

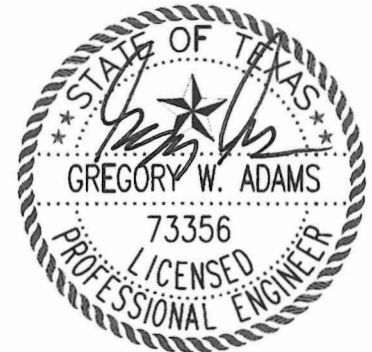
**WASTE MANAGEMENT SKYLINE LANDFILL
DALLAS AND ELLIS COUNTIES, TEXAS
PERMIT AMENDMENT APPLICATION NO. MSW 42E**

VOLUME 4 OF 4

Prepared for



March 2026



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

3/31/2026

Prepared by



BIGGS & MATHEWS ENVIRONMENTAL

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

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FIRM REGISTRATION NO. 50222

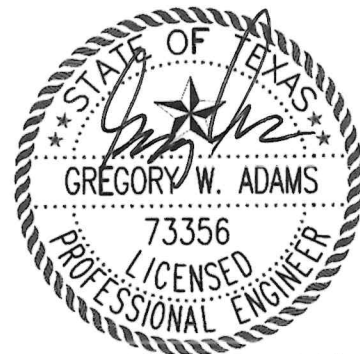
**WASTE MANAGEMENT SKYLINE LANDFILL
DALLAS AND ELLIS COUNTIES, TEXAS
PERMIT AMENDMENT APPLICATION NO. MSW 42E**

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PART IV SITE OPERATING PLAN



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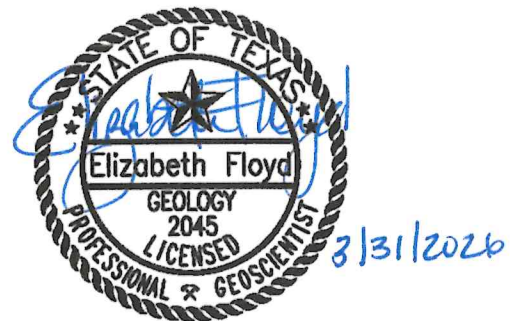
**WASTE MANAGEMENT SKYLINE LANDFILL
DALLAS AND ELLIS COUNTIES, TEXAS
PERMIT AMENDMENT APPLICATION NO. MSW 42E**

**PART III – FACILITY INVESTIGATION AND DESIGN
ATTACHMENT F
GROUNDWATER MONITORING PLAN**

Prepared for



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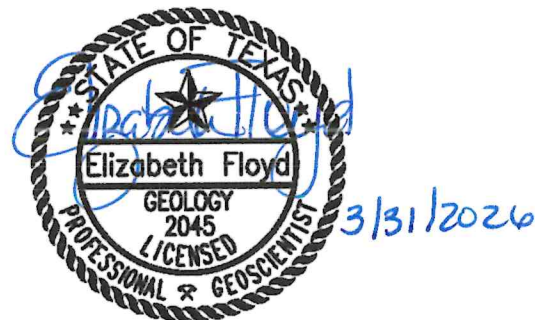
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Drawings

APPENDIX F2

Groundwater Sampling and Analysis Plan



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GROUNDWATER MONITORING SYSTEM DESIGN CERTIFICATION

General Site Information

Site: Skyline Landfill

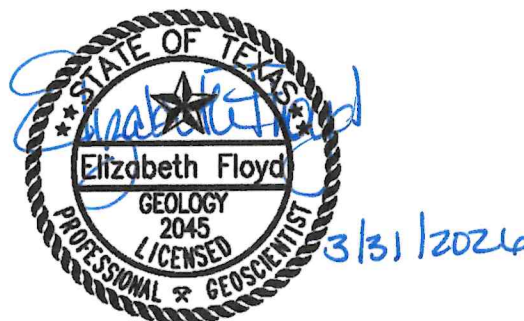
Site Location: City of Ferris, Dallas and Ellis Counties, Texas

MSW Permit Application No.: 42E

Qualified Groundwater Scientist Statement

I, Elizabeth Floyd, am a licensed professional geoscientist in the State of Texas and a qualified groundwater scientist as defined in §330.3. I have reviewed the groundwater monitoring system and supporting data contained herein. In my professional opinion, the groundwater monitoring system is in compliance with the groundwater monitoring requirements specified in 30 TAC §330.401 through §330.421. This system has been designed for specific application to the Skyline Landfill (Permit Application No. MSW 42E). The only warranty made by me in connection with this document is that I have used that degree of care and skill ordinarily exercised under similar conditions by reputable members of my profession, practicing in the same or similar locality. No other warranty, expressed or implied, is intended.

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1 SITE HYDROGEOLOGY

Two subsurface stratigraphic units have been identified at the site. They include Stratum I, weathered Taylor Marl, and Stratum II, unweathered Taylor Marl. The Taylor Marl is a very dense, low permeability formation consisting of calcareous clays (marl). Several hundred feet of Taylor exists beneath the site. The uppermost regional aquifer is the Woodbine formation, which is more than 1100 feet beneath the site and separated from the site by the very low permeability materials of the Taylor, Austin, and Eagle Ford formations. These formations consist of clay, marl, shale, and fine grained limestone (Austin).

1.1 Hydrogeologic Units

1.1.1 Stratum I – Weathered Taylor Marl / Uppermost Aquifer

Groundwater is contained in the weathered Taylor Marl as seen in site piezometers and groundwater monitoring wells. Groundwater enters the Taylor Marl at its surface outcrop. Groundwater flow generally mimics the natural site topography and flows predominantly to the east and northeast parts of the site. The groundwater movement in the weathered marl is characterized by flow through the weathered, interconnected vertical and horizontal fractures and bedding planes. Fracture frequency decreases with depth. Extensive near surface weathering of the upper portions (30 to 40 feet) of the Taylor have created fractures and slickensides from the repeated shrinking and swelling of the clays that make up the Taylor so that it has hydraulic characteristics (hydraulic conductivity) equivalent to a normally porous medium such as sand or silt. The geometric mean of calculated permeabilities for Stratum I is 4.23×10^{-9} cm/sec and the arithmetic mean is hydraulic conductivity 7.63×10^{-9} cm/sec.

Age dating of groundwater, as discussed in Dutton et al., 1994, suggests that groundwater infiltrating from the surface moves more slowly downward in the weathered zone until it meets the lower permeability, unweathered zone. Groundwater then flows laterally within the weathered zone.

The Taylor Marl is a clayey shale that is made up of clay particles. Clay particles have large surface areas per unit weight compared to typical sand and silt particles. The large surface areas can attract negatively and positively charged ions through adsorption. Inorganic constituents in the groundwater may be adsorbed to the clay particles thereby slowing or stopping contaminant movement (Brady and Weil, 2007).

1.1.2 Stratum II – Unweathered Taylor Marl / Lower Confining Unit

Groundwater occurring in the fractures of the unweathered marl immediately beneath the weathered marl would be recharged by the slow, downward movement of groundwater from the overlying shallow, weathered marl zone. Vertical movement of groundwater is retarded by unfractured or slightly fractured, low permeability materials in the Taylor Formation. Only a small fraction (less than 1 percent) of the groundwater that moves

through the surficial bedrock moves downward into the unweathered bedrock (Dutton et al., 1994). Once the overlying weathered marl is removed, the underlying unweathered marl will not produce any significant hydrostatic pressure. This has been observed for years in actual constructions at the existing landfill site. Other than surface runoff from heavy periods of rain, open excavations in the existing landfill area remain dry. The minimal seeps observed in weathered sections of excavation walls dissipate rapidly, with no ponding on the excavation floor.

Observations made during the large diameter test borings demonstrate the limited quantities of water in the subsurface and that saturated conditions do not exist in the unweathered Taylor Marl.

Studies of the Taylor Marl in Ellis County, Texas that employed groundwater dating methods suggest that groundwater in weathered Taylor Marl was recharged within the last 40 to 50 years; that groundwater in the slightly weathered, less fractured, less interconnected Taylor bedrock was recharged within the last 15,000 to 20,000 years; and that the average age of the groundwater in the unweathered Taylor Marl is 1 million years (Dutton et al., 1994). This age dating of groundwater in the unweathered suggests that the deeper water is either not recharged from overlying infiltration through connection to shallow fracturing or poorly recharged. It also suggests that groundwater infiltrating from the surface moves slowly downward in the weathered zone until it meets the lower permeability, unweathered zone. Groundwater then flows laterally within the weathered zone. The geometric mean hydraulic conductivity for Stratum II is 4.23×10^{-9} cm/sec, and the arithmetic mean hydraulic conductivity is 7.65×10^{-9} cm/sec.

Due to the scarcity of fractures and the resulting lower hydraulic conductivity in the decreasing fractures with depth, the unweathered Taylor Marl is the lower confining unit (aquiclude) to the overlying weathered Taylor that serves as the uppermost aquifer at this site for groundwater monitoring purposes.

1.2 Groundwater Flow Direction and Rate

Groundwater occurs at the site in the weathered Taylor Marl and upper part of the unweathered Taylor Marl. Groundwater flow is structurally controlled and mimics the topography. Permeability in the Taylor Marl is related to the depth of weathering of the Taylor and is thus related to the surface topographic expression. The structural contour map of the top of the unweathered Taylor (included in Attachment E, Appendix E3 as Drawing E3.5) shows a strong resemblance to the topography. Groundwater in the Taylor Marl at the site flows from the south end of the site to the north, generally toward Ten Mile Creek. Groundwater flow direction is influenced by the depth of weathering and the unweathered surface (Attachment E, Appendix E3, Drawing E3.5), which is influenced by the topography (Attachment E, Appendix E5, Drawing E5.8). Minor fluctuations in the unweathered surface and thus the potentiometric surface show minor variations in the groundwater flow directions to the northwest and northeast perimeters. Groundwater flow from the south is diverted around the composite lined excavation. Normal groundwater flow directions prevail north of the site as precipitation infiltration reaches the water table. A conceptual hydrogeologic cross section and a conceptual hydrogeologic flow model are included in Attachment E, Appendix E5 as Drawings E5.9 and E5.10. The excavation is extended well into the low permeability unweathered Taylor in the expansion area. Where it still exists it only remains in small isolated discontinuous areas which are cut off from

infiltration and recharge by an underdrain and compacted clay keyway complex. As such, a leachate leak is unlikely to migrate into the weathered Taylor groundwater.

The original site characterization included in the 1991 permit application showed multiple piezometers installed to identify groundwater in the weathered Taylor. A table of water levels from piezometers is included in Attachment E, Appendix E5. A pre-excavation potentiometric surface map from 1991 is included in Attachment E as Drawing E5.7. Most of the piezometers demonstrated groundwater occurrence during the characterization. Thirty-five piezometers were installed in clustered locations, and piezometers at all locations encountered groundwater during the characterization period of 1987-1993. Water levels from existing monitoring wells are included in Attachment E, Appendix E5.

Initial development of the Subtitle D landfill unit began with excavation of Cell 1 in the center of the site (see Attachment E, Appendix E5, Drawing E5.11). This cell opened in 1995. Cell development then moved southward. By 1999 excavation and cell development had proceeded through the center of the site to southern extent of the site. All development then moved clockwise from south to north along the west side.

Cell development consists first of excavation of the Taylor Marl. The process of excavation and the accompanying dewatering creates an inward gradient. Once the liner and underdrain are installed, the inward gradient persists. Also, when the liner is installed, recharge by infiltration of precipitation to the Taylor beneath the liner is prevented by the liner.

Multiple potentiometric surface maps were created over both temporal and seasonal variations and are included in Attachment E, Appendix E5. These maps reflect the altered groundwater flow pattern created by the placement of the lined excavations that extend well into the unweathered Taylor. Groundwater contours reflect "no flow" boundaries adjacent to the excavation and the frequently dry areas near MW-4 and MW-5R on the west. On the downgradient side of the site (north boundaries) groundwater flow follows the topography and the unweathered surface and in places flows parallel to the site boundaries. Groundwater flow velocity based on the geometric mean of hydraulic conductivity values is estimated to be approximately 2.54×10^{-3} ft/yr in Stratum I. While the groundwater flow velocity based on arithmetic mean of hydraulic conductivity values is estimated to be approximately 4.58×10^{-3} ft/yr. (Attachment E, Appendix E5, Drawing E5.6).

2 OPERATIONAL CONSIDERATIONS FOR GROUNDWATER SYSTEM DESIGN

2.1 Relationship of Excavation Bottom to Uppermost Aquifer

The excavation of the Skyline Landfill is designed to remain in the clayey Taylor Marl formation. The excavation extends well into the less permeable unweathered clay in the expansion area. Where the weathered clay still exists it only remains in small isolated discontinuous areas which are cut off from infiltration and recharge by an underdrain and compacted clay keyway complex (see Attachment E, Appendix E5, Drawing E5.11). Weathering and thus permeability decrease with depth. Groundwater flows horizontally near the interface of the weathered and unweathered marl. The unweathered marl correlation is based on the color change from tan-gray to gray shale. Some weathering occurs below the top of the color change and thus the upper part of the gray (unweathered) marl may slowly transmit groundwater and is in communication with the weathered marl. The excavation is bottomed well into the unweathered Taylor at least 40 feet over much of the site. Recharge to the Taylor by infiltration of precipitation may be diminished by placement of waste and containment layers in the waste footprint area. Groundwater flow patterns are altered as groundwater is diverted around the excavation cells where they are lined with a composite liner.

2.2 Leachate Sump Design

The Skyline Landfill containment system and excavation are designed to accommodate a Subtitle D leachate collection system (LCS). The excavation bottom over the site is now lined with a composite liner and is sloped to direct leachate flow to the lowest areas where sumps are designed to collect the leachate. Leachate is then pumped out of the sumps. While leachate will not remain for lengthy periods of time nor at significant depths, the sump locations are the lowest areas of the excavation. While a leak from the Subtitle D cell is unlikely, if one were to occur, it would be more likely to be at the lowest leachate collection points in the sumps. Since the sumps are located in the unweathered Taylor Marl and migration of a contaminant is not possible in the unweathered Taylor Marl, no monitoring wells are necessary or useful in the unweathered Taylor Marl. Sump locations at the Skyline Landfill are shown on Appendix F1, Drawings F1.1 and F1.2. There are a total of eight sumps in the leachate sump design at the Skyline Landfill. Monitoring wells are located downgradient from each sump.

2.3 Critical Receptors

Critical receptors to groundwater flow downgradient of a landfill could include public drinking water supply wells, individual drinking water or livestock wells, and surface water bodies used for drinking water supply. There are a total of three individual domestic wells to the east and south of the site. These wells are screened in the Woodbine, several hundred feet deeper than the Taylor Marl formation and are separated by several hundred feet of low permeability Cretaceous shales and limestone. The top of the Woodbine is approximately 1,100 feet below the surface of the site. The wells are located upgradient from the site. One public water supply well (602) is located directly east of the site. This well is also screened in the Woodbine, which is several hundred feet deeper than the Taylor Marl Formation and is separated by several hundred feet of low permeability

Cretaceous shales and limestones. The nearest surface water body is Ten Mile Creek, which is located several hundred feet north of the site.

2.4 Technical Demonstration for Monitor Well Spacing

Groundwater occurs from the infiltration of precipitation and moves laterally within the weathered Taylor Marl and in the upper parts of the unweathered Taylor. Some of the material that is traditionally called unweathered marl because it is gray actually may contain weathered textures a few feet into the gray marl or clay. Groundwater flows laterally in a flow direction influenced by the depth of weathering. A conceptual hydrogeologic cross section is included in Attachment E, Appendix E5. The excavation in the expansion area is extended down into the unweathered Taylor where placement of composite liners has cut off normal groundwater flow in the permeable parts of the Taylor. In the existing cells, most of the weathered area has been removed. Where it still exists it only remains in small isolated discontinuous areas, cut off from infiltration and recharge by an underdrain and compacted clay keyway complex. Areas where the unweathered Taylor still remain after excavation are shown on Attachment E, Appendices E3 and E5, Drawings E3.5 and E5.11, respectively. Groundwater is diverted around the excavation. Placement of waste, daily cover soil, intermediate cover soil, a leachate collection system, and eventually final cover will prevent infiltration of precipitation in the area covered by the waste footprint. These factors have altered normal groundwater flow.

