedures.

To ensure that the daily cover soil will be adequate (i.e., minimize vectors, contaminated stormwater runoff, odors, etc.) the following procedures will be followed:

- The daily cover will be sloped to drain.
- The daily cover will be compacted with a minimum of two passes with the dozer tracks to minimize infiltration of stormwater and graded to drain.
- The landfill manager or his designee will document where daily cover has been placed and visually inspect during placement that a minimum of 6 inches (compacted thickness) of daily cover soil has been placed. The landfill will document, on a daily basis, the daily cover placement area and indicate that the landfill manager or designee has visually verified the thickness and condition in the Cover Inspection Record as discussed in Section 8.18.9.
- Runoff from areas that have intact daily cover is not considered to have come into contact with the working face or leachate and is considered uncontaminated stormwater runoff.
- After each rainfall event, the landfill manager or his designee will inspect all daily cover areas for erosion, exposed waste, or other damage and repair as necessary. Runoff from damaged or eroded areas will be handled as contaminated water until repairs are completed.
- ADC may be used as daily cover in accordance with the Alternative Daily Cover Operating Plan (ADCOP) in Appendix IVD.

Areas with six inches of daily cover must be inspected daily for erosion, ponded water, seeps, protruding waste, or other detrimental conditions that may cause contaminated runoff from the daily cover. Once the area becomes active again, the daily cover may be stripped off prior to additional waste placement and used as daily cover in other areas.

8.18.3 Weekly Cover

All solid waste disposed of in the South Disposal Area will be covered weekly with soil cover material. Soil cover material will be at least six inches of well compacted soil that has not been previously mixed with garbage, rubbish, or other solid waste and will be placed over all solid waste received during that same week.

To ensure that the weekly cover soil will be adequate (i.e., minimize vectors, contaminated stormwater runoff, odors, etc.) the following procedures will be followed:

- The weekly cover will be sloped to drain.
- The weekly cover will be compacted with a minimum of two passes with the dozer tracks to minimize infiltration of stormwater and graded to drain.
- The landfill manager or his designee will document where weekly cover has been placed and visually inspect during placement that a minimum of six inches (compacted thickness) of weekly cover soil has been placed. The landfill will document, on a weekly basis, the weekly cover placement area and indicate that the landfill manager or designee has visually verified the thickness and condition in the Cover Inspection Record as discussed in Section 8.18.9.
- Runoff from areas that have intact weekly cover is not considered to have come into contact with the working face or leachate and is considered uncontaminated stormwater runoff.
- After each rainfall event, the landfill manager or his designee will inspect all weekly cover areas for erosion, exposed waste, or other damage and repair as necessary. Runoff from damaged or eroded areas will be handled as contaminated water until repairs are completed.

Areas with six inches of weekly cover must be inspected weekly for erosion, ponded water, seeps, protruding waste, or other detrimental conditions that may cause contaminated runoff from the weekly cover. Once the area becomes active again, the weekly cover may be stripped off prior to additional waste placement and used as weekly cover in other areas.

8.18.4 Intermediate Cover

All areas that receive waste and then become inactive for longer than 180 days will be covered with an additional six inches of well compacted earthen material, for a total cover thickness of at least 12 inches. The intermediate cover will be graded to prevent erosion and ponding of water as specified in Part III, Attachment C, Appendix C1-F – Intermediate Cover Erosion and Sedimentation Control Plan. The additional six inches of earthen material will be capable of sustaining native plant growth and will be seeded or sodded following its application for erosion control. Plant growth and other erosion control features placed as part of the intermediate cover will be maintained. Runoff from areas that have received intermediate cover are considered to have not come into contact with the active working face or leachate, and are considered uncontaminated stormwater runoff.

The landfill manager or his designee will document where intermediate cover has been placed and visually inspect during placement that a minimum of 12 inches (compacted thickness) of intermediate cover soil has been placed. The landfill will document, on a daily basis, when intermediate cover is being placed, the intermediate cover placement

area and indicate that the landfill manager or designee has visually verified the thickness and condition in the Cover Inspection Record as discussed in Section 8.18.9.

Areas with twelve inches of intermediate cover must be inspected weekly for erosion, ponded water, seeps, protruding waste, or other detrimental conditions that may cause contaminated runoff from the intermediate cover. Once the area becomes active again, the intermediate cover may be stripped off prior to additional waste placement and used as intermediate cover in other areas.

8.18.5 Alternative Daily Cover

The New Boston Landfill is authorized to use ADC in accordance with §330.165(d). The ADC is limited to a 24-hour period after which daily cover, as defined in §330.165(a) and applied as described in Section 8.18.2 of this SOP, must be placed. The authorized ADC materials and placement procedures are included in Appendix IVD – Alternative Daily Cover Operating Plan.

The New Boston Landfill may request a temporary authorization to use additional types of alternative daily cover material in accordance with §305.62(k)(1)(A).

8.18.6 Temporary Waiver

The New Boston Landfill does not anticipate requesting a waiver from the cover requirements of §330.165(a), (c), and (d) due to extreme seasonal climatic conditions. Should the landfill decide to request a waiver due to extreme seasonal climatic conditions, the landfill will request a waiver in accordance with §330.165(e).

8.18.7 Final Cover

Final cover placement over individual areas will be in accordance with Part III, Attachment H - Closure Plan and will permit ongoing landfilling operations to continue until the time of final closure. 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. Erosion of final or intermediate cover will be repaired promptly by restoring the cover material, grading, compacting, and seeding it as necessary. Such periodic inspections and restorations are required during the entire operational life and for the postclosure maintenance period. Refer to Section 8.27 of this SOP for a site inspection and maintenance schedule.

In general, final cover placement over completed portions of the site will consist of the following steps:

- Survey controls will be implemented to control the filling of solid waste to the bottom level of the daily/intermediate cover layer elevation.
- The final cover system layers will be constructed. Testing of the various components of the final cover system will be performed in accordance with Part III, Attachment D8 – Final Cover Quality Control Plans.

- A final cover certification report complete with an as-built survey will be prepared by an independent registered professional engineer and submitted to the TCEQ for approval.

- The TCEQ-approved final cover certification report will be maintained in the site operating record, and the cover inspection record as described in Section 8.18.9 will be updated to reflect the area where final cover has been placed. The TCEQ region office will also be notified that final cover placement has occurred at the site.

8.18.8 Erosion of Cover

The landfill will inspect intermediate cover at the site on a weekly basis and within 24 hours of a rainfall event of 0.5 inches or more. During the active life of the site, the landfill will inspect the final cover system on a weekly basis and within 24 hours of a rainfall event of 0.5 inches or more. The final cover system, including the erosion control structures (drainage swales and chutes), will be maintained during and after construction. Erosion gullies or washed-out areas will be repaired within five days of detection if they are deep enough (greater than four inches) to jeopardize the final or intermediate cover. Repair of final cover includes restoring cover, grading, compacting, and seeding as required. Should additional time be required for repairs due to weather related delays, the landfill will request from the TCEQ regional office approval of an alternate schedule. Documentation of weather delays for the repairs will be included in the cover inspection record. Inspections and restorations are required during the entire operational life and for the post-closure maintenance period of the landfill. Documentation of dates of inspections, detection of erosion, and completion of repairs are required in accordance with Section 8.18.9 – Cover Inspection Record. Refer to Section 8.27 for a site inspection and maintenance schedule.

Postclosure care inspection and repair procedures of the final cover are outlined in Part III, Attachment I - Postclosure Plan.

8.18.9 Cover Inspection Record

Throughout the landfill operation, a cover inspection record will be maintained and be readily available for inspection in accordance with §330.165(h). For daily, alternative daily cover, weekly, and intermediate cover, the record will specify the date cover was accomplished (no exposed waste), area covered (by use of the grid system), how it was placed, and when it was completed. For final cover, the record will show the final cover area completed, date cover was applied, and thickness of final cover. The final cover certification report for each area will be referenced in the record. Each entry in the record will be certified by the signature of the landfill manager or designee that the work was accomplished as stated in the record. The cover inspection record will document inspections required under Section 8.18.8 – Erosion of Cover and §330.165(g), including findings and corrective action taken.

8.19 Ponded Water

The New Boston Landfill will prevent ponding of water over areas that have received waste through site operations including grading and maintenance. The Ponded Water Plan provides direction to the landfill operations for the prevention and elimination of ponded water. The Ponded Water Plan follows:

- The landfill will place daily cover, weekly cover, intermediate cover, and final cover in accordance with requirements established in Section 8.18 – Landfill Cover.
- The landfill will inspect the surface of areas that have received waste and landfill cover weekly consistent with 8.18 – Landfill Cover and Section 8.27 – Site Inspection and Maintenance Schedule.
- Site grading and maintenance as required by Section 8.19 will minimize the ponding of water over areas containing waste.
- Should ponding of water occur, the depressions will be filled in and regraded within seven days of the occurrence, weather permitting. Landfill cover will be repaired consistent with procedures specified in Section 8.19.
- Diversion berms are constructed to direct uncontaminated water away from the active working face. Should ponding of water occur behind the diversion berms, depressions will be filled in and regraded within seven days of the occurrence, weather permitting.
- Diversion berms and containment berms are constructed and maintained at the active working face to minimize contaminated water within the active working face in accordance with Part III, Attachment D6 – Leachate and Contaminated Water Management Plan.
- If the ponded water has come into contact with waste, or waste contaminated soils, it will be treated as contaminated water and handled in accordance with Part III, Attachment D6.

8.20 Waste in Enclosed Containers or Enclosed Vehicles Accepted at Type IV Landfills

Waste in enclosed containers or enclosed vehicles will not be accepted for disposal in the South Disposal Area at the New Boston Landfill unless all of the following conditions are met:

- The landfill is participating in the funding program to monitor these activities as detailed in §330.169(2).
- Each enclosed container or enclosed vehicle will have all required approvals and/or permits from the executive director in accordance with §330.7.

- Enclosed containers or enclosed vehicles will only be accepted at their designated time and on the specified day in accordance with §330.169, TCEQ permits, or other orders of the TCEQ.

- If requested by the TCEQ, an inspector will be on site and will witness the unloading process to ensure that no putrescible or household waste is present. Any waste considered nonallowable by the TCEQ inspector will be removed from the working face and subsequently removed from the South Disposal Area in accordance with §330.133.

- Each transporter delivering waste in enclosed containers or enclosed vehicles will, prior to discharging the load, provide to the landfill operator a transporter trip ticket for the route being delivered. Trip tickets will be maintained as part of the site operating record.

- The TCEQ may revoke a transporter's authorization to deliver waste to a Type IV municipal solid waste facility for failure to comply with the above conditions.

In accordance with §330.133(h), the New Boston Landfill will post large conspicuous warning signs at the entrance to the South Disposal Area stating that putrescible and household wastes must be disposed of in the West Disposal Area and/or North Disposal Area and stating the landfill's requirements for transporters, such as certificates, manifests, and surcharges or other penalties that may be imposed in the event that transporters do not meet the requirements of this SOP and 30 TAC §330.

8.21 Disposal of Special Wastes

Special wastes, as defined in §330.3, may be accepted for disposal at the facility in accordance with §330.171, Section 8.2 – Unloading of Waste, and Appendix IVB – Special Waste Acceptance Plan. The special wastes that may be accepted at the site and handling procedures are discussed in Appendix IVB.

8.22 Disposal of Industrial Wastes

Industrial waste (nonhazardous) is defined by §330.3 as solid waste resulting from or incidental to any process of industry or manufacturing, mining, or agricultural operations. Class 1 industrial wastes (except wastes that are Class 1 only because of their asbestos content) will not be accepted for disposal. Class 2 and Class 3 industrial solid wastes will be accepted for disposal, provided disposal of these wastes does not interfere with proper operation of the facility. Industrial wastes may be accepted for disposal in accordance with §330.173, and Appendix IVB – Special Waste Acceptance Plan.

Regulated Asbestos Containing Material (RACM) that has been designated as Class 1 waste only due to its asbestos content will be accepted for disposal in the North and West Disposal Areas. Refer to Appendix IVC – Regulated Asbestos Containing Material Plan for handling practices of RACM during disposal operations. Refer to Section 5 – Detection and Prevention of Disposal of Prohibited Wastes, Section 8.2 – Unloading of

Waste, and Appendix IVB – Special Waste Acceptance Plan for waste screening procedures.

Class 2 industrial wastes will be accepted for disposal in the North and West Disposal Areas. Class 2 industrial waste that is similar to Type IV waste will be accepted for disposal in the South Disposal Area.

Class 3 industrial waste will be accepted for disposal in the North, West, and South Disposal Areas.

8.23 Visual Screening of Deposited Waste

Existing topography and vegetation provide natural screening of deposited waste. Screening fences will be used on the interim landfill slopes to block the line of sight of landfill operations from U.S. Highway 82 and Interstate 30.

Visual screening of deposited waste is provided as part of normal waste disposal operations and sequence of development. As the landfill is developed above ground, final cover will be constructed as the landfill reaches final contours.

8.24 Leachate and Gas Condensate Recirculation

The New Boston Landfill may recirculate leachate and landfill gas condensate in accordance with Part III, Attachment D6 – Leachate and Contaminated Water Management Plan.

8.25 Contaminated Water Discharge

The New Boston Landfill will take all steps necessary to control and prevent the discharge of contaminated water from the facility. Should the discharge of contaminated water become necessary, the landfill will obtain specific written authorization from the TCEQ prior to discharge. All water coming in contact with waste or contaminated soils will be treated as contaminated water. Runon and runoff for the 25-year, 24-hour storm event will be controlled following the procedures set forth in Part III, Attachment D6. The landfill will be operated consistent with §330.15(h)(1)-(4) regarding discharge of solid wastes or pollutants into waters of the United States.