Because normal recharge caused by infiltration of precipitation has been cut off over a larger area (the landfill footprint), water levels may be lower than normal in some areas. Because of this, several monitoring wells are periodically dry.

Historically, there have been three areas along the site perimeters where monitoring wells are dry. First, on the west side MW-4 has only had groundwater one time during the last fifteen years. Monitoring well MW-5 had never produced water until December 2017. As such, monitoring well MW-34 was installed between MW-4 and MW-5 at less than 600 feet spacing. Monitoring well MW-5 was later reported damaged and it was determined that the groundwater collected from the well was not representative of the water bearing unit. Monitoring well MW-5R was installed as a replacement in May of 2020. Monitoring wells MW-2R and MW-3R intermittently produce groundwater; additional monitoring wells (MW-27, MW-28) have been added in that area. Monitoring wells MW-12R and MW-25, located north and south of MW-13R, exhibit groundwater; two additional wells (MW-29R, MW-30R) have been installed in those areas.

Multiple potentiometric surface maps were created over both temporal and seasonal variations and are included in Attachment E, Appendix E5. These maps reflect the altered groundwater flow pattern created by the placement of the lined excavations that extend well into the unweathered Taylor. On the downgradient side of the site (north boundaries) groundwater flow follows the topography and the unweathered surface and in places flows parallel to the site boundaries. Groundwater flow velocity based the geometric mean on hydraulic conductivity values is estimated to be approximately 2.54×10^{-3} ft/yr in Stratum I. While the groundwater flow velocity based on arithmetic mean of hydraulic conductivity values is estimated to be approximately 4.58×10^{-3} ft/yr (Attachment E, Appendix E5, Drawing E5.6).

Groundwater now flows from the south toward the north and is diverted around the site. Infiltration recharge still occurs on the upgradient and downgradient parts of the site. In

those areas groundwater flows more normally in a pattern related to the topography and the shape of the unweathered surface. In many places on the downgradient side of the site groundwater flows parallel to the point of compliance. A conceptual hydrogeologic cross section and hydrogeologic model are included in Attachment E, Appendix E5 as Drawings E5.9 and E5.10.

3 SUBTITLE D GROUNDWATER MONITORING SYSTEM

The groundwater monitoring system for Permit 42D (Appendix F1, Drawing F1.1) consists of a total of thirty-four (34) wells that monitor groundwater in the Stratum I marl (uppermost aquifer).

The groundwater monitoring system for Permit 42E (Appendix F1, Drawing F1.2) will consist of a total of 36 monitoring wells that monitor groundwater in the Stratum I marl (uppermost aquifer). The revised point of compliance is shown on Drawing F1.2.

See Section 3.5 and Drawing F1.3 for monitoring well construction information.

3.1 Monitoring Well Locations

For groundwater monitoring purposes, the groundwater zone beneath the Skyline Landfill has been identified as the weathered Taylor Marl. Although not an aquifer by TCEQ definition or standard hydrogeological terminology, groundwater occurs in the weathered Taylor and upper parts of the unweathered Taylor. The Taylor Marl is present and is correlatable across the site. Groundwater enters the Taylor Marl where it is exposed at the surface. Monitoring wells are designed to be screened across the interface of the weathered/unweathered Taylor Marl contact.

3.2 Design Criteria

The design of the groundwater monitoring system is based on site specific technical information. All parts of a groundwater monitoring system will be operated and maintained so that they perform at least to design specification.

The groundwater monitoring system for the Skyline Landfill for Permit 42E (Appendix F1, Drawing F1.1) was designed and is operated in accordance with 30 TAC §330.63(f) and was certified by a qualified groundwater scientist. The waste fill excavation is founded in the Taylor Marl formation. The weathered Taylor and upper part of the unweathered Taylor, although not an aquifer, is the uppermost groundwater zone for monitoring purposes. The proposed modifications to the Skyline Landfill groundwater monitoring system are also designed in accordance with the required elements of 30 TAC §330.63(f) and have also been designed so that the monitoring well spacing does not exceed 600 feet or is demonstrated to be adequate. In some cases where the groundwater flow direction is parallel or near parallel to the site boundary, monitoring wells are actually monitoring the same flow paths and are thus redundant. In order to achieve a groundwater monitoring system design to comply with §330.403, the following criteria listed in the Groundwater Monitoring System Criteria table at the end of this section were followed. The table lists the location of the appropriate section where the required information is located in this application.

Because normal recharge caused by infiltration of precipitation has been cut off over a larger area (the landfill footprint), water levels may be lower than normal in some areas. Because of this, several monitoring wells are periodically dry.

Those areas where monitoring wells and piezometers have been historically dry (see discussion in Section 2.4 and potentiometric surface maps included in Attachment E, Appendix E5), two piezometers are proposed for that portion of the revised point of compliance. Groundwater elevations will be taken during the background and semi-annual groundwater sampling events. If piezometers P-1 or P-2 were to ever produce water, that piezometer will be converted in to a monitoring well and sampled accordingly.

**Groundwater Monitoring System
Design Criteria**

Criterion	Location of Information in this Report
Identify and Characterize the Uppermost Aquifer	Section 1 – Site Hydrogeology
Establish Groundwater Flow Direction and Rate	Section 1.1 – Groundwater Flow Direction and Rate
Evaluate Potential Impacts of Operational Attributes of the Facility on Groundwater Flow	Section 2.1 – Relationship of Excavation Bottom to Uppermost Aquifer Section 2.2 – Leachate Sump Design
Determine Impacts to Critical Receptors	Section 2.3 – Critical Receptors
Determine the Appropriate Locations and Screened Intervals of Groundwater Monitoring Wells	Section 3.1 – Monitoring Well Locations Section 3.2 – Design Criteria Appendix F1, Drawing F1.3 – Typical Monitoring Well Detail

3.3 Contaminant Pathway Analysis

In the unlikely event of a leachate release (i.e., failure of multiple, redundant engineered containment systems such as composite liners and a leachate collection system), contaminants would move downward through the unsaturated portion of the weathered Taylor Marl, where present.

If the leachate were to reach the groundwater, the miscible contaminants would be diluted by the groundwater and would move laterally, downgradient (northward). Due to the relative difference in hydraulic conductivity between the weathered portions of the Taylor Marl and the deeper unweathered Taylor Marl, leachate migration in the lower clay confining layer is unlikely.

3.4 Sampling and Analysis Procedures

Appendix F2 contains the general requirements, sampling procedures and methods, and statistical analysis information required in 30 TAC §330.405(a)-(f). A copy of the approved plan will be placed in the site operating record.

3.5 Monitoring Well Design and Construction

In accordance with §330.421 – Monitor Well Construction Specifications, a licensed Texas driller will install monitoring wells in accordance with the regulations. Wells will be drilled by a method that will not introduce contaminants into the borehole or casing. A licensed professional geoscientist or engineer who is familiar with the geology of the area will supervise monitoring well installation and development and will provide a log of the boring. Equivalent alternatives to TCEQ requirements may be used if prior written approval is obtained from the executive director. Monitoring well construction details including screen intervals, well locations and elevations, filter pack and bentonite seal elevations, and surface completion are shown in Appendix F1 on Drawings F1.3 and F1.4. In addition, a water-tight surface completion detail is provided on Drawing F1.5 for any replacement wells installed in the 100-year floodplain. Monitoring well construction will be completed in accordance with §§330.63, 330.403, and 330.421.

In accordance with 30 TAC §330.421(a), monitoring wells will be constructed in such a manner as to provide integrity, representative samples, prevent migration of water in borehole, and well construction must follow prescribed specifications.

All wells will be drilled by a qualified Texas licensed driller and will be supervised by a licensed professional geologist (P.G.) or professional engineer (P.E.).

If any fluid is required in the drilling of monitoring wells, clean, treated city water shall be used and a chemical analysis provided to the Executive Director. No glue or solvents will be used in monitoring well construction.

After installation, monitoring wells will be developed to remove drilling artifacts and open the water-bearing zone for maximum flow into the well. Development should continue until all water used or affected during drill activities is removed and field measurements of pH, specific conductance, and temperature have stabilized.

Well location and surveyed elevation will be permanently marked on the monitoring well.

Within 60 days of completion of a monitoring well or any other part of a monitoring system, an installation report will be submitted. The report will include construction and installation details for each well on forms available from the commission, a site map drawn to scale showing the location of all monitoring wells and the relevant point(s) of compliance, well elevations to the nearest 0.01 foot above msl (with year of datum shown), latitude and longitude or landfill grid location of each well, copies of detailed geologic logs including soil sample data, and copies of drillers reports required by other agencies.

As part of each monitoring well installation report, a boring log will be included and will be signed, sealed, and dated by a P.G. or P.E.

Damaged monitoring wells that are no longer usable will be reported to the Executive Director for a determination whether to replace or repair the well. In accordance with 30 TAC §305.70, if a compromised well requires replacement a permit modification request will be submitted within 45 days of the discovery.

Plugging and abandonment of monitoring wells will be performed in accordance with 16 TAC §76.702 and §76.104. No abandonment will be performed without prior written authorization.

All parts of the groundwater monitoring system will be operated and maintained so that they perform at least to design specifications through the active life of the landfill and any required post-closure care period of that solid waste management unit.

When monitoring wells are installed in unusual conditions, all aspects must be approved in writing by the Executive Director.

The facility must notify the Executive Director and local pollution agency with jurisdiction that has requested to be notified, in writing, if changes in site construction or operation or changes in adjacent property that affect or are likely to affect the direction and rate of groundwater flow and the potential for detecting groundwater contamination from the facility and that may require installation of additional monitoring wells or sampling points. Such additional wells or sampling points require a modification of the site development plan.

4 GROUNDWATER QUALITY

4.1 Plume of Contamination

In accordance with 30 TAC §330.63(f)(2), it is concluded that no plume of contamination has been identified as of the June 2025 groundwater sampling event.

4.2 Background and Detection Monitoring

In accordance with 30 TAC §330.63(f)(5), the following is a discussion on the current and proposed background and detection groundwater monitoring program that meets the requirements of §330.407.

An approved Subtitle D groundwater monitoring system has been installed at the facility, with monitoring commencing in December 1994. A tabulation of historical analytical results for all wells through June 2025 is provided in Part III, Attachment E, Appendix E7 in accordance with 30 TAC §330.63(e)(5)(E).

For any new or replaced monitoring well that may be added to the system, background groundwater quality will be established as described in Appendix F2. After the background analyses have been completed, the data will be analyzed statistically and background concentrations will be established for each parameter. For replacement wells, the approved background limits for the wells being replaced will be used until new background limits can be established. The background values will be reported to TCEQ in accordance with the requirements described in Appendix F2.

A review of historical data shows that hazardous constituents listed in 40 CFR 258, Appendix I, and 30 TAC §330.419 have been detected during groundwater monitoring at the landfill.

Inorganics Summary:

Eleven of the fifteen metals listed in 40 CFR Part 258 – arsenic, barium, cadmium, chromium, cobalt copper, lead, nickel, selenium, vandadium, and zinc – have been verified in samples from facility monitoring events. Verified and unverified detections of these metals are listed in the historical tabulation of analytical data provided in Appendix E7. In each instance, the detection was reported in accordance with the requirements of the facility GWSAP in effect at the time of the detection. In addition, appropriate statistical evaluations have been performed in accordance with the facility GWSAP. Many of the detections occurred during background sampling and since detections during background could cause control limits to be unusually high and minimize the potential to detect an increase in the well, the data is evaluated to detect increasing trends as well as comparison with the control chart limits. To date, there has been no need to place the facility in assessment monitoring as a result of any inorganic parameter detection.

Historical Detections Above the MCL of Appendix I Constituents

Well	Constituent	MCL (µg/L)	Result (µg/L)	Date	Notes
MW-20	Cadmium, total	5	5.4	12/21/94	Upgradient
MW-20	Lead, total	15	20	12/21/94	Upgradient
MW-20R	Arsenic, total	10	16	12/07/06	Upgradient
MW-20R	Lead, total	15	15	12/16/05	Upgradient
MW-20R	Lead, total	15	22	12/07/06	Upgradient
MW-21	Arsenic, total	10	27	6/23/2010	Detections during first two background events.
MW-21	Arsenic, total	10	20	9/17/2010	
MW-25	Arsenic, total	10	23	3/19/10	Detections occurred during initial background period.
MW-25	Arsenic, total	10	26	6/22/2010	
MW-25	Arsenic, total	10	20	9/16/2010	
MW-25	Arsenic, total	10	30	12/16/2010	
MW-25	Arsenic, total	10	20	3/23/2011	
MW-25	Arsenic, total	10	17	6/23/2011	
MW-25	Arsenic, total	10	12	9/27/2011	
MW-26	Arsenic, total	10	27	12/7/2012	Detections occurred during initial background period.

Detections above the established maximum contaminant level (MCL) for Appendix I parameters have only occurred in upgradient well MW-20 and the replacement MW-20R, as well as point of compliance monitoring wells MW-21, MW-25, and MW-26, as summarized in the table above. The Appendix I metal detections at upgradient MW-20R, which is a low-yield well, are attributed to high turbidity in the well (238 NTU). Arsenic detections above an MCL at point of compliance monitoring wells MW-21, MW-25, and MW-25 all occurred during the initial background period established for these wells following installation. No total metal detections above an MCL have occurred at these well locations since 2012. As explained in the approved background updates for MW-25 and MW-26, it is believed that the occurrence of arsenic at these well locations are most likely attributable to reductive dissolution of naturally-occurring soil arsenic and not from the migration of arsenic from a source such as landfill leachate.

The following tables summarize the historical statistical exceedances, verification resampling and alternate source demonstrations for the facility point of compliance wells through the December 2024 monitoring event. The inorganic groundwater quality indicator parameters detected (ammonia, potassium, iron, chloride, and alkalinity) are not listed in 40 CFR Part 258, Appendix I. Conducting analysis for these constituents is now optional and statistical analysis is no longer required to be performed on the results.

Summary of Historical Statistical Exceedances through December 2024

Event	Well	Constituent	Result (mg/L)	Statistical Limit (mg/L)	Practical Quantitation Limit (mg/L)	Primary MCL (if applicable) (mg/L)	Follow Up
Dec-00	MW-14	Iron, dissolved	0.551	0.321	0.1		Unverified
Dec-00	MW-16	Ammonia	1.2	1.64	0.1		Verified
Dec-00	MW-16	Potassium	24	26.09	0.5		Verified
Dec-00	MW-19	Potassium	17	19.4	0.5		Verified
Jun-01	MW-12	Iron	2.73	2.5	0.1		Unverified
Jun-01	MW-15	Selenium	0.0095	0.005	0.005	0.05	Unverified
Jun-01	MW-16	Iron	1.7	0.15	0.1		Unverified
Jun-01	MW-16	Nickel	0.0562	n/a	0.04		Unverified
Dec-01	MW-14	Iron	0.33	0.3234	0.1		Unverified
Dec-01	MW-15	Nickel	0.0536	0.0519	0.04		ASD submitted on 4/5/02 and approved on 4/18/02
Jun-02	MW-12	Iron	0.845	0.185	0.1		Verified
Jun-02	MW-14	Calcium	404	545.71	0.2		Unverified
Jun-02	MW-16	Arsenic	0.0196	0.013	0.01	0.05	Unverified
Dec-02	MW-12	Iron	1.4	0.185	0.1		Verified
Dec-02	MW-12	Alkalinity	890	1002.96	5		Unverified
Dec-02	MW-14	Calcium	460	545.71	0.2		Unverified
Dec-02	MW-14	Iron	1.9	0.3234	0.1		Unverified
Dec-02	MW-14	Sulfate	2700	3134.2	300		Unverified
Jun-03	MW-12	Iron	1.2	0.185	0.1		Verified
Jun-03	MW-14	Calcium	450	545.71	0.2		Verified
Jun-03	MW-12	Alkalinity	830	1002.96	5		Unverified
Jun-03	MW-14	Magnesium	190	252.35	0.5		Unverified
Jun-03	MW-15	Selenium	0.0071	0.005	0.005	0.05	Unverified
Dec-03	MW-16	Selenium	0.0054	0.005	0.005	0.05	ASD submitted on 4/6/04 and approved on 5/26/04
Jun-04	MW-12	Iron	3.4	0.185	0.1		Verified
Jun-04	MW-14	Calcium	480	545.7	0.2		Unverified

Summary of Historical Statistical Exceedances through December 2024 (Continued)

Event	Well	Constituent	Result (mg/L)	Statistical Limit (mg/L)	Practical Quantitation Limit (mg/L)	Primary MCL (if applicable) (mg/L)	Follow Up
Jun-04	MW-14	Magnesium	190	252.4	0.5		Unverified
Jun-04	MW-14	Sulfate	2500	3134	71		Unverified
Jun-04	MW-16	Iron	0.62	0.13	0.1		Unverified
Dec-04	MW-9	Calcium	550	674.61	0.2		Unverified
Dec-04	MW-9	Magnesium	170	213.49	0.5		Unverified
Dec-04	MW-12	TDS	7900	10673.88	10		Unverified
Dec-04	MW-12	Iron	3.2	0.185	0.1		Verified
Dec-04	MW-14	Calcium	490	545.71	0.2		Unverified
Dec-04	MW-14	Magnesium	190	252.35	0.5		Unverified
Dec-04	MW-14	Potassium	12	15.89	0.5		Unverified
Dec-04	MW-14	Sulfate	2500	3134.2	71		Unverified
Dec-04	MW-15	Selenium	0.016	0.005	.005	0.05	ASD submitted on 5/20/05 and approved on 6/21/05
Dec-04	MW-16	Iron	0.55	0.13	0.1		Unverified
Dec-04	MW-16	Selenium	0.018	0.005	.005	0.05	Unverified
Dec-04	MW-19	Selenium	0.0088	0.005	.005	0.05	Unverified.
<i>July 28, 2005 – Background update through 2005 is approved</i>							
Dec-05	MW-08	Iron	0.94	0.579	0.1		Unverified
Jun-06	MW-06	Nickel	0.11	0.0537	0.04		Initial Detection. ASD submitted on 9/15/06 and approved on 10/20/06.
Jun-06	MW-08	Iron	1	0.579	0.1		Unverified
Jun-06	MW-08	Ammonia	1.9	2.82	0.1		Unverified
Dec-06	MW-09	Sulfate	7500	3872	620		Unverified
Dec-06	MW-10	Sulfate	7600	4275	620		Unverified
Dec-06	MW-11	Sulfate	7600	4190	620		Unverified
Dec-06	MW-14	Sulfate	6000	3427	620		Unverified
Dec-06	MW-16	Sulfate	1100	8189	620		Unverified
Dec-06	MW-19	Sulfate	9500	5146	620		Unverified

Summary of Historical Statistical Exceedances through December 2024 (Continued)

Event	Well	Constituent	Result (mg/L)	Statistical Limit (mg/L)	Practical Quantitation Limit (mg/L)	Primary MCL (if applicable) (mg/L)	Follow Up
Jun-07	MW-08	Iron	3.9	0.579	0.1		Unverified
Jun-07	MW-15	Ammonia	1.2	1.29	0.1		Unverified
Jun-07	MW-16	Chloride	1300	1286	5		Unverified
Dec-07	MW-08	Alkalinity	570	568.7	5		Unverified
Dec-07	MW-08	Iron	12	0.579	0.1		Verified
Dec-07	MW-16	Alkalinity	560	575.8	5		Unverified
Dec-07	MW-16	Chloride	1600	1286	5		Unverified
Jun-08	MW-08	Alkalinity	530	568.7	5		Unverified
Jun-08	MW-08	Iron	1.9	0.579	0.1		Verified
Jun-08	MW-16	Alkalinity	580	575.8	5		Unverified
Jun-08	MW-16	Chloride	1700	1286	5		Verified
Jun-08	MW-16	Potassium	26	32.7	0.5		Unverified
Dec-08	MW-08	Alkalinity	520	568.7	5		Verified
Dec-08	MW-08	Iron	2.5	0.579	0.1		Verified
Dec-08	MW-16	Alkalinity	570	575.8	5		Verified
Dec-08	MW-16	Chloride	2000	1286	5		Verified
Dec-08	MW-16	Potassium	28	32.7	0.5		Unverified
<i>Subchapter J Permit Modification approved on 4/10/09. Modification included approval to no longer report statistical analysis on inorganic parameters.</i>							
Jun-09	MW-19	Barium	0.012	0.01	0.01	2	Unverified
Dec-13	MW-6	Barium	0.05	0.0378	0.010	2	Unverified
Dec-13	MW-23	Cobalt	0.0074	0.0067	0.005		Verified. ASD submitted on 2/24/14 and approved 3/4/14.
Jun-14	MW-24	Barium	0.0610	0.0543	0.010	2	Unverified
Jun-14	MW-23	Cobalt	0.0064	0.0068 (CUSUM)	0.005		Verified. Previously approved ASD.
Dec-14	MW-9	Barium	0.024	0.01658	0.010	2	Unverified

Summary of Historical Statistical Exceedances through December 2024 (Continued)

Event	Well	Constituent	Result (mg/L)	Statistical Limit (mg/L)	Practical Quantitation Limit (mg/L)	Primary MCL (if applicable) (mg/L)	Follow Up
Dec-14	MW-10	Barium	0.012	0.01	0.010	2	Unverified
Dec-14	MW-10	Chromium	0.025	0.02	0.020	0.100	Unverified
Jun-15	MW-9	Barium	0.031	0.01658	0.010	2	Verified ASD submitted 8/21/15 and approved 9/18/15.
Jun-15	MW-11	Barium	0.015	0.01	0.010	2	ASD submitted in lieu of verification resampling. ASD approved 9/18/15.
Jun-15	MW-23	Barium	0.033	0.02499	0.010	2	ASD submitted in lieu of verification resampling. ASD approved 9/18/15.
Dec-15	MW-6	Barium	0.029	0.038 (0.044 CUSUM)	0.010	2	ASD submitted on 2/8/16 in lieu of verification resampling. ASD approved on 3/8/16.
Dec-15	MW-9	Barium	0.017	0.01658	0.010	2	Verified. Previously approved ASD.
Dec-15	MW-25	Thallium	0.0011	0.001	0.001	0.002	Unverified
Jun-16	MW-6	Cobalt	0.006	0.005	0.005		Unverified
Jun-16	MW-6	Nickel	0.022	0.02	0.02		Unverified
Jun-16	MW-9	Barium	0.017	0.01658	0.010	2	Verified. Previously approved ASD.
Dec-16	MW-9	Barium	0.015	0.017 (0.01954 CUSUM)	0.010	2	Verified. Previously Approved ASD.
Jun-17	MW-9	Barium	0.013	0.01658 (0.01754 CUSUM)	0.010	2	Verified. Previously Approved ASD.
Dec-17	MW-19	Barium	0.014	0.010	0.010	2	ASD submitted 2/23/18 in lieu of verification resampling and approved on 4/26/18.
Dec-18	MW-23	Barium	0.11	0.04922	0.010	2	Verified. ASD submitted 3/11/19 and approved 5/9/19.

Summary of Historical Statistical Exceedances through December 2024 (Continued)

Event	Well	Constituent	Result (mg/L)	Statistical Limit (mg/L)	Practical Quantitation Limit (mg/L)	Primary MCL (if applicable) (mg/L)	Follow Up
Jun-19	MW-9	Barium	0.067	53.14 (80.79 CUSUM)	0.010	2	Verified. ASD submitted 8/22/19 and approved 10/23/19.
Jun-21	MW-32	Vanadium	0.011	0.01	0.010		Unverified
Dec-22	MW-23	Barium	0.15	0.1367	0.010	2	Unverified
May-23	MW-23	Barium	0.12	0.1367	0.010	2	ASD submitted 10/5/23 in lieu of verification resampling and approved 10/16/23
Dec-23	MW-10	Barium	0.023	0.012	0.010	2	Verified. ASD submitted 7/30/24 and approved 8/20/24.
Jun-24	MW-10	Barium	0.041	0.012	0.010	2	Verified. ASD submitted 8/20/24 and approved
Jun-24	MW-23	Barium	0.19	0.1367	0.010	2	Unverified
Dec-23	MW-10	Barium	0.024	0.023	0.010	2	Verified. ASD submitted 7/30/24 and approved 8/20/24.

Alternate Source Demonstrations Submitted

Event	Well	Constituent	ASD dated	ASD approved
12/2001	MW-15	Nickel	4/5/2002	4/18/2002
12/2003	MW-16	Selenium	4/6/2004	5/26/2004
12/2004	MW-15	Selenium	5/20/2005	6/21/2005
5/2006	MW-06	Nickel	9/15/2006	10/20/2006
12/2013	MW-23	Cobalt	2/24/2014	3/4/2014
6/2015	MW-9	Barium	8/21/2015	9/18/2015
	MW-11	Barium		
	MW-23	Barium		
12/2015	MW-6	Barium	2/8/2016	3/8/2016
12/2017	MW-19	Barium	2/23/2018	4/26/2018
12/2017	MW-5	1,2-dichloroethane Cis-1,2-dichloroethene Methylene chloride 1,1-dichloroethane	5/14/2018	6/6/2018
12/2018	MW-23	Barium	3/11/2019	5/9/2019
6/2019	MW-9	Barium	8/22/2019	10/23/2019
6/2023	MW-23	Barium	10/5/2023	10/16/2023
12/2023	MW-10	Barium	7/30/2024	8/20/2024

Organics Summary:

Based on the analytical data tabulation, the only volatile organic compounds (VOCs) detected have been common laboratory contaminant acetone at MW-2R (in March 2010 and in March 2011), multiple VOCs at MW-5 from December 2017 to December 2019, and low level detections of 1,1-dichloroethane at upgradient MW-17, and a detection of chloroform at newly installed MW-23R. All VOC detections at MW-2R, MW-17, and MW-23R have been well below their respective groundwater protection standards (GWPSs).

Monitoring well MW-5 was installed in 1995; however, the well did not produce sufficient volumes of water for sampling until December 2017. During the December 2017 background event for MW-5, multiple VOCs were detected and a verification resampling event was conducted. An ASD for verified detections of 1,2-dichloroethane, cis-1,2-dichloroethene, and methylene chloride at background MW-5 was submitted on May 14, 2018. The ASD stated that it is believed that the source of the VOC detections at background MW-5 may be due to residual landfill gas (LFG) detected in the area of nearby probe GP-34 that has been adsorbed to the soil matrix in the unsaturated zone. It was anticipated that the quality of the groundwater at MW-5 would improve as groundwater continues to mobilize near MW-5 and the water table returned to natural elevations. The ASD was approved by TCEQ on June 6, 2018. Since the approval of the ASD, additional VOCs were verified in the groundwater during the background period for MW-5 and TCEQ

requested that MW-5 be placed in assessment monitoring. A correspondence letter was submitted to TCEQ on January 29, 2019 that provided supporting evidence that the VOC detections at MW-5 may be a result of an intra-well bias, not representative of the aquifer. It was believed that the samples collected from MW-5 were effectively “sump water”, with the lower 12 feet of the well screened within the unweathered Taylor, acting as the sump. If MW-5 had been installed in accordance with the Subchapter J permit modification recommendations (1-2 feet into the unweathered zone), MW-5 would most likely still be considered dry. At a minimum, any headspace landfill gas that accumulates within the annulus may bias the results high and not be representative of the uppermost groundwater bearing unit. After reviewing the evidence, TCEQ approved leaving MW-5 in background monitoring on March 29, 2019 and a voluntary Appendix II monitoring event was conducted. Later that year it was reported by the groundwater sampling technician that the well was leaning and that a “dog-leg” bend was present approximately 6 feet below the top of casing. It was then determined that the samples collected from MW-5 were not representative of the groundwater bearing unit and that the integrity of the well may have been compromised. A permit modification to replace MW-5 with MW-5R was submitted to TCEQ on April 9, 2020 and was approved on May 7, 2020. Replacement MW-5R was installed in May 2020 and as anticipated, the well has not produced sufficient volumes for sampling since installation.

Monitoring well MW-17, located adjacent to but hydraulically upgradient of a capped pre-Subtitle D disposal area, was approved by TCEQ as a background well with the 2009 Subchapter J permit modification. As stated in the U.S. EPA Solid Waste Technical Manual (EPA 530-R-93-017) in Section 5.6.3, “the objective of a groundwater monitoring system is to intercept groundwater that has been contaminated by leachate from the MSWLF unit.” The detection of 1,1-dichloroethane at a concentration near the PQL (1 mg/L) in an approved background non-point-of-compliance well without confirmation from leachate indicator parameters does not indicate leakage from a landfill unit; therefore, no action was required. However, following subsequent detections, after the PQL was reduced from ug/L to 1 ug/L in 2010, and the submittal of an ASD on September 5, 2014, MW-17 was placed into assessment monitoring. Assessment monitoring statistics were conducted for the December 2014 results at MW-17; the results did not statistically exceed the GWPS. There has been no detection of 1,1-dichloroethane, or any other VOC at MW-17 since June 2014. Monitoring well MW-17 was approved to return to detection monitoring on August 8, 2017 after having met the provisions set forth in §330.409(e).

A permit modification to replace MW-17 with MW-17R, due to compromised structural integrity, was submitted to TCEQ on October 6, 2025 and was approved on November 3, 2025. Replacement monitoring well MW-17R was installed in January 2026. Monitoring well MW-17R has not produced sufficient volumes for sampling since installation.

In accordance with the permit modification issued on May 30, 2025, damaged monitoring well MW-23 was replaced due to a potential well integrity impact. Monitoring well MW-23R was installed on September 5, 2025. Due to the low-yield nature of MW-23R during installation, a significant amount of city water was introduced to the well during the well development process. Less than 2.0 well volumes was able to be purged from MW-23R during the first quarterly background monitoring event, conducted in September 2025. The analytical results from the September 2025 background event reported an unverified

detection of chloroform. According to EWG.org, chloroform has been detected in the City of Ferris tap water at average concentrations ranging from 8 ppb to 15 ppb since 2018. Historically, chloroform has not been detected in the groundwater at the Skyline Landfill. It is believed that the detection of chloroform at newly installed MW-23R is a result of a well installation induced contaminant and further well development will be conducted prior to a verification resample being collected in December 2025. Results from the December 2025 resampling event did not detect VOCs at MW-23R. A City of Ferris water sample was also collected and tested during the December 2025 resampling event. The City of Ferris water sample was reported to contain 14ppb chlorobenzene.

4.3 Assessment Monitoring

In accordance with §330.63(f)(6), the required information is provided. All detections at the facility of hazardous constituents in 40 CFR Part 258, Appendix I, and 30 TAC §330.419 have been either unverified one-time detections, occurred in upgradient wells not located on the facility's point of compliance, or have been shown to have been caused by a source other than the facility's landfill units. Should such hazardous constituents be detected in the future, and should such detections support the implementation of assessment monitoring, information to establish an assessment monitoring program under §330.409 will be submitted including a description of special wastes previously handled at the landfill and a characterization of the contaminated groundwater, including any detected concentration(s) of assessment constituents defined in §330.409.

As described in Section 4.2, background well MW-17 was placed in assessment monitoring in 2014 for detections of 1,1-dichloroethane above the PQL. There have been no detections of any VOC at the well since June 2014. A request to return MW-17 to detection monitoring status was included in the 2016 Annual Groundwater Report, dated February 10, 2017. TCEQ approved the request on August 3, 2017. Monitoring well MW-17 has since been replaced with MW-17R. No water sampling has yet to occur at this well since its installation in January 2026.