8.26 Processing and/or Storage Units Operation

8.26.1 Large Item Storage

A storage area for large items and white goods may be provided near the active working face. Large items and white goods include ovens, dishwashers, freezers, air conditioners, and other large items. These items will be recycled every 180 days or less, or disposed at the active working face within 180 days of acceptance at the facility. The procedures for the acceptance, storage, processing, and disposal of large items are addressed in Section 8.9. The large item storage area is located within the landfill footprint as noted on Part III, Attachment B, Appendix B1, Drawing B.2.

Surface water runoff will be diverted around the large item storage area by placement of earthen diversion berms. Surface water runoff from the large item storage area will be managed as contaminated water and contained by placement of earthen containment and diversion berms to preclude discharge from this area. Containment and diversion berms will be placed consistent with Part III, Attachment D6.

8.26.2 Recyclable Materials Staging Area

Inert materials such as brick, concrete, rubble, and aggregate; and non-inert materials such as reclaimed asphalt pavement and shingles, are often received and staged at the facility for use on facility access roads, staging areas, and drainage structures. Shingles will not be used in facility access roads. The recyclable materials staging area for inert materials will be located within the waste disposal footprint and will be relocated as the active working face moves. The recyclable materials staging area for non-inert materials will be located above existing lined areas and will be relocated periodically as the active working face moves. The size of the stockpiles may vary depending on the amount of materials received at any given time. Since brick, concrete, rubble, and aggregate materials are inert, their storage, separate from non-inert materials, will not create a public health hazard or nuisance and runon and runoff from rainfall will not be controlled in a special manner for these materials. Since reclaimed asphalt pavement and shingles are not inert materials, they will be managed in a manner that will prevent runoff of contaminated water, discharge of waste and creation of nuisance conditions. Since these inert and non-inert materials will continuously be reused for site operations, there is no time limit on the storage of these materials.

The generator of shingles is responsible for providing analytical reports and/or sampling documentation that the shingles do not contain asbestos. Analytical reports and/or sampling documentation must clearly identify the generator and/or customer, description of the material sampled and analyzed, sample collection date and location, and when analyses were conducted. The reference of methods employed must accompany the analytical data and be EPA/TCEQ approved method(s), as applicable.

If associated documentation for the shingles is missing, incomplete, or the characteristics of the shingles are questionable, all discrepancies must be resolved prior to acceptance of the shingles. In the event the discrepancies cannot be resolved, the load of shingles will be rejected. All necessary and required paperwork relating to the acceptance of shingles will be maintained on site in the Site Operating Record and available for review.

A recyclable materials storage and staging area is provided for source-separated recyclable materials. The reusable materials staging area is located within the landfill footprint as noted in Part III, Attachment B, Appendix B1, Drawing B.2.

8.26.3 Citizen's Convenience Area

A citizen's convenience area for waste drop-off is shown in Part III, Attachment D1, Drawing D1.2. Thirty to forty cubic yard roll-off containers as well as containers for

recycled goods may be provided. Roll-off containers will be emptied at the active working face or covered with a tarp at the end of each day.

An area for citizen recyclables drop-off boxes may be provided outside the citizen disposal facility for drop-off of source-separated recyclable materials. Recyclable materials will be collected and stored in closed containers. Recyclable materials may include glass, metals, cardboard or plastic. The items collected will be stored in accordance with §330.209(b).

8.26.4 Leachate Storage Facility

Primary leachate storage will be provided by the leachate sumps, which are located within each landfill cell. Leachate will be pumped from the sumps through a leachate forcemain to a direct connection to publicly owned treatment works (POTW). An existing storage tank provides temporary leachate storage in the event that the direct connection to the POTW is not functional. The leachate storage facility is located as shown in Part III, Attachment D1, on Drawing D1.1. The storage facility consists of one 23,000-gallon storage tank. The calculations in Part III, Attachment D6, demonstrate that the secondary containment area provides containment, with six inches of freeboard, for the leachate storage tank and precipitation from the 25-year, 24-hour storm event.

8.26.5 Truck Wheel Wash

The truck wheel wash is located along the entrance road, as shown in Part III, Attachment D1, Drawing D1.2. The truck wheel wash is a concrete drive through structure. The accumulated mud is periodically removed from the truck wheel wash and placed in the active working face. While water in the wheel wash will be allowed to evaporate before periodic mud removal, any water associated with the truck wheel wash will be treated as contaminated water and disposed consistent with Part III, Attachment D6.

8.27 Site Inspection and Maintenance Schedule

ITEM	TASK	Frequency	Inspector	Type of Inspection
Fence/Gate	Inspect perimeter fence and gate for damage. Make repairs if necessary.	Twice per month (An unofficial inspection of the perimeter fence and gate will also be conducted while policing for windblown waste, but the official detailed inspection of the perimeter fence and gate will be conducted twice per month.)	Landfill Manager or Designee	Document in the Site Operating Record
Windblown Waste	Police working fence area, wind fences, access roads, entrance area, and perimeter fence for loose trash. Clean up as necessary.	Daily	Landfill Manager or Designee	Document in the Site Operating Record
Waste Spilled on Route to the Site	Police the entrance area and all roads at least two miles from the site entrance for loose trash. Clean up as necessary.	Daily	Landfill Manager or Designee	Document in the Site Operating Record
Mud Removal	Inspect entrance road and US 82 for mud or other debris during wet weather. Remove mud and other debris.	Daily during wet weather	Landfill Manager or Designee	Document in the Site Operating Record
Landfill Markers	Inspect all landfill markers for damage, color-coding, and general location. Correct or replace damaged markers within 15 days of discovery.	Monthly	Landfill Manager or Designee	Document in the Site Operating Record
Site Access Road	Inspect site access road for damage from vehicle traffic, erosion, or excessive mud accumulation. Maintain as needed with crushed rock or stone.	Weekly – more often during wet weather or extended dry weather periods. Monthly regrading or more frequently in wet weather.	Landfill Manager or Designee	Document in the Site Operating Record
Daily Cover	Inspect for proper placement, thickness, and compaction. Correct problems as needed.	Daily at the active face. All daily cover areas will be inspected within 24 hours of a rainfall event of 0.5 inches or more.	Landfill Manager or Designee	Document in the Site Operating Record

8.27 Site Inspection and Maintenance Schedule (Continued)

ITEM	TASK	Frequency	Inspector	Type of Inspection
Intermediate Cover	Inspect for proper placement, thickness, erosion, compaction and for presence of waste or other contamination. Correct problems as needed.	Weekly and within 24 hours of a rainfall event of 0.5 inches or more. Repair erosion within five days of detection.	Landfill Manager or Designee	Document in the Site Operating Record
Final Cover	Inspect for proper placement, thickness, compaction, slope, settlement and erosion. Maintenance will be ongoing throughout postclosure care period. Correct problems as needed.	Weekly and within 24 hours of a rainfall event of 0.5 inches or more. Repair erosion within five days of detection.	Landfill Manager or Designee	Document in the Site Operating Record
Leachate	Record depth of leachate in sump, as required.	Monthly	Landfill Manager or Designee	Document in the Site Operating Record
Ponded Water	Inspect daily cover, intermediate cover and final cover areas for potential areas that may pond water. Regrade as required. Remove ponded water over intermediate cover and final cover areas. Contaminated water is to be removed in accordance with Attachment D6 – Leachate and Contaminated Water Plan.	Daily at active working face and daily cover areas. Weekly for intermediate and final cover areas. Remove ponded water within seven days of detection	Landfill Manager or Designee	Document in Site Operating Record

NEW BOSTON LANDFILL

APPENDIX IVA
EXAMPLE LOAD INSPECTION REPORT

Technically Complete September 12, 2014

APPENDIX IVA

LOAD INSPECTION REPORT

Date and Time of Inspection: _____

Inspector's Name: _____

Name of Hauling Company: _____ **Phone Number:** _____

Address: _____ **City:** _____ **State:** _____ **Zip:** _____

Driver's Name: _____ **Vehicle License Number:** _____

Type of Vehicle: _____ **(e.g., roll-off, front loader, dump truck)**

Size of Load, yards: _____ **Sources of Wastes:** _____

LOAD CONTENTS

Waste	Est. % by Vol.	Waste	Est. % by Vol.
Household wastes		Yard waste, brush, stumps	
Wood		Containers	
Metal		Bulk liquids	
Paper, cardboard		Powders, dusts	
Plastic, rubber, glass		Soil	

PROHIBITED WASTE INDICATORS

	YES	NO
Labeled hazardous waste		
Batteries		
Oil		
Medical		
Radioactive		
Ashes		
Soils		
Odors, unusual		
Colors, unusual		
Heat, excessive		
Smoke		

INSPECTION RESULTS

Prohibited wastes identified? _____

Further action required? (e.g., none, lab tests, notification) _____

Samples sent to lab? _____ Lab Name: _____ Phone: _____

Tests requested: _____

Actual form may vary.

_____ _____

Driver Signature **Load Inspector Signature**

NEW BOSTON LANDFILL
CITY OF NEW BOSTON
BOWIE COUNTY, TEXAS
TCEQ PERMIT APPLICATION NO. MSW 576C

PERMIT AMENDMENT APPLICATION

PART IV – SITE OPERATING PLAN

APPENDIX IVB
SPECIAL WASTE ACCEPTANCE PLAN

Prepared for

Waste Management of Texas, Inc.

Technically Complete September 12, 2014

Biggs & Mathews Environmental, Inc.
Firm Registration No. F-256

Prepared by

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TEXAS BOARD OF PROFESSIONAL ENGINEERS
FIRM REGISTRATION NO. F-256

TEXAS BOARD OF PROFESSIONAL GEOSCIENTISTS
FIRM REGISTRATION NO. 50222

CONTENTS

Biggs & Mathews Environmental, Inc.
Firm Registration No. F-256

1 PURPOSE

1.1 General

All TCEQ special waste will be reviewed under the Waste Management of Texas, Inc. (WMTX) Special Waste Acceptance Plan. This Special Waste Acceptance Plan was developed in accordance with 30 TAC §330.127(5)(A) and §330.171. This preventive program specifically provides for waste pre-acceptance procedures to assure that a particular waste is nonhazardous and to determine the acceptability of a waste pursuant to facility permit conditions, applicable regulations, and operating capabilities.

The Special Waste Acceptance Plan provides the procedures that allow the facility to accept special waste without prior approval from the executive director on each individual receipt of solid waste for disposal.

As stated in 30 TAC §330.3(148), at the time this application was prepared, the Texas Commission on Environmental Quality (TCEQ) solid waste regulations defined special waste as any solid waste or combination of solid wastes that because of its quantity, concentration, physical or chemical characteristics, or biological properties requires special handling and disposal to protect the human health or the environment.

1.2 Definitions

Special wastes as defined in 30 TAC §330.3(148) include the following:

(1) Hazardous waste from conditionally exempt small-quantity generators that may be exempt from full controls under Chapter 335, Subchapter N (relating to Household Materials Which Could Be Classified As Hazardous Waste)

(2) Class 1 industrial nonhazardous waste

(3) Untreated medical waste

(4) Municipal wastewater treatment plant sludges, other types of domestic sewage treatment plant sludges, and water supply treatment plant sludges

(5) Septic tank pumpings

(6) Grease and grit trap wastes

(7) Wastes from commercial or industrial wastewater treatment plants; air pollution control facilities; and tanks, drums, or containers used for shipping or storing any material that has been listed as a hazardous

constituent in 40 CFR, Part 261, Appendix VIII but has not been listed as a commercial chemical product in 40 CFR, §261.33(e) or (f)

(8) Slaughterhouse wastes

(9) Dead animals

(10) Drugs, contaminated foods, or contaminated beverages, other than those contained in normal household waste

(11) Pesticide (insecticide, herbicide, fungicide, or rodenticide) containers

(12) Discarded materials containing asbestos

(13) Incinerator ash

(14) Soil contaminated by petroleum products, crude oils, or chemicals in concentrations of greater than 1,500 milligrams per kilogram total petroleum hydrocarbons; or contaminated by constituents of concern that exceed the concentrations listed in Table 1 of §335.521(a)(1)

(15) Used oil

(16) Waste from oil, gas, and geothermal activities subject to regulation by the Railroad Commission of Texas (RRCT) when those wastes are to be processed, treated, or disposed of at a solid waste management facility

(17) Waste generated outside the boundaries of Texas that contains:

(a) Any industrial waste

(b) Any waste associated with oil, gas, and geothermal exploration, production, or development activities

(c) Any item listed as a special waste in this paragraph

(18) Lead acid storage batteries

(19) Used oil filters from internal combustion engines

Special waste as defined in 30 TAC §330.3(148), 30 TAC §330.171, §330.173, and those in Section 9, will be accepted for disposal in accordance with the requirements and/or authorizations of the TCEQ.

The West Disposal Area and the North Disposal Area will accept all special wastes determined to be acceptable wastes in accordance with this Special Waste Acceptance Plan. The South Disposal Area will only accept nonregulated asbestos-containing material (non-RACM) and empty containers as special waste in accordance with this Special Waste Acceptance Plan.

1.3 Prohibited Wastes

The following wastes as identified in §330.15(e) are prohibited and will not be accepted at this facility:

(1) A lead acid storage battery shall not be intentionally or knowingly offered by a generator or transporter for disposal at a municipal solid waste landfill or incinerator, and/or shall not be intentionally or knowingly accepted for disposal.

(2) Do-it-Yourself (DIY) used motor vehicle oil shall not be intentionally or knowingly offered by a generator or transporter for disposal at a municipal solid waste landfill or municipal incinerator, either by itself or mixed with other solid waste, and/or will not be intentionally or knowingly be accepted for disposal. It is an exception to this subsection if the mixing or commingling of used oil with solid waste that is to be disposed of in a landfill is incidental to, and the unavoidable result of, the mechanical shredding of motor vehicles, appliances, or other items of scrap, used, or obsolete metals.

(3) Used oil filters from internal combustion engines will not be intentionally or knowingly accepted for disposal at this facility except as provided in 30 TAC §330.171 (relating to Disposal of Special Wastes).

(4) Whole used or scrap tires will not be intentionally or knowingly accepted for disposal unless processed prior to disposal in a manner acceptable to the executive director. Scrap tires identified during landfill operations and generated through maintenance will be accumulated on site by placing them in containers or trailers prior to shipment. The total quantity of tires will not exceed 500 scrap tires (or weight equivalent tire pieces) on the ground, or 2,000 scrap tires in containers. Tire containers will be kept on landfill property, but the location of the containers will vary to allow operational flexibility, ease of access, and safe landfill operations. Also, from time to time, chipped tires will be brought to the site and stored temporarily for use in construction projects. Tires and tire pieces stored outside of buildings at the site will be monitored for vectors at least once every two weeks. Manifests will be used for shipment of scrap tires offsite.

(5) Refrigerators, freezers, air conditioners, and any other items containing chlorinated fluorocarbons (CFC) will not be knowingly accepted for disposal unless all the CFC contained in that item is captured and sent to an approved CFC disposal site or recycling facility. If the CFC is not removed from the item, then the whole item must be sent to an approved CFC disposal site. Such items that enter the facility with ruptured lines or holes in the CFC unit will not be accepted unless the generator or transporter provides written certification that the CFC has been evacuated from the unit and that it was not knowingly allowed to escape into the atmosphere.

(6) Liquids Restrictions. The following wastes are prohibited from disposal:

(a) Bulk or noncontainerized liquid waste will not be accepted for disposal unless the waste is household waste other than septic waste.

(b) Containers holding liquid waste shall not be accepted for disposal unless:

(i) The container is a small container similar in size to that normally found in household waste.

(ii) The container is designated to hold liquids for use other than storage.

(iii) The waste is household waste.

(7) Regulated hazardous waste as defined in 30 TAC §330.3.

(8) Polychlorinated biphenyls (PCB) wastes, except as permitted under 40 CFR Part 761.

(9) Radioactive substances as defined in Chapter 336, except as authorized in Chapter 336 or that are subject to an exemption of the Department of Health Services.

1.4 Wastes Not Requiring Review

Receipt of the following wastes does not require the strict review detailed in the Special Waste Evaluation Criteria as described in Section 3, provided the waste is handled in accordance with the operational procedures listed in Section 9.1 – Special Waste Handling Procedures. The special wastes identified below will be accepted in accordance with the requirements of §330.171(c), and Part IV, Section 5 – Detection and Prevention of Disposal of Prohibited Wastes. Each waste will be visually observed and transporter shipping documents will be reviewed as required.

(1) Medical wastes that have not been treated in accordance with the procedures specified in Subchapter Y of this chapter (relating to Medical Waste Management) must not be accepted at a landfill unless authorized in writing by the executive director. The executive director may provide this authorization when a situation exists that requires disposal of untreated medical wastes in order to protect the human health and the environment from the effects of a natural or man-made disaster.

(2) Dead animals and/or slaughterhouse waste.

(3) Regulated asbestos-containing material (RACM) as defined in 40 CFR §61.

(4) Nonregulated asbestos-containing materials (non-RACM).

(5) Empty containers that have been used for pesticides, herbicides, fungicides, or rodenticides.

(6) Municipal hazardous waste from a conditionally exempt small quantity generator (CESQG), provided the amount of waste does not exceed 220 pounds (100 kilograms) per month per generator.

(7) Sludges, grease trap waste, grit trap waste, or liquid wastes from municipal sources will be disposed of at the working face of the landfill, provided the material has been, or is to be, treated or processed and the treated/processed material has been tested, in accordance with the Method 9095 (Paint Filter Liquids Test), as described in "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods" (EPA Publication Number SW-846), as amended, and is certified to contain no free liquids.

1.5 Executive Director Approval

This Special Waste Acceptance Plan is prepared in accordance with the requirements of §330.171(b). The executive director, with approval of this plan, authorizes acceptance and/or disposal of a special waste as defined in §330.3, that is not specifically identified in §330.171(c) or (d), or in §330.173. In accordance with §330.171(b)(1), this approval for acceptance and/or disposal of special waste is granted to the New Boston Landfill, MSW Permit No. 576C, which operates in accordance with the requirements of 30 TAC Chapter 330 Municipal Solid Waste. The Special Waste Acceptance Plan meets the requirements of §330.171(b) (1-6) as follows:

- §330.171(b)(2)(A) and (B) related to a hazardous waste determination and Class 1 industrial waste determination is addressed in Section 2.
- §330.171(b)(2) including §330.171(b)(2)(A) related to generator required submittals which include the complete description of the physical and chemical characteristics of each waste is addressed in Section 3, 4, and 5.
- §330.171(b)(2)(C) related to an operational plan is addressed in Section 9 and 10.
- §330.171(b)(2)(D) related to a contingency plan is addressed in Section 10.
- §330.171(b)(2) related to documentation and recordkeeping, waste discrepancies and rejected loads, and training of personnel and waste screening are addressed in Sections 6, 7, and 8.
- 330.171(b)(3) provides requirements related to vacuum trucks that transport liquid wastes. As noted in this Special Waste Acceptance Plan, the facility will not accept liquid wastes that have not passed the Paint Filter Test.
- §330.171(b)(A) provides requirements for contaminated soils. As noted in the Special Waste Acceptance Plan, the facility will not accept contaminated soils that have concentrations greater than 1,500 milligram per kilogram (mg/kg) total petroleum hydrocarbons; or exceed the concentrations listed in Table 1, Constituents of Concern and Their Maximum Concentrations.
- §330.171(b)(5) provides that the executive director may authorize receipt of special waste with concurrence from the owner operator; however, the facility is not required to accept the waste.
- §330.171(b)(6) states that the executive director may revoke an authorization to accept special waste if the owner or operator does not maintain compliance with these rules or conditions imposed in the authorization to accept special waste.

2 HAZARDOUS WASTE DETERMINATION AND CLASS 1 INDUSTRIAL WASTE DETERMINATION

A Hazardous Waste Determination pursuant to §335.504 will be performed for all special wastes offered for disposal at the landfill. A Class 1 industrial waste determination pursuant to §335.505 will be performed for all non-hazardous industrial solid wastes offered for disposal at the landfill. Records of determination will be maintained at the New Boston Landfill. Hazardous wastes (except hazardous wastes from conditionally exempt small quantity generators) and Class 1 industrial wastes (except wastes that are Class 1 only because of their asbestos content) are prohibited for acceptance or disposal at the facility.

3 SPECIAL WASTE EVALUATION CRITERIA

In accordance with 30 TAC §330.127(5)(A), 30 TAC §330.171, and 30 TAC §335.504, WMTX has developed a program, the Special Waste Acceptance Plan, that is designed to take steps in addition to random inspections on incoming loads to prevent the receipt of hazardous waste and PCB wastes at the landfill. This proactive policy minimizes the potential that hazardous or otherwise unacceptable waste will be transported to the site for disposal. Implementation of the program provides protection from the potential dangers that a special waste could pose to employees, the public, or the environment through improper management, and serves as a hazardous waste and PCB screening mechanism that minimizes the potential of these waste streams entering the landfill.

The program specifically provides for pre-acceptance procedures to determine that a particular waste is nonhazardous and to establish the acceptability of a waste pursuant to facility permit conditions, applicable regulations, and operating capabilities. This process is implemented in two ways: (1) review of waste streams prior to acceptance, and (2) monitoring of waste arriving at the gate and/or being disposed of at the working face by qualified site personnel supervision. Specific procedures are also established for acceptance and handling of special wastes as defined by TCEQ.

Prior to acceptance of any potential special waste for disposal, the following process is completed:

(1) The potential customer is responsible for providing documentation of the nature of the waste stream to Waste Management via the Generator's Waste Profile Sheet (GWPS) or other documentation (an example form that may be used is provided in Appendix IVB-A). The customer may be required to provide any laboratory analyses data for the waste stream intended for disposal. If the potential customer is an industrial facility that is required to have specific waste codes assigned, whether self-classified, TCEQ-classified, or EPA-classified, dependent on the waste stream, sufficient documentation may be the GWPS.

(2) The WMTX Approval Manager or designee will review all information provided by the potential generator/customer. The Waste Approval Manager or designee, based on his/her qualifications, is given internal approval by WMTX to implement the Special Waste Acceptance Plan including the review and approval for the acceptance of special waste. The Waste Approval Manager or designee is typically assigned to more than one site and therefore may or may not be located at the landfill at any given time. The Waste Approval Manager or designee ensures that any analytical information meets the requirements as described later, TCEQ approval is given when appropriate, the necessary conditions/limitations on managing the waste are assigned, the intermediate transfer facility (if applicable) is permitted to accept the waste, and if the waste is eligible for disposal at the landfill. If the Waste

Approval Manager decides the waste is eligible, an approval is granted, an expiration date is assigned, and all information is routed to the approved site where it will be stored electronically.

4 QUALITY ASSURANCE/QUALITY CONTROL – ANALYTICAL INFORMATION

Any laboratory analyses required for review is dependent upon the type of waste stream to be disposed. Analyses must have been conducted in accordance with EPA test procedures as outlined in "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods" (EPA Publication Number SW-846), "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, American Society for Testing and Materials (ASTM) Standard Methods, or another approved EPA method. These analytical methods shall be performed on a representative sample(s) of the waste as described in Chapter 9 of "Test Methods for Evaluation of Solid Wastes, Physical/Chemical Methods" (EPA Publication Number SW-846), as amended, or Chapter 4 of EPA's "Ecological Assessment of Hazardous Waste Sites; a Field and Laboratory Reference" (NTIS PB 89-205967), or as amended. Any analytical data generated after June 30, 2008 that is used to make a determination regarding a waste must be generated by a laboratory that is NELAC accredited under the Texas Laboratory Accreditation Program. WMTX personnel must obtain proper analytical results or equivalent information (i.e., 40 CFR 262.11 allows generator's knowledge of the waste and process generating the waste) to ensure that the facility is not managing hazardous waste or other prohibited wastes.

Information about a waste and the process which generates that waste may be used to evaluate or assist in the evaluation of a special waste. Examples of such information include, but are not limited to, Material Safety Data Sheets (MSDS), manufacturers' literature, analytical results (e.g., an analysis may demonstrate that the potential constituents of concern are not present in the waste and therefore could not leach above the levels of concern), knowledge of how the waste was generated (e.g., a filter was used in painting operations and therefore does not contain any pesticides), and other such information generated in conjunction with a particular waste generation activity or process.

(A) When using "process knowledge" to address one or more special waste evaluation criteria, the requirements of §335.511 shall be followed.

(B) In addition to (A) above, all information that is used to evaluate special wastes shall be documented in accordance with §335.513.

Analytical reports and/or sampling documentation must clearly identify the generator and/or customer, description of the material sampled and analyzed, sample collection date and location, and when analyses were conducted.

The reference of methods employed must accompany the analytical data and be EPA/TCEQ approved method(s), as applicable. Laboratory QA/QC information must accompany the data submitted and may include sample handling, containerization and preservation techniques, chain of custody records, data on standards, duplicate analyses, spikes and blanks, and other pertinent statistical information.

Special waste that is delivered to the New Boston Landfill for disposal will receive a visual QA/QC inspection to verify contents and nature of waste. Should visual inspection detect unusual characteristics, additional QA/QC will be performed. Additional QA/QC may include random load inspections, pH testing, reactivity testing, and ignitability testing.

Any waste containing free liquids as determined using the paint filter liquids test (EPA Method 9095: Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods, EPA Publication No. SW-846) will not be accepted for processing or disposal.

5 WASTE APPROVAL UPDATES

All special wastes will be assigned an expiration date not to exceed three years unless otherwise required by the TCEQ. WMTX requires the generator/customer to provide notification and additional process and/or chemical analysis data in the event there are changes in the process from which the waste is produced. At a minimum, all special waste streams approved and accepted for disposal will be reevaluated prior to the expiration date.

In the event the physical characteristics of a waste being received at the New Boston Landfill differs from that of the approved waste stream, waste will not be disposed of and the generator/customer will be required to provide additional process and/or chemical analyses data in order to determine the cause of the change in waste characteristics and any associated disposal requirements. Special waste approval updates will be assigned a new expiration date not to exceed three years unless otherwise required by the TCEQ.

6 DOCUMENTATION AND RECORDKEEPING

Documentation for all profiled wastes that arrive for management at WMTX landfills is reviewed at the facility. If the waste and associated documentation is missing, incomplete, or the characteristics of the waste are questionable, all discrepancies must be resolved prior to acceptance of the waste. In the event the discrepancies cannot be resolved, the waste load will be rejected. All necessary and required paperwork relating to the acceptance of special waste will be maintained on site in the Site Operating Record and available for review. Refer to Appendix IVB-A for an example of a GWPS. As the result of potential future internal WMTX revisions, the format and/or information contained in the GWPS may change.