Detailed plans and an engineering report describing the groundwater monitoring program under §330.405 are included in this plan as well as the sampling, analysis, and statistical comparison procedures.

Should statistically significant increases or increasing trends of hazardous constituents be verified in point of compliance wells in the future groundwater monitoring events and absent an approved alternate source demonstration, the Skyline Landfill will establish an assessment monitoring program under §330.409 in accordance with the procedures described in Appendix F2 – Groundwater Sampling and Analysis Plan that will include sampling for Appendix II constituents.

4.4 Corrective Action Program

In accordance with §330.63(f)(7), the required information is provided. Detections of hazardous constituents at the facility above established MCLs have only occurred in upgradient wells. Should such hazardous constituents be detected in point of compliance wells in the future groundwater monitoring events above the concentration limits established in 30 TAC §330.409, and absent an alternate source demonstration,

information, data and analysis to establish a corrective action program meeting the requirements of §330.411 and §330.413 will be submitted including a description of special wastes previously handled at the landfill and a characterization of the contaminated groundwater, including:

A characterization of contaminated groundwater including any detected concentration(s) of assessment constituents defined in §330.409.

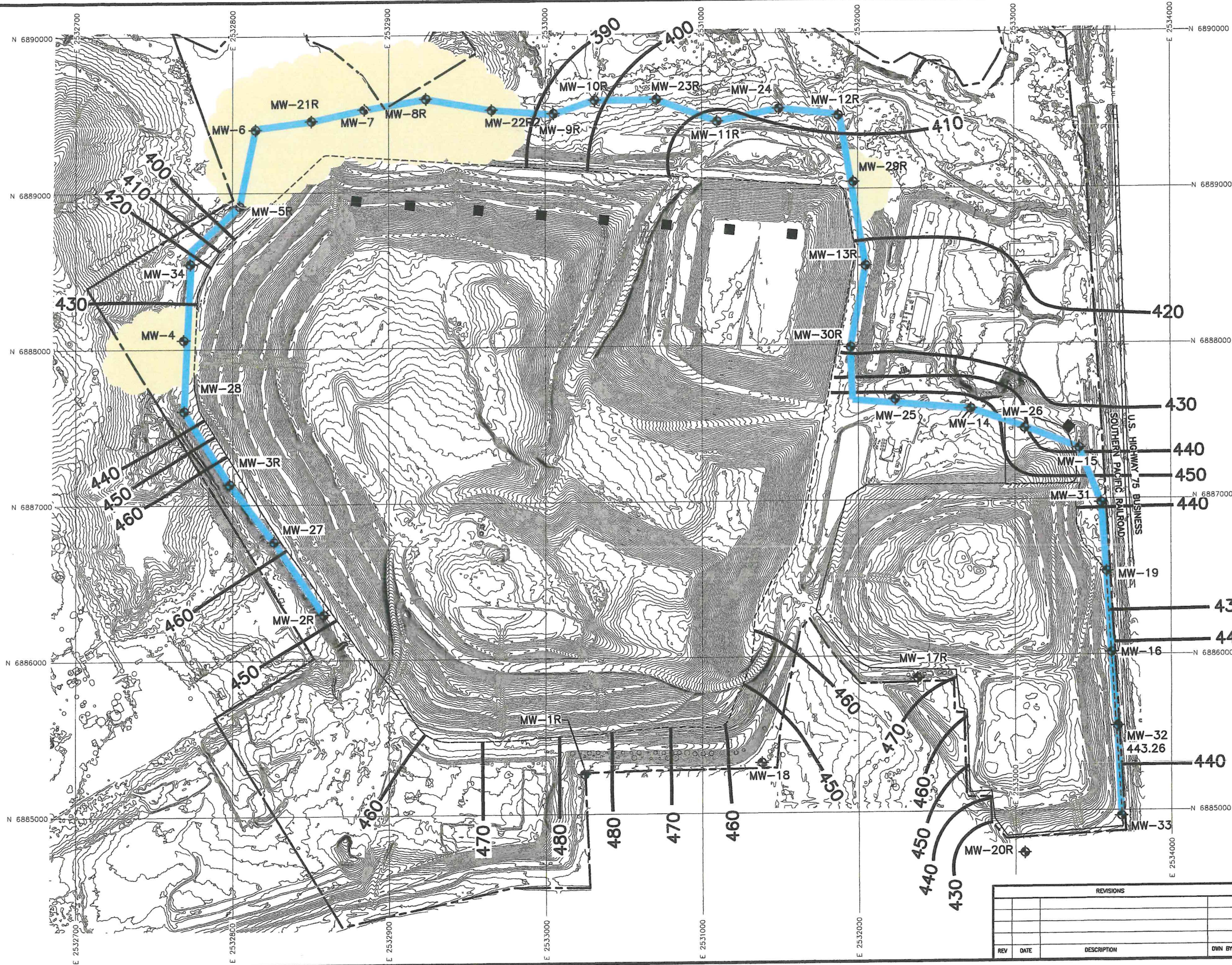
Detailed plans and an engineering report describing the groundwater monitoring program under §330.405 are included in this plan as well as the sampling, analysis, and statistical comparison procedures.

5 REFERENCES

- *Brady, N.C., and Weil, R., 2007, *The Nature and Properties of Soils*, Prentice Hall, Upper Saddle River, N.J.
- *Dutton, A.R., Collins, E.W., Hovorka, S.D., Mace, R.E., Scanlon, B.R., and Xiang, J., 1994, *Occurrence and Movement of Ground Water in Austin Chalk and Eagle Ford and Ozan Formations at the Superconducting Super Collider (SSC) Site, Ellis County, Texas*, Contract report prepared by Bureau of Economic Geology for Texas National Research Laboratory Commission, Contract No. IAC(92-93)-0301, May.

**APPENDIX F1
DRAWINGS**

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- LEGEND**
- PERMIT 42D BOUNDARY
 - .-.- PERMIT 42D LANDFILL FOOTPRINT
 - STATE PLANE GRID NAD 83
 - POINT OF COMPLIANCE
 - 400 --- GROUNDWATER CONTOUR
 - ⊕ PERMIT 42D MONITORING WELL
 - LEACHATE COLLECTION SUMP
 - GROUNDWATER ABSENT

NOTE:
 1. GROUNDWATER CONTOURS ARE FROM THE DECEMBER 2024 GROUNDWATER SAMPLING EVENT.



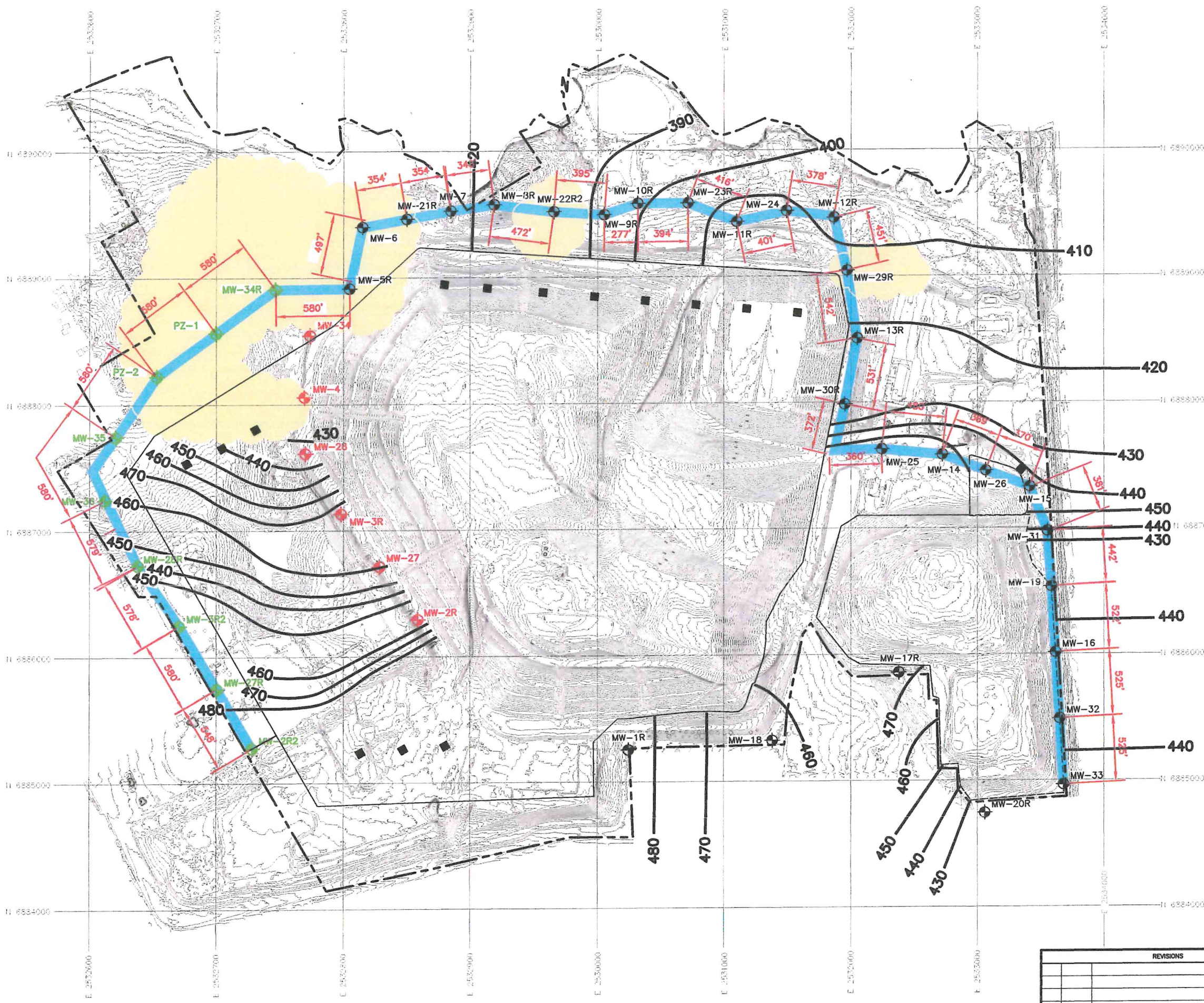
**PERMIT 42D
 GROUNDWATER MONITORING NETWORK
 WASTE MANAGEMENT OF TEXAS, INC.
 SKYLINE LANDFILL**

BME **BIGGS & MATHEWS ENVIRONMENTAL**
 1700 ROBERT ROAD, STE. 100
 MANSFIELD, TEXAS 76063
 817-563-1144

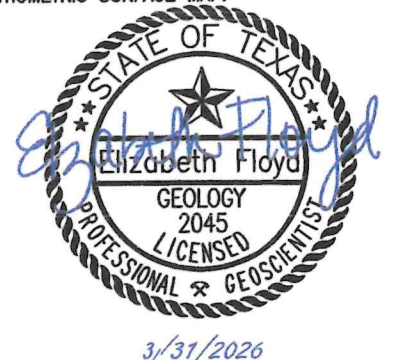
REVISIONS		
REV	DATE	DESCRIPTION

TBPELS FIRM NO. F-256 AND NO. 10194895
 TBPG FIRM NO. 50222
 DRAWING **F1.1**

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- LEGEND**
- PERMIT 42E BOUNDARY
 - LANDFILL FOOTPRINT
 - N 6886000 --- STATE PLANE GRID NAD 83
 - ⊕ PERMIT 42D MONITORING WELL
 - ⊕ PERMIT 42D MONITORING WELL TO BE PLUGGED
 - ⊕ PERMIT 42E PROPOSED MONITORING WELL OR PIEZOMETER
 - POINT OF COMPLIANCE
 - 400 --- GROUNDWATER CONTOUR
 - GROUNDWATER ABSENT
 - LEACHATE COLLECTION SUMP
- NOTE:**
- GROUNDWATER CONTOURS TAKEN FROM MARCH 2025 POTENTIOMETRIC SURFACE MAP.



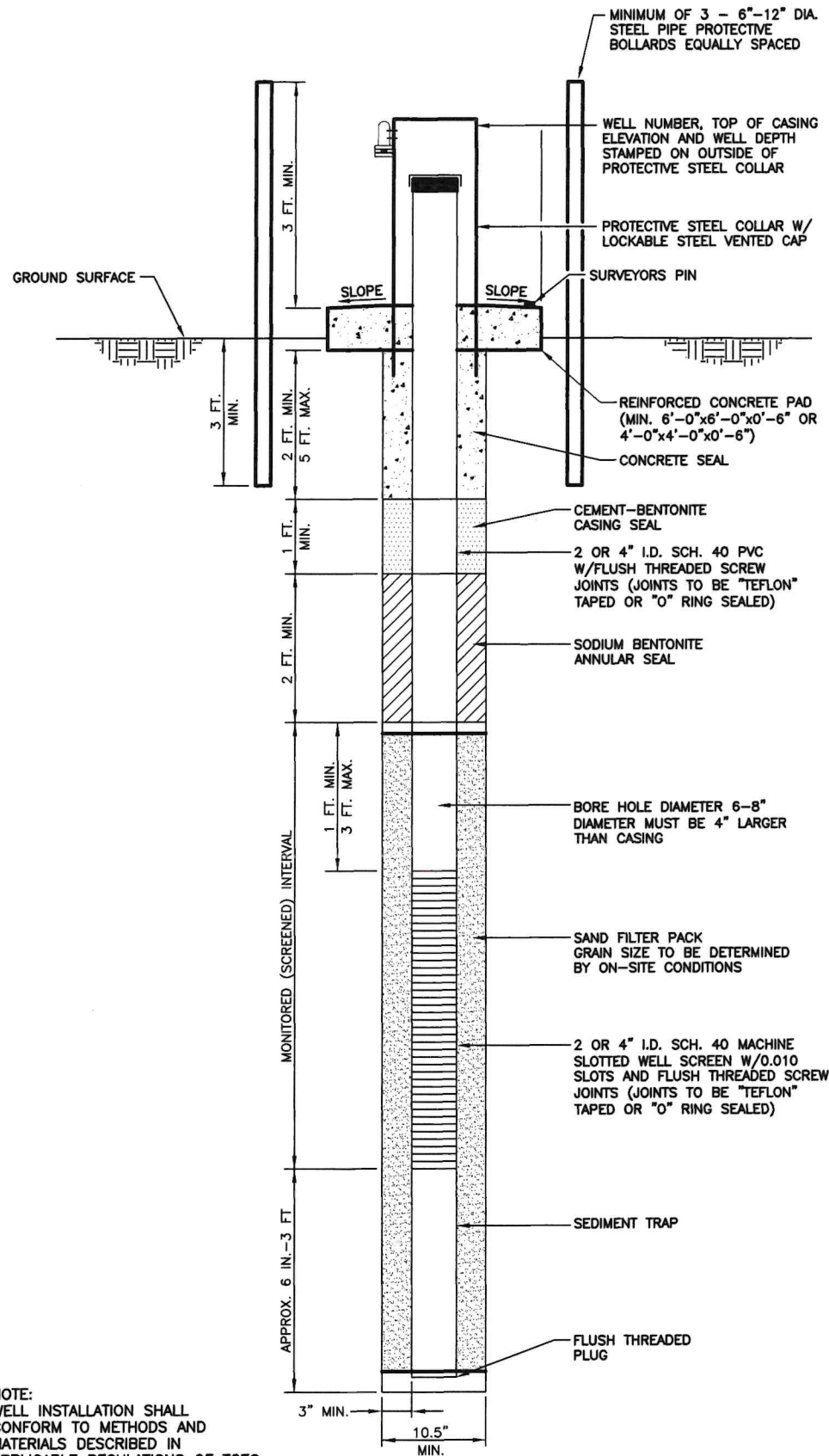
PERMIT 42E GROUNDWATER MONITORING NETWORK
WASTE MANAGEMENT OF TEXAS, INC. SKYLINE LANDFILL

BME **BIGGS & MATHEWS ENVIRONMENTAL**
 1700 ROBERT ROAD, STE. 100
 MANSFIELD, TEXAS 76063
 817-563-1144

REVISIONS			
REV	DATE	DESCRIPTION	DWN BY

TBPELS FIRM NO. F-256 AND NO. 10194895
 TBPG FIRM NO. 50222
 DRAWING **F1.2**

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NOTE:
WELL INSTALLATION SHALL CONFORM TO METHODS AND MATERIALS DESCRIBED IN APPLICABLE REGULATIONS OF TCEQ.