7 WASTE DISCREPANCIES AND REJECTED LOADS

Documentation for all profiled wastes that arrive for management are on file at the facility. If the waste and associated documentation is missing, incomplete, or the characteristics of the waste are questionable, all discrepancies must be resolved prior to acceptance of the waste. In the event the discrepancies cannot be resolved, the waste load will be rejected. All waste discrepancies must be resolved before a waste can be accepted for disposal. Discrepancies that cause a load to be rejected include but are not limited to:

- A special waste requiring a manifest arrives without a manifest.
- A special waste arrives and the waste material does not match the description on the waste manifest.
- A special waste arrives and the information on the manifest is not complete or is incorrect.
- A special waste arrives that does not match the information provided on the approval.

In the event that the description or physical characteristics of a waste being received at the New Boston Landfill differs from the approved waste stream or if previously unidentified waste is suspected, the load will be stopped and the generator/customer will be required to provide additional process and/or chemical analysis data in order to determine the proper identity of the waste.

Should an incident occur where hazardous waste, PCBs, radioactive or other prohibited wastes are suspected or discovered, the waste will not be authorized for disposal but will instead be isolated until the material can be adequately identified to determine the proper disposition/remediation of the material and the appropriate handling procedures. During this identification process, the generator/customer will be contacted to determine the identity of the material. If the material is determined to be hazardous waste or contain regulated levels of PCB, radioactive or other prohibited material, the TCEQ will be notified of the incident and the planned disposition/remediation of the material. The proper disposition/remediation of the prohibited waste will be specific to the waste and will be implemented upon TCEQ concurrence and approval.

8 TRAINING OF PERSONNEL AND WASTE SCREENING

In addition to the implementation of WMTX's Special Waste Acceptance Plan, which provides for specific and detailed pre-acceptance procedures to prevent the receipt of hazardous waste, PCBs, and other prohibited wastes, appropriate facility personnel will receive training to recognize potential hazardous waste, PCBs, or other prohibited wastes. WMTX provides in-house company designed training to key site personnel, gatehouse personnel and field personnel. This in-house training is function specific and may include Subtitle D requirements, state specific requirements, regulations and procedures, waste recognition and/or waste screening requirements and procedures for acceptable and unacceptable wastes, definition and identification of special wastes, hazardous waste, PCBs or other prohibited waste, and the requirements and procedures of WMTX's Special Waste Acceptance Plan. Appropriate landfill operations personnel will be trained in the proper use of PPE and on-site emergency equipment. Proper PPE includes a work uniform, work boots, and safety vest. Additional PPE may include Tyvek (or equivalent) suit or coveralls, hardhat, hearing protection, gloves, and safety glasses as conditions warrant. Documentation and a record of all training provided to key facility personnel will be maintained on site in the Site Operating Record and available for inspection.

This required training allows for the monitoring of waste streams as they enter the facility, as well as during disposal, under the supervision of properly trained site personnel. Upon arrival at the site, appropriate gatehouse personnel screen all industrial customers to ensure that all special waste represented by the special waste approval has been identified and that all required paperwork, approvals, and documentation are in place. In the event that the description or physical characteristics of a waste being received at the landfill differ from that of an approved waste stream, or if a previously unidentified waste is suspected, the load will be stopped and the generator will be required to provide additional process and/or chemical analysis data in order to determine the proper identity of the waste. Upon arrival at the working face and during the unloading of a customer's waste, appropriate field personnel screen the waste for signs of any waste that may exhibit signs of being hazardous or otherwise prohibited waste.

Household hazardous wastes are exempt from regulation under 40 CFR 261.4(b)(1) and under 30 TAC §§335.401-335.419. Notwithstanding this exemption, shipments of residential waste may be screened and visually monitored for hazardous wastes upon arrival at the gatehouse and during unloading at the working face or citizen's collection station by the appropriate gatehouse and field personnel.

During the waste screening process by the appropriate field and gatehouse personnel, items to consider and look for may include the type of transport vehicle, signs of liquids or leaking liquids, strange odors, nonhousehold size containers, smoke, vapors, unusual color or content, unusual compaction, excessive liquids, powders or abnormal products,

unusual or prohibited signage or labeling, and body language of driver (i.e., suspicious or nervous appearance or actions).

Should an incident occur where hazardous waste, PCB waste prohibited from Subtitle D land disposal, or other prohibited wastes are suspected or discovered, the waste will not be authorized for disposal but will instead be isolated until the material can be adequately identified to determine the proper disposition/remediation of the material and the appropriate handling procedures. During this identification process, the facility will make a reasonable attempt to determine the identity of the generator of the material.

If the generator is identified, he will be contacted to determine the identity of the material. If the material is determined to be a nonacceptable waste for the facility, the waste will be returned to the generator for proper disposal. The proper disposition/remediation of the prohibited waste will be specific to the waste.

If the generator cannot be identified, the facility will take reasonable steps to determine the identity of the material. If the material is determined to be a hazardous waste, PCB, or other prohibited material, the TCEQ will be notified of the incident and the planned disposition/remediation of the material. The facility will make the necessary arrangements for proper disposition/remediation of the waste.

Special wastes requiring pre-acceptance that are delivered to the landfill for disposal will be checked against any pre-acceptance information to match the contents and nature of waste. The gate attendant will monitor the loads by observing the vehicle, and/or inspecting the load, and/or questioning the driver concerning the origin of the waste. Additional QA/QC may include pH testing, ignitability testing, and paint filter testing. If conducted, QA/QC results will be recorded and referenced by manifest document number and maintained in the site operating record. Wastes requiring special handling are diverted to the appropriate special management area.

9.1 Special Waste Handling Procedures

The following special wastes will be handled and disposed of in accordance with the provisions applicable to that waste. The special waste handling procedures are for special wastes to be disposed of in the municipal solid waste disposal area.

(1) Dead animals, other than single household pets and other single small animals, and nonhazardous slaughterhouse wastes will be covered by three feet of other solid waste or at least two feet of soil immediately upon receipt. Additional treatment and disposal requirements are listed below:

(a) Animal waste meeting the definition of "special waste from health care related facilities" (Title 25 TAC 1.132 relating to Definitions), shall be disposed of in accordance with 30 TAC §330.1219(b) (relating to the Treatment and Disposal of Medical waste). Refer to 25 TAC §1.136(a)(1) for approved treatment methods.

(b) Agricultural wastes are subject to the regulations in Chapter 335. If they are disposed of, they will be subject to all appropriate requirements of this Chapter. Agricultural wastes will be accepted if they are determined to be Class 2 nonhazardous industrial wastes.

(2) Nonhazardous soil and sorbent material from industrial and nonindustrial sources contaminated by petroleum substances as defined in §335.1 (relating to Definition of Petroleum Substance) or chemicals listed in §335.521(a)(1) (relating to Appendices) may be disposed of at the New Boston Landfill under this plan provided they are not Class 1 industrial waste. Pursuant to §335.508(6), soil and sorbent material shall be classified as a Class 1 waste until a generator demonstrates that the waste's total petroleum hydrocarbon concentration (TPH) is less than or equal to 1,500 parts per million (ppm). Where hydrocarbons cannot be differentiated into specific petroleum substances, then such wastes with a TPH concentration of greater than 1,500 ppm shall be classified as a Class 1 waste. The concentrations of the chemicals of concern contained

in the soil or sorbent material shall be less than the values listed in 30 TAC §335.521(a)(1) to be acceptable at the facility.

(3) When a situation exists that requires disposal of untreated waste in order to protect human health or the environment from the effects of a natural or manmade disaster, a request for written authorization by the executive director will be submitted to the TCEQ. Untreated medical wastes will be placed in the active working face and immediately covered with daily cover soil.

(4) Nonhazardous empty containers that have held pesticides (e.g., herbicides, fungicides, or rodenticides) as defined in §330.171(c)(5)(A) or (B) shall be disposed of in accordance with subparagraphs (a) and (b) of this paragraph.

(a) These containers will be disposed of at the New Boston Landfill under this plan provided that:

(i) The containers are triple-rinsed prior to receipt at the site.

(ii) The containers are rendered unusable prior to or upon receipt at the site.

(iii) The containers are covered by the end of the same working day that they are received.

(b) Those containers for which triple-rinsing or hydroblasting is not feasible or practical (e.g., paper bags and cardboard containers) may be disposed of under the provisions of §330.171(c)(6) or in accordance with §330.173, relating to Disposal of Industrial Wastes, as applicable.

(5) Municipal hazardous waste from a conditionally exempt small quantity generator (CESQG) meeting the requirements of §330.171(c)(6) (relating to Special Requirements for Hazardous Waste Generated by Conditionally Exempt Small Quantity Generators) may be accepted at the New Boston Landfill provided the amount of waste does not exceed 220 pounds (100 kilograms) per month per generator, and provided the New Boston Landfill is willing to accept the waste.

(6) Nonhazardous drugs (not including manufacturing wastes), nonhazardous contaminated foods, and nonhazardous contaminated beverages will be disposed of at the New Boston Landfill, provided the waste is not a Class 1 industrial waste, and a minimum of one foot of other municipal solid waste or six inches of dirt will be placed on the waste immediately upon disposal (in addition to daily cover placed on the working face) and additional precautionary measures are taken to prevent scavenging and salvaging. For waste that may contain free liquids, the provisions outlined in the paragraph below must also be followed. Nonregulated and non-illegal drugs received in volumes of less than one

cubic foot need not be covered immediately upon receipt as long as scavenging and salvaging does not occur. The Diversion Group of the Drug Enforcement Agency will be contacted prior to the acceptance of controlled substances.

(7) Nonhazardous containerized liquids will be disposed of at the New Boston Landfill under this plan provided the waste is not a Class 1 industrial waste, and the waste is solidified prior to receipt of the waste at the facility.

(a) Waste in small containers similar in size to that normally found in household waste, or in a container that is designed to hold liquids for use other than storage, may be placed in the New Boston Landfill provided the following takes place:

(i) The New Boston Landfill unit in which the containerized liquid waste is to be disposed of shall have a minimum of three feet of waste in it prior to disposal of the liquid waste.

(ii) The liquid waste shall be mixed with soil or another absorbing material or waste in a 4:1 ratio of solid to liquid.

(iii) If the liquid waste is an alcoholic beverage, it shall be handled in accordance with specific conditions, if any, required by the Texas Alcoholic Beverage Commission (TABC).

(iv) No ponded water should be visible at the working face where disposal will occur.

(v) A minimum of one foot of municipal solid waste or six inches of dirt (not including daily cover) will be placed on the waste immediately after it is deposited on the working face.

(8) Nonhazardous municipal wastewater treatment plant sludges, other types of domestic sewage treatment plant sludges, water-supply treatment plant sludges, and septic tank pumpings (e.g., materials regulated under Chapter 312 relating to Sludge Use, Disposal and Transportation) may be processed and the processed sludge shall be tested in accordance with Method 9095 (Paint Filter Liquids Test) as described in "Test Methods for Evaluation of Solid Wastes, Physical/Chemical Methods" (EPA Publication Number SW-846) as amended, and certified to contain no free liquids.

(9) Nonhazardous grease trap waste and nonhazardous grit trap waste will be accepted for disposal at the New Boston Landfill provided the waste is not a Class 1 industrial waste and:

(a) The waste has been treated or processed.

(b) The treated/processed material has been tested in accordance with Method 9095 (Paint Filter Liquids Test), as described in "Test Methods for the Evaluation of Solid Wastes, Physical/Chemical Methods" (EPA Publication Number SW-846), as amended, and is certified to contain no free liquids.

(10) [Reserved]

(11) Nonhazardous incinerator ash may be disposed of at the New Boston Landfill under this plan provided the waste is not a Class 1 industrial waste and the ash is handled such that it does not cause operational problems or become a public health nuisance, such as becoming airborne. Nonhazardous incinerator ash will be placed in the active working face and immediately covered with daily cover soil.

(12) Nonhazardous filter media (e.g., paint filters, glycol filters, molecular sieves and other types of filter media), but not including those contained in normal household waste or used oil filters from internal combustion engines, will be disposed of at the New Boston Landfill under this plan provided:

(a) The waste is not a Class 1 waste.

(b) The waste has been air dried at least 72 hours prior to disposal.

(c) The air dried waste has been tested in accordance with Method 9095 (Paint Filter Liquids Test), as described in "Test Methods for the Evaluation of Solid Wastes, Physical/Chemical Methods" (EPA Publication Number SW-846), as amended, and is certified to contain no free liquids.

(13) Nonhazardous abrasive wastes (e.g., blasting grit, steel shot, etc.) may be accepted at the New Boston Landfill under this plan provided the waste is not a Class 1 industrial waste and the waste is handled such that it does not cause operational problems or become a public health nuisance. Nonhazardous abrasive wastes will be placed in the active working face and immediately covered with daily cover soil.

(14) Nonhazardous demolition debris contaminated with lead based paint from household activities may be accepted for disposal at the New Boston Landfill. Wastes containing lead-based paints from nonhousehold sources will require analysis to determine that the concentration of lead meets the requirements of the Hazardous Waste/Class 1 industrial waste determination.

(15) Class 2 and Class 3 industrial solid waste will be handled in accordance with §330.173 (relating to Disposal of Industrial Wastes).

(16) Waste generated outside the state boundaries that meets the definition of a special waste will be handled in accordance with the provisions and

requirements of this plan for the same types of waste generated within Texas. Out-of-state Class 2 and Class 3 industrial solid waste will be handled in accordance with §330.173 and §335.508(9)(B)(ii).