TYPICAL MONITORING WELL INSTALLATION

NOT TO SCALE

NOTES:

- MONITORING WELLS SHALL BE DRILLED BY A TEXAS-LICENSED DRILLER WHO IS QUALIFIED TO DRILL AND INSTALL MONITORING WELLS.
- THE WELL SHALL BE DRILLED BY A METHOD WHICH WILL ALLOW INSTALLATION OF THE CASING, SCREEN, ETC., AND THAT WILL NOT INTRODUCE CONTAMINANTS INTO THE BOREHOLE OR CASING. IF ANY FLUIDS ARE NECESSARY IN DRILLING OR INSTALLATION, THEN CLEAN, TREATED CITY WATER SHALL BE USED; OTHER FLUIDS MUST BE APPROVED IN WRITING.
- DURING DRILLING OF THE MONITORING WELL, A LOG OF THE BORING SHALL BE MADE BY A QUALIFIED GEOLOGIST OR ENGINEER WHO IS FAMILIAR WITH THE GEOLOGY OF THE AREA.
- THE WELL CASING SHALL BE NSF-CERTIFIED PVC SCHEDULE 40 OR 80 PIPE. FLUSH-THREAD, SCREW JOINT (NO GLUE OR SOLVENTS); POLYTETRAFLUORETHYLENE (PTFE, SUCH AS TEFLON) TAPE OR O-RINGS IN THE JOINTS; NO COLLAR COUPLINGS. THE CASING SHALL BE CLEANED AND PACKAGED AT THE PLACE OF MANUFACTURE; THE PACKAGING SHALL INCLUDE A PVC WRAPPING ON EACH SECTION OF CASING TO KEEP IT FROM BEING CONTAMINATED PRIOR TO INSTALLATION. THE CASING SHALL BE FREE OF INK, LABELS, OR OTHER MARKINGS. MANUFACTURE: THE PACKAGING SHALL INCLUDE A PVC WRAPPING ON EACH.
- THE SCREEN SHALL BE COMPATIBLE WITH THE CASING AND SHOULD GENERALLY BE OF THE SAME MATERIAL. THE SCREEN SHALL NOT INVOLVE THE USE OF ANY GLUES OR SOLVENTS FOR CONSTRUCTION. FIELD-CUTS SLOTS ARE NOT PERMITTED FOR WELL SCREEN. FILTER CLOTH SHALL NOT BE USED. SCREEN STERILIZATION METHODS ARE THE SAME AS THOSE FOR CASING. SELECTION OF THE SIZE OF THE SCREEN OPENING SHOULD BE DONE BY A PERSON EXPERIENCED WITH SUCH WORK.
- THE FILTER PACK, PLACED BETWEEN THE SCREEN AND THE WELL BORE, SHALL CONSIST OF PRE-PACKAGED, INERT, CLEAN SILICA SAND OR GLASS BEADS. THE FILTER PACK SHOULD BE PLACED WITH A TREMIE PIPE TO ENSURE THAT THE MATERIAL COMPLETELY SURROUNDS THE SCREEN AND CASING WITHOUT BRIDGING. THE TREMIE PIPE SHALL BE STEAM CLEANED PRIOR TO THE FIRST WELL AND BEFORE EACH SUBSEQUENT WELL.
- THE ANNULAR SEAL SHALL BE PLACED ON TOP OF THE FILTER PACK. THE SEAL SHOULD BE COMPOSED OF, IN ORDER OF PREFERENCE, COARSE-GRAIN SODIUM BENTONITE, COARSE-GRIT SODIUM BENTONITE, OR BENTONITE GROUT. SPECIAL CARE SHOULD BE TAKEN TO ENSURE THAT FINE MATERIAL OR GROUT DOES NOT PLUG THE UNDERLYING FILTER PACK. THE SEAL SHOULD BE PLACED ON TOP OF THE FILTER PACK WITH A STEAM-CLEANED TREMIE PIPE TO ENSURE GOOD DISTRIBUTION AND SHOULD BE TAMPED WITH A STEAM-CLEANED ROD TO DETERMINE THAT THE SEAL IS THICK ENOUGH. THE BENTONITE SHALL BE HYDRATED WITH CLEAN WATER PRIOR TO ANY FURTHER ACTIVITIES ON THE WELL AND LEFT TO STAND UNTIL HYDRATION IS COMPLETE (EIGHT TO 12 HOURS, DEPENDING ON THE GRAIN SIZE OF THE BENTONITE). IF A BENTONITE-GROUT (WITHOUT CEMENT) CASING SEAL IS USED IN THE WELL BORE, THEN IT MAY REPLACE THE ANNULAR SEAL DESCRIBED ABOVE.
- A CASING SEAL SHALL BE PLACED ON TOP OF THE ANNULAR SEAL TO PREVENT FLUIDS AND CONTAMINANTS FROM ENTERING THE BOREHOLE FROM THE SURFACE. THE CASING SEAL SHALL CONSIST OF A COMMERCIAL BENTONITE GROUT OR A CEMENT-BENTONITE MIXTURE.
- CONCRETE PAD. HIGH-QUALITY STRUCTURAL-TYPE CONCRETE SHALL BE PLACED FROM THE TOP OF THE CASING SEAL (TWO TO FIVE FEET BELOW THE SURFACE) CONTINUOUSLY TO THE TOP OF THE GROUND TO FORM A PAD AT THE SURFACE. THIS FORMED SURFACE PAD SHALL BE AT LEAST SIX INCHES THICK. THE TOP OF THE PAD SHALL SLOPE AWAY FROM THE WELL BORE TO THE EDGES TO PREVENT PONDING OF WATER AROUND THE CASING OR COLLAR.
- A STEEL PROTECTIVE PIPE COLLAR SHALL BE PLACED AROUND THE CASING "STICKUP" TO PROTECT IT FROM DAMAGE AND UNWANTED ENTRY. THE TOP OF THE COLLAR SHALL HAVE A LOCKABLE HINGED TOP FLAP OR COVER. A STURDY LOCK SHALL BE INSTALLED, MAINTAINED IN WORKING ORDER, AND KEPT LOCKED WHEN THE WELL IS NOT BEING BAILED/PURGED OR SAMPLED. THE WELL NUMBER OR OTHER DESIGNATION SHALL BE MARKED PERMANENTLY ON THE PROTECTIVE STEEL COLLAR.
- SEDIMENT TRAP PREVIOUSLY USED IN HISTORIC MONITORING WELLS

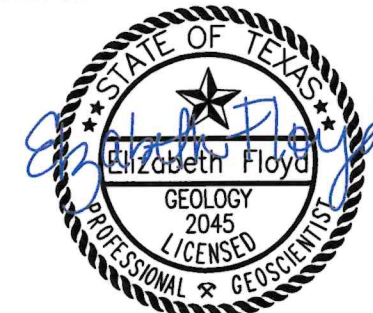
TYPICAL MONITORING WELL INSTALLATION

Monitoring Well No.	Ground Elevation (ft msl)	Total Depth (ft bgs)	Top of Casing Elevation (ft msl)	Screened Interval (ft msl)		Filter Pack Interval (ft msl)	
				From	To	From	To
MW-1R	488.99	64	491.65	446.49	426.49	448.49	424.99
MW-2R	502.89	85.85	505.56	439.04	418.04	442.04	417.04
MW-3R	483.67	73.04	485.97	432.63	411.63	435.63	410.63
MW-4	441.1	32.28	443.6	426.82	408.82	428.82	408.82
MW-5R	421.56	20.5	423.56	414.56	401.56	413.56	401.56
MW-6	416.81	25	419.96	409.81	391.81	411.81	391.81
MW-7	429.73	25	432.67	422.73	404.73	424.73	404.73
MW-8R	455.48	11	457.69	449.48	444.48	451.48	444.48
MW-9R	412.4	44.5	416.16	378.40	368.40	380.40	368.40
MW-10R	408.50	45	410.83	373.50	363.50	375.50	363.50
MW-11R	423.37	28	426.1	405.37	395.37	408.37	395.37
MW-12R	419.01	21.5	421.48	408.01	398.01	410.01	398.01
MW-13R	454.92	45.5	457.07	421.42	411.42	423.42	410.42
MW-14	463.51	32.5	466.71	453.51	431.01	455.51	431.01
MW-15	448.66	25.5	452.2	440.66	423.16	442.66	423.16
MW-16	446.36	24.5	449.56	439.36	421.86	441.36	421.86
MW-17R	487.03	55.0	490.14	442.53	432.53	447.03	432.53
MW-18	467	47.5	470.2	442.00	419.50	444.00	419.50
MW-19	441.25	31	444.45	432.75	410.25	434.25	410.25
MW-20R	464.63	35.5	468.03	450.13	430.13	452.63	429.13
MW-21R	416.65	15	419.25	406.65	401.65	408.65	401.65
MW-22R2	429.1	27.45	431.94	399.58	394.58	401.58	394.58
MW-23R	411.76	47	414.18	374.76	364.76	376.76	364.76
MW-24	421.58	20	424.62	409.58	404.58	412.58	401.58
MW-25	459.53	35	462.33	437.53	427.53	439.53	424.53
MW-26	448.09	20	451.06	436.09	431.09	438.09	428.09
MW-27	489.13	45.88	492.04	454.25	444.25	456.25	443.25
MW-28	453.16	19.28	456.53	438.88	433.88	440.88	433.88
MW-29R	439.6	22	442.23	423.60	418.60	425.60	418.60
MW-30R	456.76	39	459.42	423.76	418.76	425.76	417.76
MW-31	438.23	10.5	440.81	433.73	428.73	434.73	427.73
MW-32	449.45	17.5	451.41	437.95	432.95	439.95	431.95
MW-33	450.15	18	452.75	438.15	433.15	440.15	432.15
MW-34	432.5	39	435.12	415.00	395.00	417.00	393.50

Proposed Monitoring Wells							
MW-2R2	498	42	550.5	446.00	456.00	443.00	456.00
MW-3R2	501	53	503.5	438.00	448.00	435.00	448.00
MW-27R	500	52	502.5	438.00	448.00	435.00	448.00
MW-28R	496	28	498.5	458.00	468.00	455.00	468.00
MW-34R	432	14	434.5	408.00	418.00	405.00	418.00
MW-35	457	14	459.5	433.00	443.00	430.00	443.00
MW-36	454	16	456.5	428.00	438.00	425.00	438.00

Proposed Piezometers							
PZ-1	478	55	480.50	413.00	423.00	410.00	423.00
PZ-2	483	44	485.00	433.00	443.00	430.00	443.00

1. ALL INFORMATION SHOWN IN THIS TABLE IS APPROXIMATE AND BASED ON CURRENTLY AVAILABLE INFORMATION.

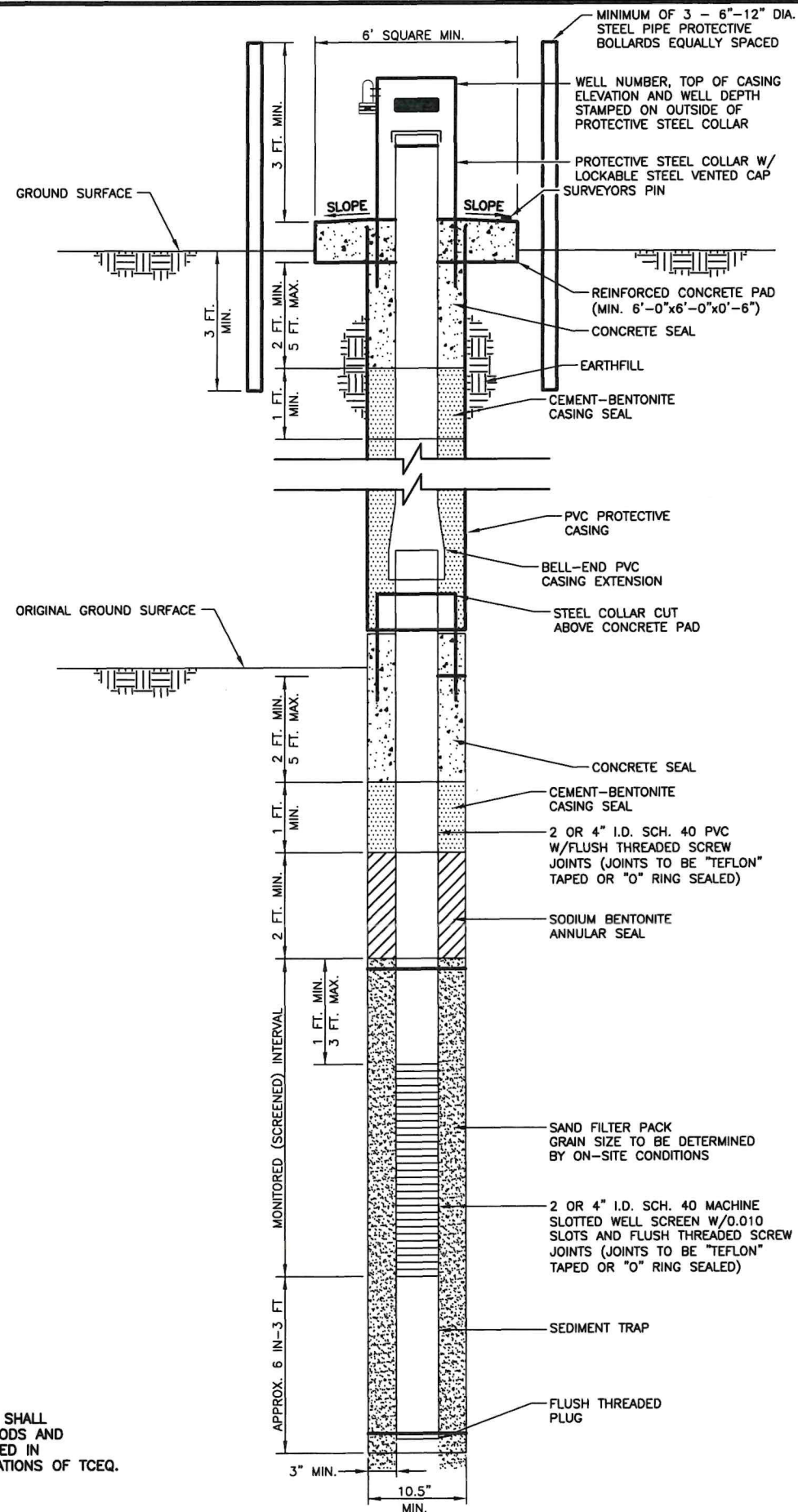


3/31/2026

REVISIONS			
REV	DATE	DESCRIPTION	DWN BY

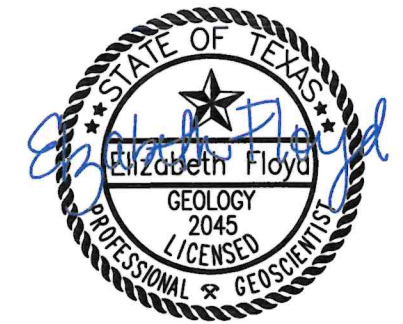
MONITORING WELL DETAIL	
WASTE MANAGEMENT OF TEXAS, INC. SKYLINE LANDFILL	
BME	BIGGS & MATHEWS ENVIRONMENTAL 1700 ROBERT ROAD, STE. 100 MANSFIELD, TEXAS 76063 817-563-1144
TBPELS FIRM NO. F-256 AND NO. 10194895	DRAWING F1.3
TBPFG FIRM NO. 50222	

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NOTE:
WELL INSTALLATION SHALL
CONFORM TO METHODS AND
MATERIALS DESCRIBED IN
APPLICABLE REGULATIONS OF TCEQ.