(17) Materials from oil, gas and geothermal activities subject to regulation from the RRCT will be managed in accordance with "disposal of special wastes associated with the development of oil, gas, and geothermal resources" (TCEQ Regulatory Guidance RG-003, September 2006) and disposed of in the working face at the New Boston Landfill.

(18) Regulated asbestos-containing material (RACM) will be disposed at the New Boston Landfill in accordance with the provisions and requirements of §330.171(c)(3) and Appendix IVC – Regulated Asbestos-Containing Material Plan included in this Site Operating Plan. The New Boston Landfill currently accepts asbestos waste and will continue to accept and dispose of this waste in future Type I landfill cells as constructed.

(19) Nonregulated asbestos-containing material (non-RACM) will be handled in accordance with §330.171(c)(4) provided the wastes are placed on the active working face and covered in accordance with §330.165. Under no circumstances will any material containing non-RACM be placed on any surface or roadway which is subject to vehicular traffic or disposed of by any other means that could result in the crumbling of the material into a friable state.

10 CONTINGENCY PROCEDURES

For incidental spills that do not pose a threat to waters of the state, operations staff will contain and clean up the spill using appropriate equipment at the direction of the landfill manager. For solids, site staff will use shovels, brooms, and/or heavy equipment to pick up spilled materials. For liquids, typical cleanup materials would include oil dry, absorbent pads, or other available materials to contain the spilled material. Spill cleanup kits are maintained on site. Pumps might also be used, when appropriate, to transfer liquid material from the spill area into containers.

For larger spills, or where there is potential for the waste to impact waters in the state, the landfill manager will assess the situation and determine the appropriate means to contain and collect the material. If spilled material threatens to impact storm water discharge from the site, the landfill manager will use booms or diversionary dikes, or excavate holes or pits as needed to contain the spilled material. Equipment typically available for spill response includes excavators, backhoes, dozers, pumps, and haul trucks. In the event of a spill that cannot be picked up using handheld tools, this equipment will be used as needed to contain and collect spilled material. For larger spills of liquid wastes that cannot be adequately cleaned up with on-site equipment, an emergency cleanup contractor or vacuum truck company may be contacted to assist with cleaning up the spill. Once the liquids are removed, a visual inspection of the spill area will be made, and soils observed to be potentially impacted will be over-excavated and disposed with the collected material.

Refer to the Spill Prevention Control and Countermeasures Plan (SPCC Plan) for additional information regarding cleanup procedures, reporting, inspections control, and notification requirements.

NEW BOSTON LANDFILL

APPENDIX IVB-A
GENERATOR'S WASTE PROFILE SHEET

Generator's Non-hazardous Waste Profile Sheet

Requested Disposal Facility: _____ Profile Number: _____

☐ Renewal for Profile Number: _____ Waste Approval Expiration Date: _____

☐ Check here if there are multiple generating locations for this waste. Attach additional locations.

A. Waste Generator Facility Information (must reflect location of waste generation/origin)

1. Generator Name: _____
2. Site Address: _____ 7. Email Address: _____
3. City/ZIP: _____ 8. Phone: _____ 9. FAX: _____
4. State: _____ 10. NAICS Code: _____
5. County: _____ 11. Generator USEPA ID #: _____
6. Contact Name/Title: _____ 12. State ID# (if applicable): _____

B. Customer Information ☐ same as above

P. O. Number: _____

1. Customer Name: _____ 6. Phone: _____ FAX: _____
2. Billing Address: _____ 7. Transporter Name: _____
3. City, State and ZIP: _____ 8. Transporter ID # (if appl.): _____
4. Contact Name: _____ 9. Transporter Address: _____
5. Contact Email: _____ 10. City, State and ZIP: _____

C. Waste Stream Information

1. DESCRIPTION
   a. Common Waste Name: _____
   State Waste Code(s): _____
   b. Describe Process Generating Waste or Source of Contamination:
   c. Typical Color(s): _____
   d. Strong Odor? ☐ Yes ☐ No Describe: _____
   e. Physical State at 70°F: ☐ Solid ☐ Liquid ☐ Powder ☐ Semi-Solid or Sludge ☐ Other: _____
   f. Layers? ☐ Single layer ☐ Multi- layer ☐ NA
   g. Water Reactive? ☐ Yes ☐ No If Yes, Describe: _____
   h. Free Liquid Range (%): _____ to _____ ☐ NA(solid)
   i. pH Range: _____ to _____ ☐ NA(solid)
   j. Liquid Flash Point: ☐ < 140°F ☐ 140°- 199°F ☐ ≥ 200°F ☐ NA(solid)
   k. Flammable Solid: ☐ Yes ☐ No
   l. Physical Constituents: List all constituents of waste stream - (e.g. Soil 0-80%, Wood 0-20%): ☐ (See Attached)

Constituents (Total Composition Must be ≥ 100%)	Lower Range	Unit of Measure	Upper Range	Unit of Measure
1.				
2.				
3.				
4.				
5.				
6.				

2. ESTIMATED QUANTITY OF WASTE AND SHIPPING INFORMATION
   a. ☐ One Time Event ☐ Base ☐ Repeat Event
   b. Estimated Annual Quantity: _____ ☐ Tons ☐ Cubic Yards ☐ Drums ☐ Gallons ☐ Other (specify): _____
   c. Shipping Frequency: _____ Units per ☐ Month ☐ Quarter ☐ Year ☐ One Time ☐ Other
   d. Is this a U.S. Department of Transportation (USDOT) Hazardous Material? (If yes, answer e.) ☐ Yes ☐ No
   e. USDOT Shipping Description (if applicable): _____
3. SAFETY REQUIREMENTS (Handling, PPE, etc.): _____

IVC-A-1 May 2010

Generator's Non-hazardous Waste Profile Sheet

D. Regulatory Status (Please check appropriate responses)

1. Waste Identification:
   a. Does the waste meet the definition of a USEPA listed or characteristic hazardous waste as defined by 40 CFR Part 261? ☐ Yes ☐ No
      1. If yes, please complete a hazardous waste profile.
   b. Does the waste meet the definition of a state hazardous waste other than identified in D.1.a? ☐ Yes ☐ No
      1. If yes, please complete a hazardous waste profile.
2. Is this waste included in one or more of categories below (Check all that apply)? If yes, attach supporting documentation. ☐ Yes ☐ No
   ☐ Delisted Hazardous Waste ☐ Excluded Wastes Under 40CFR 261.4
   ☐ Treated Hazardous Waste Debris ☐ Treated Characteristic Hazardous Waste
3. Is the waste from a Federal (40 CFR 300, Appendix B) or state mandated clean-up? If yes, see instructions. ☐ Yes ☐ No
4. Does the waste represented by this waste profile sheet contain radioactive material? ☐ Yes ☐ No
   a. If yes, is disposal regulated by the Nuclear Regulatory Commission? ☐ Yes ☐ No
   b. If yes, is disposal regulated by a State Agency for radioactive waste/NORM? ☐ Yes ☐ No
5. Does the waste represented by this waste profile sheet contain Polychlorinated Biphenyls (PCBs)? ☐ Yes ☐ No
   (If yes, list in Chemical Composition - C.1.l)
   a. If yes, are the PCBs regulated by 40 CFR 761? ☐ Yes ☐ No
   b. If yes, is it remediation waste from a project being performed under the Self-Implementing option provided in 40 CFR 761.61(a)? ☐ Yes ☐ No
   c. If yes, were the PCBs imported into the US? ☐ Yes ☐ No
6. Does the waste contain untreated, regulated medical or infectious waste? ☐ Yes ☐ No
7. Does the waste contain asbestos? ☐ Yes ☐ No
   a. If Yes, ☐ Friable ☐ Non Friable
8. Is this profile for remediation waste from a facility that is a major source of Hazardous Air Pollutants (Site Remediation NESHAP, 40 CFR 63 subpart GGGGG)? ☐ Yes ☐ No
   a. If yes, does the waste contain <500 ppmw VOHAPs at the point of determination? ☐ Yes ☐ No

E. Generator Certifcation (Please read and certify by signature below)

By signing this Generator's Waste Profile Sheet, I hereby certify that all:

1. Information submitted in this profile and all attached documents contain true and accurate descriptions of the waste material;
2. Relevant information within the possession of the Generator regarding known or suspected hazards pertaining to this waste has been disclosed to WM/the Contractor;
3. Analytical data attached pertaining to the profiled waste was derived from testing a representative sample in accordance with 40 CFR 261.20(c) or equivalent rules; and
4. Changes that occur in the character of the waste (i.e. changes in the process or new analytical) will be identified by the Generator and disclosed to WM (and the Contractor if applicable) prior to providing the waste to WM (and the contractor if applicable).
5. Check all that apply:
   ☐ a. Attached analytical pertains to the waste. Identify laboratory & sample ID #'s and parameters tested: _____ # Pages: _____
   ☐ b. Only the analysis identified on the attachment pertain to the waste (identify by laboratory & sample ID #'s and parameters tested). Attachment #: _____
   ☐ c. Additional information necessary to characterize the profiled waste has been attached (other then analytical, such as MSDS). Indicate the number of attached pages: _____
   ☐ d. I am an agent signing on behalf of the Generator, and the delegation of authority to me from the Generator for this signature is available upon request.

Certification Signature: _____ Title: _____

Company Name: _____ Name (Print): _____

Date: _____

Generator's Non-Hazardous Waste Profile Sheet Instructions

Information on this form is used to determine if the described waste may be transported, treated, stored or disposed in a legal, safe, and environmentally sound manner. This information will be maintained in strict confidence. Typed or printed answers must be provided for Requested Disposal Facility, Certificate of Disposal (if required), Renewal information and Sections A - E. For a response of "NONE" or "NA" attach the information to the completed Generator's Non-Hazardous Waste Profile Sheet. If you have questions concerning this form, please contact 1-800-WMDisposal (1-800-963-4776).

A. Waste Generator Information

1. **Generator Name** - Enter the name of the facility where the waste is generated.
2. **Site Address** - Enter the street address (not P.O. Box) of the facility where the waste is generated.
3. **City/ZIP** - Enter the city and zip or postal code where the waste is generated.
4. **State/Province** - Enter the state or province where the waste is generated.
5. **County** - Enter the county where the waste is generated.
6. **Contact Name/Title** - Enter the name and title of the Generator's contact.
7. **Email Address** - Enter the email address of the Generator's contact.
8. **Phone** - Enter Generators contact's area code and phone number.
9. **FAX** - Enter the Generators contact's area code and facsimile number.
10. **NAICS Code** - Enter the SIC/NAIS Code for the facility where the waste is generated http://www.census.gov/epcd/www/naics.html.
11. **Generator USEPA ID#** - Enter the USEPA (or Canadian equivalent) identification number issued to the facility generating the waste (if applicable).
12. **State/ID#** - Enter the identification number issued by the state to the facility generating the waste (if applicable).

B. Customer Information

1. **Customer Name** - Enter the customer name that is responsible for billing. If the same as the Generator, mark "Same as Above."
2. **Billing Address** - Enter the customer address where the bill for services should be sent.
3. **City, State, ZIP** - Enter the customer's city, state and ZIP or postal code.
4. **Contact Name** - Enter the name of the person who can answer technical questions about the waste.
5. **Contact Email** - Enter the email address of the technical contact.
6. **Phone/FAX** - Enter the technical contact's area code and phone number and area code and facsimile number for the technical contact.
7. **Transporter Name** - Enter the name of the transportation company hauling the waste (if known).
8. **Transporter ID #** - Enter the Federal/State Identification number issued to the transporter (if applicable).
9. **Transporter Address** - Enter the physical address for the transportation company.
10. **City, State and ZIP** - Enter the City, State and ZIP for the transportation company.

C. Waste Stream Information

1.a. **Common Waste Name** - Enter a name generally descriptive of this waste (e.g., paint sludge, fluorescent bulbs).
State Waste Code - If applicable, enter the appropriate State code assigned to this type of waste.

1.b. **Process Generating Waste or Source of Contamination** - Describe the process or source of contamination generating the waste in detail. Identify the specific process/operation or source that generates the waste (e.g., incineration of municipal refuse, wastewater treatment, generated from domestic water conditioning, contaminated soil from gasoline UST removal).).

1.c. **Color(s)** - Describe the color(s), of the waste (e.g., blue, transparent, varies).

1.d. **Strong Odor** - DO NOT SMELL THE WASTE! If the waste has a known or strong odor, then describe (e.g., acrid, pungent, solvent, sweet).

1.e. **Physical State @ 70°F** - If the four boxes provided do not apply, a descriptive phrase may be entered after "Other" e.g., multi-phase).

1.f. **Layers** - Single layer means the waste is homogenous. Multi-layer means the waste is comprised of two or more layers (e.g., oil/water/sludge).

1.g. **Water Reactive** - See attached

1.h. **Free Liquid Range** - See attached

Generator's Non-Hazardous Waste Profile Sheet Instructions

C. Waste Stream Information (continued)

1.i. **pH Range** - Indicate the pH range of the waste. **Note:** Certain states may require pH of a water/waste slurry.

1.j. **Liquid Flash Point** - Indicate the flash point obtained using the appropriate test method.

1.k. **Flammable Solid** - See attached

1.l. **Physical Constituents** - List general components of the waste using appropriate names. If trade names are used, attach Material Safety Data Sheets or other documents that adequately describe the composition of the waste. For each component, estimate the range (in percent) in which the component is present (e.g. 90-100% Soil/0-10% debris).

2.a. **Event/Base Business** - Indicate if the waste is generated from a specific event or an on-going process.