**TYPICAL MONITORING WELL DETAIL
FOR RAISED WELLS**
NOT TO SCALE



3/31/2026

**TYPICAL WELL DETAIL
FOR RAISED WELLS**
WASTE MANAGEMENT OF TEXAS, INC.
SKYLINE LANDFILL

BME **BIGGS & MATHEWS
ENVIRONMENTAL**
1700 ROBERT ROAD, STE. 100
MANSFIELD, TEXAS 76063
817-563-1144

REVISIONS			
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TBPELS FIRM NO. F-256 AND NO. 10194895
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DRAWING
F1.4

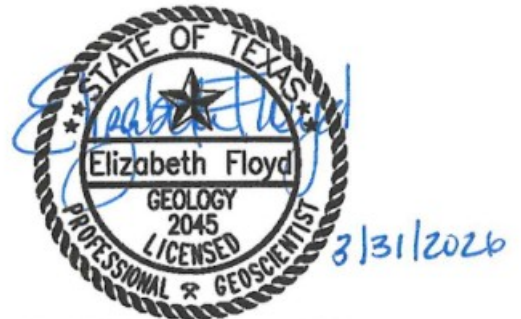
**SKYLINE LANDFILL
DALLAS AND ELLIS COUNTIES, TEXAS
PERMIT AMENDMENT APPLICATION NO. MSW 42E**

**PART III – FACILITY INVESTIGATION AND DESIGN
APPENDIX F2
GROUNDWATER SAMPLING AND ANALYSIS PLAN**

Prepared for



March 2026



Biggs & Mathews Environmental, Inc.
Firm Registration No. 50222

Prepared by



BIGGS & MATHEWS ENVIRONMENTAL

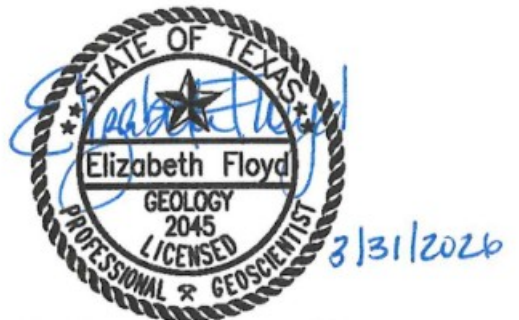
1700 Robert Road, Suite 100 ♦ Mansfield, Texas 76063 ♦ 817-563-1144

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

TEXAS BOARD OF PROFESSIONAL GEOSCIENTISTS
FIRM REGISTRATION NO. 50222

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Biggs & Mathews Environmental, Inc.
Firm Registration No. 50222

1 INTRODUCTION

The purpose of this document is to outline the sampling and analysis procedures implemented at the Skyline Landfill, TCEQ Permit No. MSW 42E. The procedures will ensure that the groundwater monitoring results provide an accurate representation of groundwater quality and are protective of human health and the environment.

WMTX will employ competent, qualified consultants and laboratories to assist in all aspects of the groundwater sampling and analysis requirements.

This plan has been prepared to meet or exceed the requirements of 30 TAC Subchapter J related to Groundwater Monitoring and Corrective Action, promulgated by TCEQ on March 27, 2006.

2 GROUNDWATER SAMPLING PROCEDURES

The following subsections summarize specific tasks involved in sampling the groundwater through the monitoring system.

2.1 Well Inspection

Prior to performing any purging or sampling each monitoring well will be inspected to assess its integrity. Each well will be inspected for any physical damage. The security of each well will be assessed in order to confirm that no outside source constituents have been introduced to the well. All inspection information, stabilization data, date and time, general weather conditions, and sampling personnel identification will be documented on the Field Information Form (Figure 2-1). If it has been determined that the integrity of the well has, or may have been, compromised, the necessary information will be documented and the TCEQ notified within 45 days of discovery of the compromised monitoring well.

2.2 Sample Collection

Each monitoring well in the groundwater monitoring system may have a dedicated sampling device installed in the well (i.e., a Well Wizard bladder pump (or equivalent) or a Teflon, PVC, or stainless steel bailer). If a non-dedicated sampling device is used, it will be disposable or properly decontaminated prior to use. Volatile samples will be collected first, followed by metals and, finally, other inorganics.

2.2.1 Equipment Decontamination

All equipment used for the collection of groundwater samples will be decontaminated prior to use at each well location unless the equipment is dedicated to a specific well. An appropriate decontamination procedure will be sufficient to avoid the introduction of any contaminant into a well and to not allow any contaminant to be transported between wells that will create false sample results or otherwise harm the environment.

2.2.2 Water Level Measurements

Prior to groundwater purging and sampling, water level measurements will be taken at each well location utilizing a portable water level indicator, fiberglass tape, or other suitable measuring device. The measuring device used will be capable of measuring to the nearest 0.01 foot. Water level measurements will be collected over a period of time short enough to avoid temporal variations in water levels. All measurements will be taken from the surveyed top of the well casing.

Sampling shall proceed from the well with the highest water level elevation to those with successively lower elevations unless contamination is known to be present, in which

case wells not likely to be contaminated shall be sampled prior to those that are known to be contaminated.

2.2.3 Purging/Bailing

Prior to sampling at each well location, water will be evacuated until a minimum of three well volumes has been purged, until the well has been pumped or bailed dry, or until an appropriate amount of water has been purged to achieve the collection of a representative sample. Groundwater will be considered representative once pH, specific conductance, turbidity, and temperature have stabilized. This will ensure that samples are drawn from the water-bearing unit and not from stagnant water left in the well screen between sampling events. If the well contains less than three well volumes, the well will be pumped or bailed dry, allowed to recover and immediately sampled. If sufficient water is available for a full set of samples within 7 days of purging, a full set of samples will be collected. If after 7 days a well has not recovered sufficiently for a full set of samples, a partial set of samples will be collected in an order dictated by data needs. If sufficient water is not available for even a partial set of samples/any sample within 7 days of purging, the well will be considered dry and will not be sampled during that event.

Wells are completely purged and allowed to recover prior to sample collection. If, after purging, the resulting recharged water level is below the weathered and unweathered contact, that water is nonetheless recently recharged water from the weathered Taylor groundwater unit. The weathered and unweathered interface will be used in potentiometric maps of ground water monitoring events for monitoring reports when the actual groundwater measurement is below that elevation.

Purged groundwater (and excess sample water) may be discharged to the ground surface away from the wellhead area, but only after analytical results for samples of that groundwater have been received, and only if the results demonstrate that it is not contaminated. Groundwater is considered contaminated if the concentration of any constituent of concern is greater than the background concentration. If analyses indicate the groundwater is contaminated, then the purge water (and any excess sample water) must be managed as contaminated water, and not discharged.

Low-flow purging and sampling may be conducted at the site contingent upon a successful demonstration to determine the viability of this technique for all wells using the low-flow techniques. However, until a successful demonstration is approved by the TCEQ, traditional purging and sampling methods (i.e., minimum purge of three well volumes) will be used at all wells.

2.3 Sample Preservation and Filtering

The appropriate sample container and preservative requirement for each analyte is listed on Table 1. The laboratory or sampling personnel for each sampling event may supply pre-labeled containers. The appropriate preservatives will be added to each sample container based on the required analytical method. Samples shall not be filtered prior to laboratory analysis.

2.4 Sample Shipment

After collection and sample preservation, the sample bottles will be wiped clean, labeled and placed into an insulated, plastic-shelled cooler or other suitable shipping container with frozen ice packs or ice. The temperature of the samples will be recorded when the cooler arrives at the analytical laboratory to assure that the appropriate sample temperature was maintained during shipment. All samples included in the cooler will be packed in such a manner to minimize the potential for container breakage. Volatile Organic Analysis (VOA) vials and toxicology (TOX) bottles will not be placed directly on the ice packs (or ice). A Field Information Form (Figure 2-1) and Chain of Custody Form (Figure 2-2) will be sealed in a water resistant bag and placed with the appropriate sample bottle set.

2.4.1 Chain of Custody

Appropriate Chain of Custody procedures for samples will be implemented to ensure sample integrity and to provide technically and legally defensible groundwater quality data. At the time each sample is collected, Chain-of-Custody (Figure 2-2) and Field Information Forms (Figure 2-1) will be completed and placed in the cooler. The Field Information form will include general sampling event information including location, time, weather conditions, sampler identification, well integrity, any numerical field data values, and well purging procedures. The cooler will then be sealed with a tamper-proof lock and the custody seal provided with the cooler.

Upon arrival of the cooler at the laboratory, the cooler will be opened and the Chain of Custody forms will be signed and time/dated by the person taking custody of the cooler. The Bill of Lading or receipt for cooler shipment will be attached to the Chain of Custody form upon arrival at the analytical laboratory.

3 GROUNDWATER ANALYSIS PROCEDURES

3.1 Analytical Methods/Procedures

Table 2 presents the methodologies used by WMTX's designated laboratory for each parameter or group of parameters. All methods are USEPA approved.

3.2 Quality Assurance/Quality Control

Skyline Landfill has historically utilized a NELAC (National Environmental Laboratory Accreditation Council) certified laboratory for analysis of groundwater samples and will continue to use a NELAC certified laboratory for future groundwater analyses. Laboratory data analyses and/or a Laboratory Review Checklist will be performed and the facility will submit laboratory data and analysis prepared by a TCEQ accredited environmental testing laboratory, and in accordance with acceptable accreditation standards (e.g., NELAC). NELAC standards require that laboratories have an established quality system that includes a comprehensive laboratory quality manual (LQM) and an authorized quality assurance officer. A copy of the LQM will be maintained in the Skyline Landfill Site Operating Records (SOR) for use in data evaluation.

The laboratory calibrates equipment and instrumentation according to the laboratory's LQM and referenced methodologies. Quality control including matrix spikes, matrix spike duplicates or sample duplicates, laboratory control samples, method blanks, and surrogates are analyzed along with field groundwater samples and field QC samples also in accordance with LQM and method requirements. The laboratory evaluates and reports this information in a report with laboratory case narrative (LCN), with qualifiers and narrative detail where appropriate such that Skyline Landfill may ensure that all sample collection, preparation and analyses, and data management activities have been conducted. The laboratory report (including the LCN) will report the number of samples, sampling parameters, and sample matrix, the name of the laboratory (including subcontract labs) involved in the analysis, an explanation of each failed precision and accuracy measurement determined to be outside the laboratory and/or method control limits and whether such a quality control excursion represents a positive or negative bias and the limitations these excursions have on data quality. Additionally, exceedance of sample holding times and identification of matrix interferences shall be identified in the LCN. Any dilutions implemented due to sample matrix interference will be done to the smallest dilution possible to bring the sample into control for analysis.

In addition to the exceptions listed above, the LCN report for all problems and anomalies observed will be included in the laboratory report for each sampling event. The LCN will report, at a minimum, the following information:

1. The exact number of samples, testing parameters and sample matrix.
2. The name of the laboratory involved in the analysis. If more than one laboratory is used, all laboratories shall be identified in the case narrative.
3. The test objective regarding samples.
4. Explanation of each failed precision and accuracy measurement determined to be outside of the laboratory and/or method control limits.
5. Explanation if the effect of the failed precision and accuracy measurements on the results induces a positive or negative bias.
6. Identification and explanation of problems associated with the sample results, along with the limitations these problems have on data usability.
7. A statement on the estimated uncertainty of analytical results of the samples when appropriate and/or when requested.
8. A statement of compliance and/or noncompliance with the requirements and specifications. Exceedance of holding times and identification of matrix interferences must be identified. Dilutions shall be identified and if dilutions are necessary, they must be done to the smallest dilution possible to effectively minimize matrix interferences and bring the sample into control for analysis.
9. Identification of any and all applicable quality assurance and quality control (QA/QC) samples that will require special attention by the reviewer.
10. A statement on the quality control of the analytical method of the permit and the analytical recoveries information shall be provided when appropriate and/or when requested.

The analytical laboratory report for each sampling event will document the results and methods for each sample and analyte along with the quantification limit. The report will also include a copy of the chain-of-custody and an understandable correlation between the chain-of-custody and the sample results reported to the TCEQ. The analytical laboratory report will be submitted either electronically or in hard copy upon TCEQ request.

The Skyline Landfill shall ensure that a data reviewer consider the project data quality objectives as appropriate to determine if the results meet the project needs with respect to completeness, representativeness, and accuracy. Prior to submittal of the data to the Commission all analytical data will be examined to ensure that the data quality objectives are considered and met and that the results representing the samples are accurate and complete. The data will be reviewed, including the laboratory quality control results, the relative percent difference (RPD) of the monitor well results and its duplicate analysis (DUP) as a measure of accuracy. The data review will include a statement assessing data usability by a certified groundwater scientist with respect to the project data quality

objectives (primarily a statistical evaluation of the groundwater analytical data) and, when necessary, provide comment to further explain or supplement the quality control data on the laboratory report. If the facility determines that the analytical data may be utilized, any and all problems and corrective action that the laboratory identified during the analysis will be included in the report submitted to the TCEQ.

A record of laboratory sample receipt, storage and analysis procedures will be kept for each sample received. A summary of this record will be part of the laboratory analysis report. A copy of the NELAC Certified LQM is maintained as part of the facility's SOR. If at any time the site changes analytical laboratories, the new laboratory's LQM will be submitted by the laboratory and the site SOR updated.

Although the QA/QC procedures for use at this facility apply predominantly to groundwater analytical data, it is possible that soil sample analytical results may be reported in the future. If the data is from soils and/or sediment samples, it will be reported on a dry weight basis with the percent solids and the percent moisture reported so that any back calculations of the wet analysis may be performed.

3.2.1 Field Sampling QA/QC

Field and Trip Blanks. If volatile organic compounds (VOCs) are collected during the sampling event, additional QA/QC samples will be collected. A trip and field blank will be utilized during each round of sampling at the site. The trip blank, containing laboratory-grade distilled water or deionized water, will remain packaged and sent from and to the laboratory in the same manner as the site environmental samples. The trip blank will be provided by the analytical laboratory supplying the sample bottles and shipping containers and will remain unopened until analysis. Trip blanks will be analyzed for VOCs only. The field blank will be prepared in the field by pouring the supplied laboratory-grade distilled water or deionized water into one of the clean sample containers opened in the field. The field blank will then be sealed and shipped in the same manner as the environmental samples and typically analyzed for the same parameters.

If non-dedicated sampling equipment is used, an equipment blank will be collected by pouring supplied laboratory-grade distilled water or deionized water through the sampling device after sampling and decontamination into a clean, laboratory-provided sample container opened in the field. The equipment blank will then be sealed, shipped, and analyzed for the same parameters as the groundwater sample.

A field duplicate sample will be obtained to verify precision and accuracy of the laboratory during each routine sampling event. The duplicate sample is collected and analyzed for the same parameters and in the same manner as an environmental sample. Typically, a field duplicate sample is collected from a downgradient well.

3.2.2 Laboratory QA/QC

Analytical Blanks and Spikes. The selected laboratory will use method quality control procedures that are equivalent to those described in SW-846. Duplicate samples, method blanks, instrument/reagent blanks, matrix spikes, blank/water reagent spikes, and surrogate spikes are typical quality control checks performed throughout the

analytical laboratory. With the exception of instrument/reagent blanks and surrogate spikes, these checks are performed at a frequency of 5% or 10% (i.e., 1 in 20 samples, 1 in 10 samples). Instrument/reagent blanks and surrogate spikes are performed on a daily or per sample (where required by method) frequency. Each of the applied QC checks will be compared against the acceptance criteria for each QC check to ensure that analytical quality is maintained.

The method blank is a blank solution, which is treated as a sample for the parameter being measured, including all pretreatment/preparation procedures. The blank is then analyzed in the same manner as the environmental samples to assess analytical accuracy and the potential for sample contamination. Instrument/reagent blanks are used on a daily basis (where used) to detect contamination or interferences related to the sample treatment solvents and chemicals and ensure that none of these systematically bias sample results.

Matrix spikes are environmental samples fortified with known concentrations of analytes expected to be in the sample. The percent recovery of any spiked analyte is taken as a measure of the bias of the analytical method caused by the sample matrix. Blank/reagent water spikes are blank solutions fortified with known concentrations of analytes expected to be in environmental samples. These spikes may (reagent water spikes) or may not (blank spike) be taken through the full analytical procedure prior to analysis. The percent recovery of any spiked analyte is taken as a measure of control on the analytical procedure. A surrogate spike is performed on every sample and QC sample where the analytical method requires it. Adding a known compound to the sample, which is not expected to be in the environmental sample, makes a surrogate spike. VOC analysis uses this type of spike to measure method extraction efficiency.

Instrument Calibration. Instruments are calibrated using calibration standards and method specified calibration criteria. A solution containing various compounds of known concentrations is diluted and analyzed to establish calibration curves. Calibration is performed daily or per the method to monitor the accuracy and precision of the instrument. Instrument calibration is verified by analyzing a solution containing a known concentration of the pure compound(s) of interest and comparing it against the calibration curve. The standard compound is taken from the same stock as that used to develop the calibration curve. Calibration verification is done at a 5% frequency (or as the method requires) to check the stability of the calibration curve as well as the accuracy and precision of the system or analyst.

All standards and reagents used in laboratory procedures will be inventoried, labeled, and logged in accordance with documented procedures. All stock standards are purchased as certified primary solutions from reputable, commercial lab suppliers, and prepared from neat chemicals with certified purity. Stock standards are combined and/or diluted into secondary dilution standards, which are then diluted into working standards.

Instrument Maintenance. Routine maintenance is performed and documented for all major instruments. Maintenance schedules to be followed for the major instruments are summarized in the analytical laboratory SOP.

Method Detection Limits (MDLs). The analytical laboratory uses the procedures described in Appendix B to 40 CFR 136 to determine MDLs. Each year, method specific

upper and lower precision and accuracy limits are developed from historical matrix spike and duplicate data. MDLs will be checked on an annual basis to determine if a statistical difference exists between the former year's MDL and the yearly update. An appropriate outlier test will be used to determine if a statistical difference exists between the two years' mean values.

Practical Quantitation Limits (PQLs). Practical quantitation limit (PQL) is defined as the lowest concentration reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions, and is considered equivalent to the limit of quantitation (LOQ) described in the most recent NELAC Standard (www.nemc.us/epa12/2003standards.html). The PQL is method, instrument, and analyte specific and may be updated as more data becomes available.

To help ensure these practices will be observed the following information is provided:

- a. The PQL will be below the groundwater protection standard established for each analyte in accordance with 30 TAC §330.409(h) unless approved otherwise by the TCEQ.
- b. The precision and accuracy of the PQL initially will be determined from the PQLs reported over the course of a minimum of eight groundwater monitoring events. The results obtained from these events will be used to demonstrate that the PQLs meet the specified precision and accuracy limits. The PQL may be updated as more data becomes available.

Constituents / Chemicals of Concern	Precision (percent RSD)	Accuracy (percent recovery)
Metals	10	70-130
Volatiles	20	50-150
Semi-Volatiles	30	50-150

- c. The PQL will be supported by analysis of a PQL check sample, consisting of a laboratory reagent grade sample matrix spiked with constituents/chemicals of concern at concentrations equal to or less than the PQL. At a minimum, a PQL check sample will be performed quarterly during the calendar year to demonstrate that the PQL continues to meet the specified limits for precision and accuracy.
- d. Analytical results for data below the limit of detection ("non-detect" results) must be reported as less than the established PQL limit that meets those precision and accuracy requirements.

If a PQL cannot be established according to the specified precision and accuracy limits, the owner or operator will ensure that the laboratory provides sufficient documentation to justify the alternate precision and accuracy limits. This information will be reported to the TCEQ by the owner or operator and will be evaluated on a case-by-case basis.

4 ESTABLISHMENT OF BACKGROUND GROUNDWATER QUALITY

Background groundwater quality will be established for all new and replacement upgradient and downgradient wells in the groundwater monitoring system.

Constituents to be monitored for the establishment of background are listed in Table 3. This background constituent list, as required by §330.419, consists of constituents listed in 40 CFR Part 258, Appendix I.

In order to establish background concentrations for each constituent listed in Table 3, eight (8) statistically independent samples will be collected from each new or replacement monitoring well (upgradient and downgradient) in the groundwater monitoring system. Background monitoring samples will be collected and analyzed on a quarterly basis for two years. The statistical independence of samples will be achieved through the assignment of a proper sampling interval. Pursuant to the TCEQ guidance document, the appropriate time interval between sampling events can be estimated through the use of site-specific groundwater velocities to determine what time "fresh" formation groundwater will be found in the monitoring well after initial sampling.

For slow recovery wells that have not completed background collection within two years (due to lack of sufficient groundwater for sampling), the wells will then be sampled, or attempted to be sampled, for background during the subsequent regularly scheduled semi-annual events.

Based on existing data from piezometers and monitoring wells previously installed at the site, the groundwater velocity has been estimated to be approximately 2.0×10^{-4} ft/yr. This extremely slow rate is the result of water moving through the cracks and fissures in the clays at the site. Typically, the piezometers were installed dry and considerable time elapsed (several months) before water accumulated in the piezometer casings. Therefore, the procedure for collecting the independent samples will be to collect samples during each calendar quarter until a minimum of eight samples have been obtained. This method of sample collection will provide data to assess seasonal variations in groundwater quality. If additional samples are needed to adequately perform the statistical analysis procedure (discussed below), they will be collected no more frequently than quarterly.

Background constituent concentrations for each parameter listed in Table 3 will be derived from the analytical results. For the constituents that are in control, the background data set will be updated to control or correct for seasonal and spatial variability as well as temporal correlation in the data (30 TAC §330.405(f)(6)) no more frequently than every two (2) years if approved by the TCEQ.

Following each background monitoring event, the analytical results will be reviewed and compared with the results of other site wells to determine whether there is any indication of facility impact.

Evaluation methods of analytical results, in particular wells that have been dry and not able to complete background within two years, may include anion-cation balance techniques or Piper plots and Stiff diagrams to compare the groundwater geochemical signature to previous events and comparison to results from upgradient wells or to other wells on the site unaffected by waste management activities or other sources of contamination. Trends may be evaluated using graphing software, statistical software or other appropriate methods. Should the background concentrations of a constituent with an MCL exhibit results that are naturally above the MCL, a risk based concentration will be used for evaluation of that constituent and described in the annual report.

On completion of background monitoring and during background updates, the facility will evaluate the background data to ensure that the data are representative of background groundwater constituent concentrations unaffected by waste disposal activities or other sources of contamination. The evaluation will be documented in a report and submitted to the TCEQ before the next subsequent groundwater monitoring event following the updated (or initial) background period.

4.1 Statistical Methodology

The statistical approach presented in this GWSAP was developed through the interaction of a qualified statistician (Dr. Robert Gibbons, professor at the University of Illinois, Chicago) and the Waste Management Corporate Director of Hydrogeology. The use of intra-well statistical comparisons for evaluation of groundwater chemistry data is supported by the USEPA and is in widespread use.

4.1.1 Volatile Organic Compounds

It is well known that when a landfill facility actually produces a release to groundwater, multiple constituents contained in the leachate are associated with the source fluids and are subsequently detected by the groundwater monitoring program. A single constituent at very low concentration (i.e., below the PQL) typically is not the signature that is produced from an actual release from a municipal solid waste landfill (MSWLF) unit.

VOC detections may be indicators of a release from a MSWLF unit. Because these compounds are not routinely detected in background groundwater samples, establishing monitor well-specific limits for VOCs is generally not an option. Therefore, detection decision rules based on laboratory-specific PQLs will be used. Although this simple comparison to a fixed limit is not statistically based, a VOC detected and verified at a concentration above the PQL is considered statistically significant.

4.1.2 Inorganic Parameters

The statistical analysis methodology for inorganic parameters with a detection frequency greater than 25% will be based on a combined Shewhart-cumulative sum (CUSUM) control chart that is capable of detecting both sudden and gradual changes in groundwater chemistry (Gibbons, 1992; Gibbons, 1994). Combined Shewhart-CUSUM control charts will be constructed for each well and parameter monitored to provide a statistical/visual tool for detecting trends and abrupt changes in inorganic groundwater

chemistry. For inorganic parameters with a detection frequency less than or equal to 25%, calculation of non-parametric or Poisson prediction limits will be conducted. Some facilities may require alternate methods (such as normal prediction limits) based on the number of statistical comparisons required for the site and the alternatives allowed to manage the site-wide false positive and false negative rates.

The combined Shewhart-CUSUM procedure requires a minimum of eight (8) historical independent samples (i.e., background data) to provide a reliable estimate of the mean and standard deviation of each constituent in each well. The combined Shewhart-CUSUM control chart procedure assumes that the data are independent and normally distributed with a fixed mean and constant variance. Shewhart-CUSUM control charts are not recommended for data sets of less than eight (8) independent samples except as time-series plots and evaluation of trends. Once background data are obtained from each detection monitoring well, subsequent sample results are statistically compared to the estimated control limit both in terms of their absolute magnitude and cumulative sum. If necessary, the statistical method will include procedures to control or correct for seasonal and spatial variability as well as temporal correlation in the data.

If all inorganic parameter data collected during the background period (minimum of eight [8] independent events) are not detected in concentrations greater than the respective PQLs, the PQL will be used as the non-parametric prediction limit. The collection of 13 samples in background for this detection frequency provides a 99% confidence non-parametric prediction limit with one resample. Note that 99% confidence is equivalent to a 1% false positive rate and pertains to a single comparison (that is, well and constituent) and not the site-wide error rate (all wells and constituents), which is set to 5%. If the detection frequency is greater than zero but less than 25%, the non-parametric prediction limit is the largest of the 13 background samples (for 1 verification resample) or 8 background samples if a "pass 1 of 2" verification resampling program is implemented.

5 DETECTION MONITORING

The Detection Monitoring Program is summarized in the following subsections.

5.1 Groundwater Detection Monitoring Parameters

In accordance with §330.419, parameters that will be monitored during detection monitoring are found in 40 CFR Part 258, Appendix I. The site-specific detection monitoring constituent list has been included as Table 4.

In accordance with 30 TAC §330.419(b), those constituents “not reasonably expected to be in or derived from the waste contained in the unit” may be deleted from the detection monitoring list with approval from the executive director. At a future date, when leachate data are further evaluated, the detection monitoring parameter list may be revised to exclude compounds not found in the site leachate in sufficient quantity for statistical contrast.

In addition to the parameter list required for statistical analysis, WMTX may continue to monitor the water quality parameters listed in Table 5 but the results will not be included in statistical analyses.

5.2 Groundwater Detection Monitoring Frequency

After the establishment of background groundwater quality (refer to Section 4), the detection monitoring frequency for all constituents found in 40 CFR Part 258, Appendix I, identified in Table 4 will be semi-annual during the active life, closure, and post-closure care periods of the site, unless an alternate frequency is approved by the TCEQ.

5.3 Reporting Requirements

Within 60 days of each groundwater sampling event, a determination will be made whether an apparent or verified exceedance of a statistically calculated background limit has occurred. “Apparent SSI” and “apparent exceedance” correspond to the statistically significant increase (SSI) referred to in the first sentence of 30 TAC §330.407(b), and are based on the statistical evaluation of an initial sample during a detection monitoring event that has not yet been confirmed by verification resampling. An SSI over background of any tested constituent at any monitoring well will be verified in accordance with verification resampling portion of the statistical methodology described in Section 4.1. If an apparent SSI is observed, the executive director and any local pollution agency with jurisdiction that has requested notification will be notified in writing within 14 days of the apparent SSI determination. If an apparent SSI of any tested constituent at any monitoring well has

occurred, the following actions will be initiated, as appropriate for each separate apparent SSI incident, in accordance with 30 TAC §330.407(b).

(1) The facility shall immediately place a notice in the SOR describing the release and establish an assessment monitoring program meeting the requirements of §330.409 within 90 days of the date of the notice to the TCEQ, except as provided in (2) and (3) below:

(2) The facility shall submit results of resampling as appropriate for the statistical method within 60 days of determining the apparent SSI. The resample data may be used to statistically confirm or disprove the apparent SSI.

(3) If a SSI over background of any tested constituent at any monitoring well has occurred and the owner or operator has reasonable cause to think that a source other than a landfill unit caused the contamination or that the SSI resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality, then the owner may submit a report documenting the error or alternate source in accordance with §330.407(b)(3), as follows:

(A) Notify, in writing, the executive director and any local pollution agency with jurisdiction that has requested to be notified within 14 days of determining the SSI that the owner will make a demonstration of alternate source.

(B) Submit the demonstration, prepared and certified by a qualified groundwater scientist, within 90 days of SSI determination.

(C) Do not filter the sample for constituents addressed by the demonstration prior to laboratory analysis.

(D) Continue detection monitoring.

If the owner/operator does not make a demonstration satisfactory to the executive director within 90 days of the date of notice, as evidenced by a letter of denial from the TCEQ, the owner/operator shall initiate an assessment monitoring program at the well(s) exhibiting the SSI and at the immediately adjacent wells on each side of the well(s), unless an alternative subset of wells is designated by the TCEQ or the executive director. If the facility receives a response that a demonstration is not satisfactory after the deadline for initiating assessment monitoring, then assessment monitoring will be initiated at the next regularly scheduled semi-annual monitoring event following receipt of the response.

5.3.1 Assessment Monitoring and Corrective Action

Groundwater sampling for assessment monitoring and corrective action will be done in accordance with 30 TAC 330 Subchapter J rules.

Assessment monitoring is required whenever the owner or operator determines there has been a statistically significant increase over background for one or more of the constituents listed in 30 TAC §330.419.

Within 90 days of determining that an SSI has occurred, the owner or operator must sample and analyze each affected well and the two wells adjacent to each affected well for the full set up constituents listed in Appendix II to 40 CFR Pa 258. After sampling for the full set of Appendix II constituents, the executive director may delete any of Appendix II constituents.

If any new constituents are detected in the well as a result of the Appendix II analysis, a background level must be established for the additional constituents. This background level consists of four statistically independent samples from each background well.

If the concentration of any 40 CFR Part 258, Appendix II constituent is above its respective background limit, but below its GWPS, the facility must continue assessment monitoring. If the concentrations of all 40 CFR Part 258, Appendix II constituents are shown to be at or below background values for two (2) consecutive sampling events, the owner or operator may return the well to detection monitoring status, after notifying the executive director and receiving approval.

If any 40 CFR Part 258, Appendix II constituents were detected at statistically significant levels above the groundwater protection standard, the facility must notify the executive director and appropriate local government officials within 7 days of the determination.

Groundwater protection standards will be established for Appendix II constituents in the point of compliance monitoring wells. Groundwater protection standards will be provided for constituents for which a maximum (MCL) has been promulgated under 40 CFR Part 141, Safe Drinking Water Act Maximum Contaminant Level (MCL). Groundwater protection standards will be provided for constituents for which no MCL is promulgated. Groundwater protection standards will be provided for background constituents that are higher than MCL or health-based level. The Executive Director may establish alternative groundwater protection standards in accordance with 30 TAC §330.409(i).

The owner or operator shall also install any additional monitoring wells necessary to characterize the nature and extent of the release, notify in writing all persons that own or occupy the land that directly overlies any part of the plume of contamination, and initiate an assessment of corrective measures within 90 days of the notice to the executive director.

The owner or operator shall also install any additional monitoring wells necessary to characterize the nature and extent of the release and install at least one additional monitoring well between the monitoring well with the statistically significant level and the next adjacent wells along the point of compliance before the next sampling event.

Within 90 days of reporting Appendix II results, and semiannually thereafter, all wells will be resampled for Appendix I and any new constituent detected from Appendix II. The results of resampling will be submitted within 60 days after each sampling event.

An annual assessment monitoring report will be submitted within 60 days of 2nd semiannual sampling event that includes the following information;

1. A Statement of any statistically significant exceedances of groundwater protection standards in accordance with 30 TAC §330.409(i).