2.b. **Estimated Annual Quantity** - Approximate annual volume in tons, yards or other (e.g., drums, gallons) that will be received by the ultimate management facility. This volume amount is not intended for use in complying with state and/or permit restrictions.

2.c. **Shipping Frequency** - Choose the appropriate option or "other" along with a description.

2.d. **US DOT Hazardous Material** - Indicate if the waste is considered to be a US DOT hazardous material in the quantities/packages shipped.

2.e. **US DOT Shipping Description** - If applicable, enter the proper US DOT Shipping description. For further information, see 40CFR173.

3. **Safety Requirements** - All personal protective equipment necessary to safely manage the waste stream (e.g. dust mask, gloves, respirator, do not wet waste).

D. Regulatory Status

1. **Hazardous Waste Determination** - Verify that the waste is non-hazardous as defined by RCRA or state equivalent regulation. If unsure check with your WM representative for assistance.
2. **Identify whether your waste is an excluded, delisted or treated hazardous waste** - If yes, please attach the following to the profile. Delisted - Attach the Federal Register Citation FR____ or State Agency Letter; Excluded Waste - Identify the specific citation in 40CFR261.4 Treated Hazardous Waste - Identify Method from 40CFR268; Treated Characteristic Waste - Attach Certification of Treatment.
3. **Is this waste from a Federal or State mandated clean-up** - If yes, Waste Management may require the Records of Decision or other documentation to assist others in the evaluation for proper disposal.
4. **If the waste contains radioactive material or is a Normally Occurring Radioactive Material (NORM)** - answer 4.a and 4.b.
5. **Does the waste contain PCBs?** If yes, attach analysis and supporting documentation of the PCB source. For additional information, see 40CFR761.
6. **Regulated (untreated) medical waste** - See attached.
7. **Asbestos containing waste** - Indicate whether the waste contains asbestos. If yes, indicate the type of asbestos.

E. Generator Certification (Please read and certify by signature below)

Indicate the appropriate response to questions/statements 1, 2, 3, 4 and 5. By signing this Generator's Waste Profile Sheet, the Generator certifies the responses are true and accurate with respect to the waste stream(s) listed.

Certification Signature - Signature of an authorized employee of the Generator or representative of the generator if authorized in writing by the generator.

Title - Enter Employee's title.

Company Name - Company employing the person certifying the Generator's Waste Profile Sheet.

Name - Type or Print Employee's name.

Date - Date of certification.

NEW BOSTON LANDFILL
CITY OF NEW BOSTON
BOWIE COUNTY, TEXAS
TCEQ PERMIT APPLICATION NO. MSW 576C

PERMIT AMENDMENT APPLICATION

PART IV – SITE OPERATING PLAN

APPENDIX IVC
REGULATED ASBESTOS-CONTAINING MATERIAL PLAN

Prepared for

Waste Management of Texas, Inc.

Technically Complete September 12, 2014

Biggs & Mathews Environmental, Inc.
Firm Registration No. F-256

Prepared by

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TEXAS BOARD OF PROFESSIONAL ENGINEERS
FIRM REGISTRATION NO. F-256

TEXAS BOARD OF PROFESSIONAL GEOSCIENTISTS
FIRM REGISTRATION NO. 50222

CONTENTS

Biggs & Mathews Environmental, Inc.
Firm Registration No. F-256

1 INTRODUCTION

The primary objective in handling asbestos waste is the prevention of the release of asbestos fibers during disposal operations. Proper management practices can prevent exposure to asbestos fibers.

This plan has been prepared to identify proper handling practices of regulated asbestos-containing material (RACM) during disposal operations at the New Boston Landfill. The plan has been prepared to meet all federal, state, and local requirements. These include Code of Federal Regulations Title 40 Part 61, Title 29 Parts 1910.1001 and 1926.57, Title 49 Parts 171–173; and 30 TAC §330.171(c)(3). The plan also meets WMTX policy and the Special Waste Acceptance Plan approval process for asbestos.

The New Boston Landfill has previously provided written notification to the executive director of the intent to accept RACM and is permitted to accept such waste in accordance with §330.171(c)(3)(A). The landfill currently accepts RACM for disposal in the West Disposal Area and will continue to accept RACM for disposal in the North Disposal Area. Refer to Part III, Attachment B, Appendix B1, Drawing B.2 for these locations.

In accordance with §330.171(c)(3)(B), the location of the area designated to receive the RACM shall be surveyed and marked by a Registered Professional Land Surveyor and identified on a current site diagram, which is maintained at the landfill. The survey required for RACM disposal will be documented in landfill liner certification reports submitted to TCEQ prior to disposal of any waste in the cell or unit. The landfill will maintain on site, unless otherwise authorized by the executive director, a record of each load of RACM accepted describing its location, depth, area and volume of material in cubic meters or yards.

2 NOTIFICATION

The transporter should notify the landfill manager in advance of the delivery so that the load will arrive at a time to be properly handled and covered.

3 LANDFILL DISPOSAL

(1) Notification and Recordkeeping

(a) When a load of RACM arrives at the gatehouse, the gate attendant shall notify the landfill manager, or his designated representative, who will oversee the disposal operations.

(b) The gate attendant shall check the accompanying manifest (required for RACM) to ensure that necessary information is properly recorded.

(c) If the manifest is properly completed, the gate attendant will direct the driver to the proper disposal location.

(d) A disposal log will be maintained on site documenting the location, depth, and volume of disposal of all RACM.

(2) Initial Inspection

(a) When the load of RACM arrives at the disposal area it will be inspected prior to unloading. The visual inspection by landfill personnel will be to determine if the waste was properly wetted and double-bagged or otherwise packaged as required. If not, it will be rejected for disposal at this time. TCEQ will be notified by the following working day of any such rejections.

(b) In an effort to minimize the potential hazard posed to the public that sending an improperly wetted and bagged load back onto public roadways presents, the rejected load will be held in a discreet area on site. The generator must then make arrangements to have the waste properly bagged within 24 hours. After that time, the landfill will make arrangements to have the load rewetted and bagged at the sole expense of the generator.

(3) Place of Unloading

(a) The entire permitted Type I waste disposal footprint of the facility (West Disposal Area and North Disposal Area) will be considered a potential RACM disposal area. The site maintains a record of each load of RACM accepted as to its location, depth, or elevation, and volume of material. This information is maintained at the facility. The boundary locations of these fillable areas will be marked in the field.

(b) RACM is to be placed in a disposal area separate from (but possibly immediately adjacent to) the active working face. A separate cell is not required. A minor depression (i.e., three to five feet deep) shall

be made with a dozer or compactor prior to unloading. As an alternative, a dozer or compactor may make a cut into the refuse working face, which is deep enough to contain the volume of RACM anticipated (this does not necessarily mean going below grade). Depressions or cuts will not be made if there is potential to cut into previously placed asbestos.

(c) Below natural grade fill areas for placement of RACM is preferred. A minimum separation of three feet of other solid waste is required between the bottom and/or sidewall liner and RACM. However, should this below natural grade disposal not be possible or practical, the following precautions will be taken for above natural grade fill areas to ensure the waste is not subject to future exposure through erosion or weathering of the intermediate and/or final cover. RACM disposal in above natural grade fill areas will be at least 20 feet interior of any design finished side slope of the unit. In addition, RACM disposal will be at least 10 feet below the design finished top final surface elevations of the unit.

(4) Methods of Unloading

Transporter shall use either Method (a) or Method (b), as described below to unload RACM at the landfill.

(a) Bags or containers holding RACM must be carefully unloaded and placed in their disposal location rather than thrown to the ground. Employees of the generator or transporter will perform the task of unloading the material.

(b) Unloading of roll-off containers is permitted when performed in accordance with the following procedures:

(i) The truck and roll-off box are positioned to unload in a location prepared in advance for disposal of the waste.

(ii) With the opened roll-off box tailgate above the edge of the excavation, the bed of the truck and the roll-off box are gradually elevated until the entire load slowly slides out of the roll-off box and into the excavation. Bags that do not land in the excavation shall be hand placed by the transporter personnel.

(5) Covering the Asbestos Waste

Asbestos waste will not be compacted directly. After unloading, the asbestos waste should be covered with a minimum of three feet of other solid waste or one foot of soil. Care should be exercised in the application of the cover to ensure that the bags or containers will not be ruptured.

(6) Grid System Control

A grid system will be utilized to identify where the waste will be disposed of. The site grid system (i.e., 100-foot markers) and a temporary elevation benchmark will be used in identifying the disposal locations in a log book or spreadsheet. The date of disposal, the approximate depth or elevation and grid coordinates, and the volume of waste will be recorded.

4 RECORDKEEPING

Recordkeeping for RACM disposal is in the form of manifests, Waste Shipment Records (WSR), and a disposal location log (which includes location, depth or elevation, and volume). The gate attendant normally processes the manifests, WSR, and receipt log. The landfill manager or his designee maintains the disposal location logbook indicating RACM disposal locations. Each month a Monthly Waste Receipt Summary for Class 1 non-hazardous industrial waste is submitted using the STEERS reporting system provided by TCEQ. In the future, if TCEQ designates another reporting process the facility will follow the revised procedures.

(1) Manifests

(a) All shipments of RACM must be accompanied by a Uniform Hazardous Waste Manifest, or similar form, which includes:

(i) Name, address, and telephone number of the generator.

(ii) Name, address, and telephone number of any transporter.

(iii) Description and quantity of RACM (including Class 3 Designation).

(iv) Date of receipt and signature of disposal facility representative.

(v) In the "Supplemental Information" section, include the name, address, and telephone number of the asbestos remover (or abatement company). Also include a 24-hour emergency response team and telephone number.

(b) A copy of the signed manifest is to be sent by the disposal facility to the waste generator within 30 days of disposal.

(c) A copy of each manifest must be retained on site for at least three years in accordance with 30 TAC §330.173(g); this time period will be automatically extended if any enforcement action involving the owner, operator, or landfill facility is initiated or pending by the executive director.

(2) Waste Shipment Records

Waste Shipment Records for each RACM load will be maintained with the minimum following information:

(a) Name of the generator

(b) Manifest number and WMTX Special Waste Profile number

(c) Date of receipt

(d) Volume of asbestos waste

(e) Transporter name

(3) Disposal Location Log or Site Map

A RACM disposal log for the landfill must be maintained. The following information should be recorded for each load of RACM accepted:

(a) The horizontal location of disposal (using the existing site grid system)

(b) The depth or elevation of disposal

(c) The volume of waste

(d) The date of disposal

(4) Monthly Waste Receipt Summary

A Monthly Waste Receipt Summary will be prepared and submitted using the STEERS reporting system provided by TCEQ. In the future, if TCEQ designates another reporting process the facility will follow the revised procedures. The report will be submitted no later than the 25th day of the month following the receipt of any Class 1 non-hazardous industrial RACM received during the preceding calendar month.

(5) Deed Recordation

Upon closure of the landfill, a specific notation that the landfill accepted RACM will be placed in the deed records of the property, which will include a site diagram or other information identifying the disposal locations of RACM. In addition, a notice of deed recordation and copies of the site diagram or other information identifying the RACM disposal locations will be submitted to the TCEQ.

5 PERSONAL PROTECTIVE EQUIPMENT

Minimizing contact with waste controls potential for exposure to asbestos. Landfill personnel will remain inside equipment while the transporter unloads the material. Should a spill occur during the disposal operation, workers involved in the cleanup should wear a respirator, disposable coveralls, gloves, and foot coverings.

6 EMPLOYEE TRAINING

(1) All employees involved in the receipt and disposal of RACM are given training annually on the proper procedures of managing RACM. This training includes:

(a) Asbestos and its health effects

(b) Regulations on transportation, disposal, and worker protection

(c) Paperwork, manifesting and notification requirements

(d) Personal protection and protective equipment (including respirator fit tests)

(e) Transportation requirements

(f) RACM receipt procedures

(g) RACM disposal procedures

(h) Location logging and recordkeeping

(i) Spill response actions

Training of employees will be completely documented and the documentation maintained on site.

(2) Contractors and others working around the RACM disposal areas are informed of the RACM disposal practices at the site. Should any excavation work be necessary in areas of previous RACM disposal, a written notification to the TCEQ or EPA Administrator will be made 45 days prior to excavating or otherwise disturbing any RACM. Excavated or exposed RACM will be handled in the same manner as if the waste had just been brought to the site for disposal.

7 CONTINGENCY PLAN

This contingency plan has been developed in the event that a spill of RACM occurs during unloading operations. Personnel involved in the response are to be kept to a minimum to reduce the risk to employees. The landfill manager or his designated representative shall be in charge of the landfill's spill response for RACM. The following procedures will be followed in the event of a spill of RACM at the landfill:

(1) Personal Protection

(a) Get upwind of the RACM.

(b) Employees involved in cleanup should make use of their spill control kits, including:

(i) Respirator

(ii) Disposable coveralls

(iii) Shoe covers

(iv) Gloves

(v) Safety glasses or goggles

(c) Keep others away until cleanup is complete.

(2) Notification

(a) Notify the landfill office / landfill manager.

(b) Should the spill involve one pound or more, the landfill manager or his designated representative will notify the National Response Center (NRC).

(3) Emergency Cleanup Actions

(a) Summon water truck, wet down waste with a misting spray of water.

(b) Scoop the waste and put it into a properly labeled bag or a closed container and dispose of it with the other RACM.

(c) Wash any contaminated equipment or machinery.

(d) Dispose of gloves, coveralls, and shoe covers in a tightly sealed 6-mil plastic bag.

(e) Wash all other personal protective equipment with soap and water.

(f) Check respirator and refit with new filter cartridges, and place into a resealable, airtight container for future use.

(4) Spill Response Equipment

(a) An OSHA approved respirator with the proper prefilters

(b) A disposable, Tyvek or similar coverall suit

(c) Disposable gloves

(d) Rubber boots

(e) 6-mil plastic bags with asbestos warning

(f) Water spray tank

(g) Roll of duct tape

(h) Broom and shovel

(5) Emergency Response Contractor

The landfill manager may contract with an outside contractor to conduct the landfill's spill response for RACM.

NEW BOSTON LANDFILL
BOWIE COUNTY, TEXAS
TCEQ PERMIT NO. 576C

PERMIT MODIFICATION

PART IV – SITE OPERATING PLAN
APPENDIX IVD
ALTERNATIVE DAILY COVER OPERATING PLAN

Prepared for

Waste Management of Texas, Inc.

Technically Complete September 12, 2014

Biggs & Mathews Environmental, Inc.
Firm Registration No. F-256

Prepared by

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TEXAS BOARD OF PROFESSIONAL ENGINEERS
FIRM REGISTRATION NO. F-256

TEXAS BOARD OF PROFESSIONAL GEOSCIENTISTS
FIRM REGISTRATION NO. 50222

CONTENTS

Biggs & Mathews Environmental, Inc.
Firm Registration No. F-256

1 INTRODUCTION

This Alternative Daily Cover Operating Plan (ADCOP) has been prepared for the New Boston Landfill consistent with §330.165(d). The purpose of this ADCOP is to address the following issues:

- Description and thickness of each alternative daily cover (ADC) material
- Chemical composition of the material and the MSDS(s) for the ADC (if applicable)
- Operation methods to be utilized at the site when using the ADC
- Effect of the ADC on vectors, fires, odors, and windblown litter

As specified in Part IV, SOP, Section 8.18.5 – Alternative Daily Cover, ADC may be used to cover exposed waste except when the landfill is to be closed for a period of greater than 24 hours, (unless otherwise approved by TCEQ). Refer to Appendix IVD-A and Appendix IVD-B for TCEQ approval of alternative daily cover at the New Boston Landfill. These ADC materials were incorporated into a permit modification to the Site Operating Plan as requested in TCEQ's "Notice of Site Operating Plan Call-In Letter", as approved on November 27, 2007. Refer to Appendix IVD-C for a copy of TCEQ approval letter.

2 MATERIAL CHARACTERISTICS

2.1 Description of ADC Materials

The following types of ADC materials are approved for use at the New Boston Landfill. The New Boston Landfill may substitute similar ADC materials manufactured by other manufacturers provided they are determined equal to the approved materials identified at this time.

- DURASHIELD 12000 – DURASHIELD 12000 is manufactured by THOR Enterprises, Ltd. The tarp is manufactured in approximately 50-foot by 50-foot, 2-layer panels. The thickness of the tarp material is approximately 20 mils. The material is reported to have a 5,000-pound tensile strength. The DURASHIELD 12000 was evaluated by TNRCC and approved for use as an ADC in a letter to THOR Enterprises, Ltd., dated April 2, 1993 (see Appendix IVD-A).

- Amoco 2000 – Amoco 2000 is manufactured by Amoco Fabrics and Fibers Co. The tarp is manufactured in approximately 50-foot by 50-foot woven panels. The thickness of the woven material is approximately 60 mils. Amoco 2000 was approved by TNRCC for use as an ADC in a permit modification dated March 31, 1995 (see Appendix IVD-B).

2.2 Chemical Characteristics

Characteristics of each ADC material have been approved for use at the New Boston Landfill. The chemical characteristics of each ADC material are included in Appendices IVD-A and IVD-B. The tarp materials are manufactured products consisting of polyethylene or polypropylene materials. The ADC materials approved for use at the New Boston Landfill are not reactive, ignitable, or corrosive under expected conditions.

3 OPERATIONAL METHODS

This following section discusses the operational procedures that will be used to employ the approved ADC materials. For each type of ADC, landfill personnel will verify that the waste fill area has been covered with the minimum required thickness at the completion of each working day.

The DURASHIELD and Amoco material will be deployed as follows:

- Panels of ADC material will be pulled over the working face by a dozer or similar equipment at the end of the day.
- The perimeter of the tarps will be anchored approximately every 20 feet with dirt, tires, sandbags, or similar material to keep the tarp in place and prevent vector intrusion.
- The tarps will be removed the following morning and stored in an inactive area prior to waste receipt.

4 ADC VERIFICATION AND INSPECTION PROCEDURES

At the end of each working day, landfill personnel will inspect the working face to confirm that the minimum thickness of an approved ADC has been placed over the working face in accordance with this ADCOP (i.e., tarps extend beyond the waste surface and are anchored in soil covered areas, tarps are in good contact with soil and no gaps are present). Landfill personnel will routinely assess the effectiveness of each ADC in controlling vectors, fires, odors, and windblown waste. Daily application of ADC will be documented and maintained in the site operating record.

Status reports on the ADCs have previously been submitted in accordance with 30 TAC §330.165(d)(2) and are no longer required. ADC was approved at this site dating back to 1993. The New Boston Landfill has been effectively using ADC material since that time. No additional reporting is required because the ADCs have been proven effective with vectors, fires, odors, and windblown litter and waste.

APPENDIX IVD
ALTERNATIVE DAILY COVER OPERATING PLAN

APPENDIX IVD-A
DURASHIELD 12000

TEXAS WATER COMMISSION

PROTECTING TEXANS' HEALTH AND SAFETY BY PREVENTING AND REDUCING POLLUTION

APR 02 993

Mr. Dave Urban
Thor Enterprises, Ltd.
P.O. Box 141726
Austin, Texas 78714-1726

Re: Municipal Solid Waste - Statewide
Alternate Daily Cover Material

Dear Mr. Urban:

This is in response to your undated letter, received in this office on March 24, 1993, requesting approval of a Dura Shield 12000 product as an alternate daily cover material. The information submitted has been revieved. The Dura Shield 12000 material is acceptable as an alternate daily cover material for municipal solid waste landfills.

If you have any questions concerning this letter or if we may be of any assistance to you regarding municipal solid waste, you may contact me at P.O. Box 13087, Austin, Texas 78711; telephone number (512) 908-6671.

Sincerely,

Michael D. Graeber, P.E., Team Leader
Permits Section
Municipal Solid Waste Division

MDG/jad

P.O. Box 13087 • 1700 North Congress Avenue • Austin, Texas 78711-3087 • 512/463-7830

THOR Tarp

DIV. OF ODIN INTERNATIONAL, INC

DURASHIELD™ 12000

PROPERTY	TEST METHOD(S)	VALUE
Count		Nominal 24 x 16 tapes/inch
Weight		10 oz. per sq. yd.
Tensile strength (Grab method)	ASTM D1682-64	
- MD		440 lbs.
- TD		335 lbs.
Tear strength (Tongue method)	ASTM D2261-71	
- MD		65 lbs.
- TD		65 lbs.
Mullen burst	ASTM D751	610 psi
Coating thickness		2 mil average two sides
Scrim type		Clear tapes
Color		Natural
Width		Up to 12 feet without seams-unlimited with seams (heat, sewn, extrudate)

These values are typical data are not intended as limiting specifications.

CORPORATE HQ: P.O. BOX 811 • OCONOMOWOC, WI 53066-0811 • 262-569-7171 • FAX: 262-569-1511
TOLL FREE: 1-888-ODIN-INC • 1-888-634-6462 • EMAIL: INFO@THORTARP.COM

WWW.THORTARP.COM

THOR Tarp

DIV. OF ODIN INTERNATIONAL, INC

DuraShield 12,000 FR

Fire Retardant 4-ply Woven Coated Polyethylene Data Sheet

COUNT:	Nominal 16 x 16 tapes/inch	
WEIGHT:	9.25 oz per square yard (315 gsm)	
TENSILE STRENGTH: (Grab Method)	Warp - 320 lbs	ASTM D751 (Meth. A)
	Weft - 320 lbs	
TEAR STRENGTH: (Tongue Method)	Warp - 50 lbs	ASTM D751 (Meth. B)
	Weft - 50 lbs	
MULLEN BURST:	675 p.s.i.	ASTM D751
COATING THICKNESS:	2.0 mil average, both sides	
SCRIM TYPE:	Clear tapes, UV stabilized	
COLOUR:	Clear and colored coatings available	
ACCELERATED WEATHERING/U.V.:	More than 80% strength retention after 2000 hours	ASTM G53-84

(Q.U.V.[A-340 Lamps] 8 hrs U.V. @60° C/4 hrs condensation @50° C)

CORPORATE HQ: P.O. BOX 811 • OCONOMOWOC, WI 53066-0811 • 262-569-7171 • FAX: 262-569-1511
TOLL FREE: 1-888-ODIN-INC • 1-888-634-6462 • EMAIL: INFO@THORTARP.COM
WWW.THORTARP.COM

APPENDIX IVD
ALTERNATIVE` DAILY COVER OPERATING PLAN

APPENDIX IVD-B
AMOCO 2000

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Protecting Texas by Reducing and Preventing Pollution

March 31, 1995

Mr. John Carrington, Regional Landfill Manager
Western Waste Industries
100 Interstate 45
L. P. Tower, Suite 210
Conroe, TX 77301

Subject: Municipal Solid Waste - Bowie County
WMT/New Boston - Permit No. MSW-576
1.7 Miles W of IH-30 and SH-8 Int.

Dear Mr. Carrington:

This is in response to a letter, dated March 10, 1995, from Mr. Gary R. Horwitch, P.E., HMA Environmental, submitting additional information concerning a requested modification to the Site Development Plan (SDP) of the subject permit. The requested modification was a portion of the Subtitle "D" upgrade that included the use of alternate daily cover and the provisions for special waste and industrial waste. The additional information has been reviewed by my staff and was found to be acceptable. The modification for the use of the alternate daily cover and the provisions for special waste and industrial waste are hereby approved as a Class I Modification to the SDP of Permit No. MSW-576 in accordance with 30 Texas Administrative Code (TAC) Sections (§§) 305.70(i), 305.70(g)(16), and 330.133(c).

If you have any questions concerning this letter or if we may be of any assistance to you regarding municipal solid waste, you may contact Mr. Michael D. Graeber, P.E., of my staff here in Austin at MC-124, P.O. Box 13087, Austin, Texas 78711; telephone number (512) 239-6671.

Sincerely,

Ronald R. Pedde, P.E.
Special Assistant
Office of Waste Management

RRP/MDG/ff

cc: TNRCC Region 5
HMA Environmental
Texarkana-Bowie County Family Health Center

P.O. Box 13087 · Austin, Texas 78711-3087 · 512/239-1000

Geotextile Product Data - Amoco Fabrics & Fibers Co.

Property	Amoco 3198	Amoco 3199	Amoco 3380	Amoco 2000	Amoco 2002
Mass Per Unit g/m2 (oz/yd2	NA	NA	NA	NA	NA
Structure	W	W	W	W	W
Ploymer Composition	PP	PP	PP	PP	PP
% Open Area CWO-22125	NA	NA	NA	NA	NA
AOS ASTM D4491-87 mm (US Seive)	0.425 (40)	0.212 (70)	0.600 (30)	0.600 (30)	0.300 (50)
Permittivity ASTM D4491-92 sec-1/Flow Rate l/min/m2 (gal/min/ft2)	0.05/2032 (50)	0.25/731 (18)	0.40/1219 (30)	0.04/163 (4)	0.04/163 (4)
uncture ASTM D 4833-88 kN (lb)	0.53 (120)	0.60 (135)	0.36 (80)	0.29 (65)	0.040 (90)
Mullen Burst ASTM D 3786-87 kPa (psi)	3100 (450)	3307 (480)	2026 (300)	2239 (325)	2756 (400)
Trapezoid Tear Strength ASTM D 4533-91 kN (lb)	0.29 (65)	0.42 (95) warp 0.24 (55, fill	0.22 (50)	0.20 (45)	0.33 (75)
Grab/Tensile Elongation ASTM D 4632-91 kN (lb)%	1.34 x 0.89/15 (300 x 200)/15	1.56 x 1.11/15 (350 x 250)/15	0.78 '175)/25	0.62(140) (140)/15	0.89(200 (140)/15
Wide With Tensile Elongatior ASTM D 4595-86 kN/m (lb/in.)					
MD	NP	NP	NP	NP	21(120,/10
XD	NP	NP	NP	NP	21(120,/6
nufacturer's ggested plications	Erosion, Drainage, Filtration	Erosion, Drainage, Filtration	S/F	S/S	S/S

APPENDIX IVD
ALTERNATIVE DAILY COVER OPERATING PLAN

APPENDIX IVD-C
APPROVED ADC PERMIT MODIFICATION

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

December 10, 2007

Ms. Paula Carboni
Market Area Compliance Manager
North Texas Market Area
Waste Management of Texas, Inc.
P. O. Box 400
Ferris, Texas 75125-0400

Re: Municipal Solid Waste (MSW) – Bowie County – TCEQ Region 5
Waste Management New Boston Landfill – MSW Permit No. 576B
Permit Modification – Site Operating Plan (SOP)
WWC Nos. 11421464, 11499269, 11660098, 11690160, and 11853315
RN102594892 / CN600127856

Dear Ms. Carboni:

We have reviewed your application for a municipal solid waste permit modification dated July 19, 2006, and the revisions dated October 26, 2006, March 12, 2007, April 27, 2007, and August 10, 2007, for a modification to the SOP for the referenced facility, as requested in our "Notice of Site Operating Plan Call-In" letter dated May 24, 2006. The information presented is technically sufficient for a permit modification and is approved with changes, in accordance with Title 30 Texas Administrative Code, Chapter 305, Section 305.70(g)(1)(A).

Enclosed is a copy of the above referenced modification which is now part of your permit and should be attached thereto as part of Attachment C. The documentation prepared and submitted to support the modification request shall be considered as requirements of the permit.

If you have questions concerning this matter, please contact Mr. Arten Avakian at (512) 239-4419. When addressing written correspondence, please use Mail Code 124 (MC 124).

This action is taken under authority delegated by the Executive Director of the Texas Commission on Environmental Quality.

Sincerely,

Richard C. Carmichael, Ph.D., P.E.
Manager, Municipal Solid Waste Permits Section
Waste Permits Division

RCC/AJA/ff

Enclosure

cc: Mr. Kenneth J. Welch, P.E., Biggs & Mathews Environmental, Mansfield

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

MODIFICATION TO

MUNICIPAL SOLID WASTE PERMIT NO. 576B

WASTE MANAGEMENT NEW BOSTON LANDFILL

Municipal Solid Waste Permit No. 576B is hereby modified as follows:

Description of Change:

Authorizes modification of the Site Operating Plan to comply with the requirements in Title 30 Texas Administrative Code (30 TAC), Chapter 330, Subchapter D. In accordance with 30 TAC Section 305.70(g)(1)(A), the permit modification includes the following conditions:

- The facility shall not accept or process waste that contains free liquids unless the facility obtains authorization to process liquid waste.
- The facility shall not accept nonhazardous incinerator ash, filter media, or abrasive wastes from non-industrial sources unless it has been determined that the waste constituent concentrations are below the levels listed in 30 TAC Chapter 335, Subchapter R, Appendix 1, Table 1.

The details of this permit modification are contained in the application dated July 19, 2006, and the revisions dated October 26, 2006, March 12, 2007, April 27, 2007, and August 10, 2007.

Part of Permit Modified:
Site Operating Plan

This modification is a part of Permit No. 576B and should be attached thereto.

APPROVED, ISSUED, AND EFFECTIVE in accordance with 30 TAC Chapter 305, Sections 305.70(i) and (l), and Chapter 330, Subchapter D.

ISSUED DATE: NOV 27 2007

For the Commission

NEW BOSTON LANDFILL

APPENDIX IVE
SPECIES PROTECTION PLAN

Technically Complete September 12, 2014

SPECIES PROTECTION PLAN

For:
New Boston Landfill Expansion
Bowie County, Texas

Prepared by:

HALFF ASSOCIATES, INC.

1201 NORTH BOWSER ROAD
RICHARDSON, TX 75081

TEL (214) 346-6200
FAX (214) 739-0095

WWW.HALFF.COM

AVO 27760

February 2014

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Figures

1.0 INTRODUCTION

Waste Management of Texas, Inc. (WM) has proposed to expand the New Boston Landfill (Landfill) in New Boston, Bowie County, Texas. The 332-acre Landfill property (the "study area") is located east of the intersection of US Highway 82 and Interstate Highway 30, with the site entrance located about 1 mile east on the north side of US Highway 82. **Figure 1** shows the Landfill in the general east Texas region. **Figure 2** shows the location in relation to the City of New Boston. Rice Creek is the major drainage in the region, is rerouted on the property from past permitting actions, and generally flows in a north to south direction. The primary purpose of the facility is the disposal of municipal solid waste. The landfill expansion would be centrally located on the property leaving a wooded area on the northern, eastern and southern boundaries and minimizing the disturbance to creeks and wetlands identified on the property.

The facility will be permitted/registered in accordance with 30 TAC Chapter 330 Municipal Solid Waste Management Regulations. The Texas Commission on Environmental Quality (TCEQ) is the agency responsible for permitting and regulating municipal solid waste facilities. The TCEQ requires an applicant to address endangered and threatened species. Halff Associates, Inc. (Halff) has identified two threatened or endangered species that have the potential to occur within the study area: the wood stork and the timber rattlesnake. Both are state-listed threatened species; no critical habitat has been designated for either of these species. Those portions of the study area that may provide suitable habitat for the wood stork are for the most part beyond areas that will be impacted by construction and operation of the facility. Within the study area, mixed hardwood forest areas may provide suitable habitat for the timber rattlesnake.

2.0 PRESENCE OF POTENTIALLY SUITABLE HABITAT

2.1 Wood Stork

The potential for occurrence of the wood stork within the study area is conditional on the basis that this species migrates and its migratory range may happen to overlap with water features in the study area that may be suitable as a temporary stopover site. Because no critical habitat has been designated for this species, because of the incidental chance for occurrence, and because the suitable habitat occurs primarily in an area that will not be impacted by the

proposed facility (i.e. north central pond/wetland complex), the project will not result in the destruction or adverse modification of critical habitat of, or cause or contribute to takings of, this species.

2.2 Timber Rattlesnake

The study area represents the western edge of the timber rattlesnake range, and is characterized by conditions that may be preferred for this species. Populations tend to be higher in eastern Texas where greater concentrations of wetlands and humid forests are found. Given the general habitat requirements for the timber rattlesnake, some habitat requirements are found in the study area. The mixed hardwood forests in the study area occur in both upland and riparian habitats which meet some habitat descriptions. Some of these areas will not be impacted by the landfill. A forested area along the northern edge of the expansion area, which includes forested wetlands, will be cleared during construction. A conservative (overly-inclusive) depiction of the potential timber rattlesnake habitat is shown on **Figure 3.**

3.0 AVOIDANCE, MINIMIZATION, AND MITIGATION

No wood stork or timber rattlesnake were observed by Halff personnel during the time spent investigating the study area. Suitable habitat within the study area for these species is depicted on **Figure 3**. Facility construction and operation activities will for the most part not affect areas that include potentially suitable habitat for the wood stork. The removal of forested habitat associated with the proposed northern waste storage area will remove approximately 0.78 acre of trees that could potentially be used as roosting areas if nearby aquatic areas pond water. Within the same proposed northern waste storage area, approximately 20.77 acres of forested area that is potentially suitable habitat for the timber rattlesnake will be cleared. This area encompasses approximately 1.23 acres of forest wetland that may also be suitable habitat for the timber rattlesnake. Each of these areas is depicted in **Figure 3**; not depicted on the figure is perimeter fencing which will be placed along the edge of the permit boundary.

The avoidance, minimization, and mitigation measures to be implemented pursuant to this species protection plan include:

1. Clearing of potential wood stork habitat as shown on **Figure 3** should not occur between July and September when wood storks are known to wander inland in eastern Texas.

2. Clearing of the forested areas shown on **Figure 3** should not occur between September and May to avoid the hibernation periods for the timber rattlesnake.

3. Immediately prior to clearing to facilitate construction of the perimeter access road, landfill area, and perimeter fencing, a survey of the area will be conducted by a biologist with a Texas Parks & Wildlife Department (TPWD) scientific collection permit. If a timber rattlesnake is observed during this survey, the specimen(s) will be relocated by the biologist to suitable habitat in the mixed hardwood forest area in the southeastern part of the study area.

4. During the clearing operations, a biologist with a TPWD scientific collection permit will conduct surveys around construction equipment prior to start-up of the equipment and in the area where clearing will occur in advance of operations. If a timber rattlesnake is observed during these surveys, work will be stopped and the specimen(s) will be relocated by the biologist to suitable habitat in the mixed hardwood forest area in the southeastern part of the study area.

5. Employees and construction crews working on the site will receive pocket identification cards with color photographs and species information for the wood stork and timber rattlesnake. These will allow for identification of the species and provide instructions on how to respond to a sighting: avoid disturbance of the animal and notify the facility general manager of the sighting location and species. Signage will also be posted at the Gate House with similar information. Following a reported sighting of either of these species, the facility general manager will contact a biologist with a TPWD scientific collection permit to determine and implement any appropriate action, including the possible relocation (by a biologist with a TPWD scientific collection permit) of a timber rattlesnake to suitable habitat in the mixed hardwood forest area in the southeastern part of the study area.

6. Although unexpected, a limited potential exists that the timber rattlesnake may be encountered on the site. If specimens are observed during construction, work will be

stopped and a biologist with a TPWD scientific collection permit will be contacted to determine and implement any appropriate actions, including pre-construction surveys and/or the possible relocation (by a biologist with a TPWD scientific collection permit) of specimens to suitable habitat in the mixed hardwood forest area in the southeastern part of the study area.

FIGURES

N

0 2 4 8

Miles

Legend

Study Area

Project Title: NEW BOSTON LANDFILL
Date: 12/2013 AVO: 27760
Sheet Title: PROJECT REGIONAL MAP
Sheet Number: FIGURE - 1
HALFF

Technically Complete September 12, 2014

N

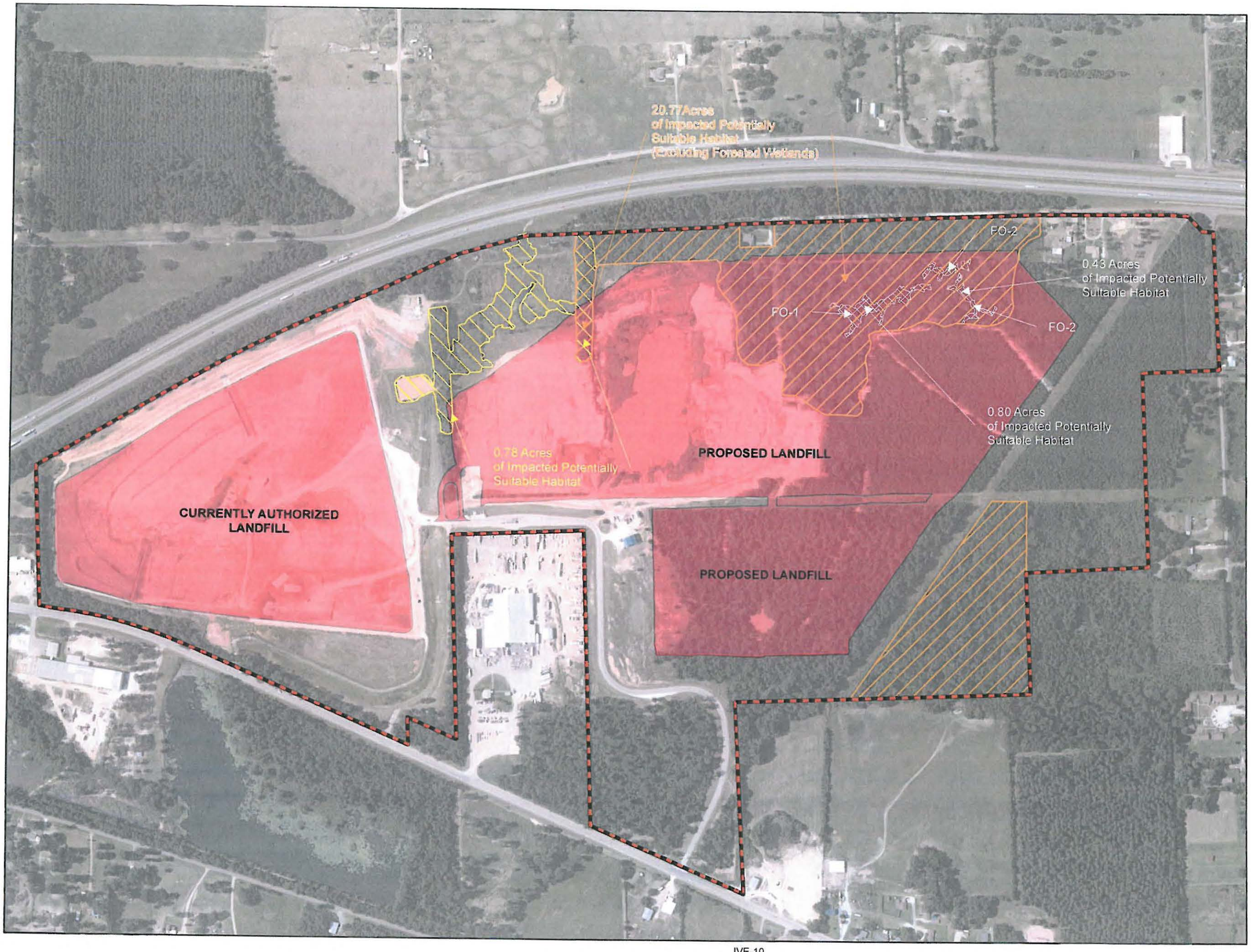
0 1,500 3,000 6,000

Feet

Legend

Study Area

Project Title: NEW BOSTON LANDFILL
Date: 12/2013 AVO: 27760
Sheet Title: PROJECT VICINITY MAP
Sheet Number: FIGURE - 2
HALFF



N

0 250 500 1,000

SCALE IN FEET

Legend

- Study Area
- Timber/Canebrake Rattlesnake Habitat
- Timber/Canebrake Rattlesnake Habitat (Forested Wetland)
- Wood Stork Habitat
- Project Impact Area

Species	Potentially Suitable Habitat Acreage
Wood Stork	7.33
Timber/ Canebrake Rattlesnake	48.09*

*Acreage includes forested wetland habitat

Notes:
1. Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Project Title:
NEW BOSTON LANDFILL

Date: 02/2014 AVO: 27760

Sheet Title: POTENTIALLY SUITABLE HABITAT MAP

Sheet Number: FIGURE 3

HALFF

Technically Complete September 12, 2014