2. Groundwater monitoring results, summary of background, statistical calculations, graphs, and drawings.
3. Groundwater flow rate and direction based on data from sampling events and supporting documentation.
4. A piezometric water level contour map and supporting documentation.
5. Recommendations for any changes.
6. Any other information required by the Executive Director.

If the owner or operator determines that the assessment monitoring program no longer satisfies the requirements of this section, the owner or operator must, within 90 days, submit an application for a permit amendment or modification to make any appropriate changes to the program.

5.3.2 Annual Report

Annually, within 90 days after the facility's last groundwater monitoring event in a calendar year, a report will be submitted that includes the following information gathered since the previous annual report:

(1) A statement regarding SSI(s) in any well and the status of same.

(2) The results of all groundwater monitoring, testing, and analytical work obtained or prepared under the requirements of the permit in hard copy format on form TCEQ 0312 – Groundwater Sampling Report, and any other format requested by the executive director (e.g., electronic files). The report will include a copy of the LCN, with either a laboratory checklist or a copy of the laboratory QA/QC data. The analytical data may be submitted in either hard copy or electronic format. A summary of background groundwater quality values, groundwater monitoring analyses, and statistical calculations, as well as graphs and drawings, will also be included.

(3) The facility will explain any problems or observed anomalies associated with the analysis by attaching additional information to the checklist or LCN.

(4) Any information required in the LCN that cannot be completed by the laboratory will be completed by the operator.

(5) Groundwater flow rate and direction in the uppermost aquifer, using the previous year's data collected, including documentation used to determine the flow rate and direction.

(6) Contour map(s) of piezometric water levels in the uppermost aquifer based on concurrent measurements at all monitoring wells, including supporting data.

(7) Any recommendations for changes to the groundwater monitoring program.

(8) Any other items requested by the executive director.

Figures

Figure 2-1 – Field information Form*

Figure 2-2 – Chain of Custody*

Figure 2-3 – Laboratory Review Checklist*

* For informational purposes only. Actual may vary.

Figure 2-1 - Field Information Form

(For informational purposes only. Actual may vary.)

FIELD INFORMATION FORM



Site Name: _____
 Site No.: _____
 Sample Point: _____
 Sample ID: _____

This Waste Management Field Information Form is Required
 This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only: Lab ID: _____

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLS PURGED

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment ... Dedicated: Y or N

Purging Device: A-Submersible Pump D-Bailer
 B-Peristaltic Pump E-Piston Pump
 C-QED Bladder Pump F-Dipper/Bottle
 X-Other: _____

Filter Device: Y or N, 0.45 μ or _____ μ (circle or fill in)
 Filter Type: _____
 A-In-line Disposable C-Vacuum
 B-Pressure X-Other: _____

Sample Tube Type: _____
 A-Teflon C-PVC X-Other: _____
 B-Stainless Steel D-Polypropylene

WELL DATA

Well Elevation (at TOC) _____ (ft-msl) Depth to Water (DTW) (from TOC) _____ (ft) Groundwater Elevation (site datum, from TOC) _____ (ft-msl)

Total Well Depth (from TOC) _____ (ft) Stick Up (from ground elevation) _____ (ft) Casing ID _____ (in) Casing Material _____

Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

STABILIZATION DATA (Optional)

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (μmhos/cm @ 25°C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
	1 st							
	2 nd							
	3 rd							
	4 th							

Suggested range for 3 consec. readings or note Permit/State requirements:
 pH: ± 0.2 Conductance: ± 3% Temp: -- Turbidity: -- D.O.: ± 10% eH/ORP: ± 25 mV DTW: Stabilize

Stabilization Data Fields are Optional (i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (μmhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: Units

Final Field Readings are required (i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site).

Sample Appearance: _____ Odor: _____ Color: _____ Other: _____
 Weather Conditions (required daily, or as conditions change): _____ Direction/Speed: _____ Outlook: _____ Precipitation: Y or N

Specific Comments (including purge/well volume calculations if required): _____

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

 Date Name Signature Company

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy

Figure 2-2 - Chain of Custody

(For informational purposes only. Actual may vary.)

Figure 2-3 - Laboratory Review Checklist

(For informational purposes only. Actual may vary.)

Laboratory Data Package Cover Page

This data package consists of:

- This signature page, the laboratory review checklist, and the following reportable data:
- R1 Field chain-of-custody documentation;
- R2 Sample identification cross-reference;
- R3 Test reports (analytical data sheets) for each environmental sample that includes:
 - a) Items specified in NELAC Chapter 5 for reporting results, e.g., Section 5.5.10 in 2003 NELAC Standard
 - b) dilution factors,
 - c) preparation methods,
 - d) cleanup methods, and
 - e) if required for the project, tentatively identified compounds (TICs).
- R4 Surrogate recovery data including:
 - a) Calculated recovery (%R), and
 - b) The laboratory's surrogate QC limits.
- R5 Test reports/summary forms for blank samples;
- R6 Test reports/summary forms for laboratory control samples (LCSs) including:
 - a) LCS spiking amounts,
 - b) Calculated %R for each analyte, and
 - c) The laboratory's LCS QC limits.
- R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
 - a) Samples associated with the MS/MSD clearly identified,
 - b) MS/MSD spiking amounts,
 - c) Concentration of each MS/MSD analyte measured in the parent and spiked samples,
 - d) Calculated %Rs and relative percent differences (RPDs), and
 - e) The laboratory's MS/MSD QC limits
- R8 Laboratory analytical duplicate (if applicable) recovery and precision:
 - a) the amount of analyte measured in the duplicate,
 - b) the calculated RPD, and
 - c) the laboratory's QC limits for analytical duplicates.
- R9 List of method quantitation limits (MQLs) for each analyte for each method and matrix;
- R10 Other problems or anomalies.
- The Exception Report for every "No" or "Not Reviewed (NR)" item in laboratory review checklist.

Release Statement: I am responsible for the release of this laboratory data package. This data package has been reviewed by the laboratory and is complete and technically compliant with the requirements of the methods used, except where noted by the laboratory in the attached exception reports. By my signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory in the Laboratory Review Checklist, and no information or data have been knowingly withheld that would affect the quality of the data.

Check, if applicable: [] This laboratory is an in-house laboratory controlled by the person responding to rule. The official signing the cover page of the rule-required report (for example, the APAR) in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is true.

Name (Printed)

Signature

Official Title (printed)

Date

Laboratory Review Checklist: Supporting Data

Laboratory Review Checklist: Reportable Data							
Laboratory Name:			LRC Date:				
Project Name:			Laboratory Job Number:				
Reviewer Name:			Prep Batch Number(s):				
# ¹	A ²	Description	Yes	No	NA ³	NR ⁴	ER# ⁵
		Chain-of-custody (C-O-C)					
R1	OI	Did samples meet the laboratory's standard conditions of sample acceptability upon receipt? Were all departures from standard conditions described in an exception report?					
R2	OI	Sample and quality control (QC) identification					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers? Are all laboratory ID numbers cross-referenced to the corresponding QC data?					
R3	OI	Test reports					
		Were all samples prepared and analyzed within holding times? Other than those results < MQL, were all other raw values bracketed by calibration standards? Were calculations checked by a peer or supervisor? Were all analyte identifications checked by a peer or supervisor? Were sample quantitation limits reported for all analytes not detected? Were all results for soil and sediment samples reported on a dry weight basis? Were % moisture (or solids) reported for all soil and sediment samples? If required for the project, TICs reported?					
R4	O	Surrogate recovery data					
		Were surrogates added prior to extraction? Were surrogate percent recoveries in all samples within the laboratory QC limits?					
R5	OI	Test reports/summary forms for blank samples					
		Were appropriate type(s) of blanks analyzed? Were blanks analyzed at the appropriate frequency? Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures? Were blank concentrations < MQL?					
R6	OI	Laboratory control samples (LCS):					
		Were all COCs included in the LCS? Was each LCS taken through the entire analytical procedure, including prep and cleanup steps? Were LCSs analyzed at the required frequency? Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits? Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SQLs? Was the LCSD RPD within QC limits?					
R7	OI	Matrix spike (MS) and matrix spike duplicate (MSD) data					
		Were the project/method specified analytes included in the MS and MSD? Were MS/MSD analyzed at the appropriate frequency? Were MS (and MSD, if applicable) %Rs within the laboratory QC limits? Were MS/MSD RPDs within laboratory QC limits?					
R8	OI	Analytical duplicate data					
		Were appropriate analytical duplicates analyzed for each matrix? Were analytical duplicates analyzed at the appropriate frequency? Were RPDs or relative standard deviations within the laboratory QC limits?					
R9	OI	Method quantitation limits (MQLs):					
		Are the MQLs for each method analyte included in the laboratory data package? Do the MQLs correspond to the concentration of the lowest non-zero calibration standard? Are unadjusted MQLs included in the laboratory data package?					
R10	OI	Other problems/anomalies					
		Are all known problems/anomalies/special conditions noted in this LRC and ER? Were all necessary corrective actions performed for the reported data? Was applicable and available technology used to lower the SQL and minimize the matrix interference effects on the sample results?					

Laboratory Name:			LRC Date:				
Project Name:			Laboratory Job Number:				
Reviewer Name:			Prep Batch Number(s):				
#1	A ²	Description	Yes	No	NA ³	NR ⁴	ER# ⁵
S1	OI	Initial calibration (ICAL)					
		Were response factors and/or relative response factors for each analyte within QC limits?					
		Were percent RSDs or correlation coefficient criteria met?					
		Was the number of standards recommended in the method used for all analytes?					
		Were all points generated between the lowest and highest standard used to calculate the curve?					
		Are ICAL data available for all instruments used?					
		Has the initial calibration curve been verified using an appropriate second source standard?					
S2	OI	Initial and continuing calibration verification (ICCV and CCV) and CCB⁶ :					
		Was the CCV analyzed at the method-required frequency?					
		Were percent differences for each analyte within the method-required QC limits?					
		Was the ICAL curve verified for each analyte?					
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?					
S3	O	Mass spectral tuning:					
		Was the appropriate compound for the method used for tuning?					
		Were ion abundance data within the method-required QC limits?					
S4	O	Internal standards (IS):					
		Were IS area counts and retention times within the method-required QC limits?					
S5	OI	Raw data (NELAC Section 1 Appendix A Glossary, and Section 5)					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?					
		Were data associated with manual integrations flagged on the raw data?					
S6	O	Dual column confirmation					
		Did dual column confirmation results meet the method-required QC?					
S7	O	Tentatively identified compounds (TICs):					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?					
S8	I	Interference Check Sample (ICS) results:					
		Were percent recoveries within method QC limits?					
S9	I	Serial dilutions, post digestion spikes, and method of standard additions					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?					
S10	OI	Method detection limit (MDL) studies					
		Was a MDL study performed for each reported analyte?					
		Is the MDL either adjusted or supported by the analysis of DCSs?					
S11	OI	Proficiency test reports:					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?					
S12	OI	Standards documentation					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?					
S13	OI	Compound/analyte identification procedures					
		Are the procedures for compound/analyte identification documented?					
S14	OI	Demonstration of analyst competency (DOC)					
		Was DOC conducted consistent with NELAC Chapter 5C?					
		Is documentation of the analyst's competency up-to-date and on file?					
S15	OI	Verification/validation documentation for methods (NELAC Chapter 5)					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?					
S16	OI	Laboratory standard operating procedures (SOPs):					
		Are laboratory SOPs current and on file for each method performed?					

Laboratory Review Checklist: Exception Reports	
Laboratory Name:	LRC Date:
Project Name:	Laboratory Job Number:
Reviewer Name:	Prep Batch Number(s):
ER # ⁵	DESCRIPTION

1. Items identified by the letter "R" must be available as a hard copy or as a .pdf file. Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable).
3. NA = Not applicable.
4. NR = Not reviewed.
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).
6. CCB = Continuing Calibration Blank.

Tables

Table 1 – Sample Collection, Preservation, and Holding Times

Table 2 – Methodologies for Testing and Analysis

Table 3 – Background Groundwater Quality Parameter List

Table 4 – Detection Monitoring Parameter List

Table 5 – Water Quality Parameters

Table 1 - Sample Collection, Preservation, and Holding Times

<u>Parameter¹</u>	<u>Sample Collection² And Container</u>	<u>Sample^{3, 4} Preservation</u>	<u>Recommended⁵ Holding Time</u>
Acid Extractables	1000 ml Glass, only (Amber) w/Teflon liner	Cool, 4°C	Extract within 7 days; analyze within 40 days
Alkalinity	100 ml P, G	Cool, 4°C	14 days
Ammonia	125 ml P, G	Cool, 4°C H ₂ SO ₄ to pH<2	28 days
Base/Neutral Extractables (priority pollutants)	1000 ml Glass, only (Amber) w/Teflon liner	Cool, 4°C	Extract within 7 days; analyze within 40 days
Biochemical Oxygen Demand, 5 day (BOD ₅)	1000 ml P, G	Cool, 4°C	48 hours
Calcium	500 ml P	HNO ₃ to pH<2	6 months
Chemical Oxygen Demand (COD)	125 ml P, G	Cool, 4°C H ₂ SO ₄ to pH<2	28 days
Chloride	250 ml P, G	None required	28 days
Coliform, fecal and total	100 ml P, G sterilized	Cool, 4°C	24 hours
Cyanide	1000 ml P, G	Cool, 4°C NaOH to pH>12 0.6 g ascorbic acid ⁶	14 days ⁷
Fluoride	250 ml P	None required	28 days
Hardness	100 ml P, G	HNO ₃ to pH<2	6 months
<u>Metals</u> Chromium (hexavalent)	200 ml P, G	Cool, 4°C	24 hours
Mercury (dissolved)	1000 ml P, G	Filter on site HNO ₃ to pH<2	28 days
Mercury (total)	1000 ml P, G	HNO ₃ to pH<2	28 days

Table 1 - Sample Collection, Preservation, and Holding Times

<u>Parameter</u> ¹	<u>Sample Collection</u> ² <u>And Container</u>	<u>Sample</u> ^{3, 4} <u>Preservation</u>	<u>Recommended</u> ⁵ <u>Holding Time</u>
Other metals, (dissolved) (Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Nickel, Potassium, Selenium, Silver, Sodium, Thallium Vanadium, Zinc)	1000 ml P, G	Filter on site HNO ₃ to pH<2	6 months
Other metals, (total) (Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc)	1000 ml P, G	HNO ₃ to pH<2	6 months
Nitrate ⁷	125 ml P, G	Cool, 4°C	28 days
Nitrite	125 ml P, G	Cool, 4°C	48 hours
Oil and Grease	1000 ml, G only	Cool, 4°C H ₂ SO ₄ to pH<2	28 days
PCB (priority pollutant)	1000 ml, Glass only Amber w /Teflon liner	Cool, 4°C	Extract within 7 days; analyze within 40 days
<u>Pesticides</u> (Endrin, Lindane, Toxaphene, Methoxychlor)	1000 ml, Glass only Amber w /Teflon liner	Cool, 4°C pH 5 - 9	Extract within 7 days; analyze within 40 days
pH (field)	25 ml P, G	None required	Analyze immediately
Phenols	500 ml G only	Cool, 4°C H ₂ SO ₄ to pH<2	28 days

Table 1 - Sample Collection, Preservation, and Holding Times

<u>Parameter</u> ¹	<u>Sample Collection</u> ² <u>And Container</u>	<u>Sample</u> ^{3, 4} <u>Preservation</u>	<u>Recommended</u> ⁵ <u>Holding Time</u>
Phosphorous (total)	125 ml P, G	Cool 4°C H ₂ SO ₄ to pH<2	28 days
Semi-Volatile Organics	1000 ml, G	Cool, 4°C	7 days
Specific Conductance (field)	100 ml P, G	None required	Analyze immediately
Sulfate	50 ml P, G	Cool, 4°C	28 days
Temperature (field)	1000 ml P, G	None required	Analyze immediately
Total Dissolved Solids Residue on Evaporation (TDS/ROE) 180° C	1000 ml P	Cool, 4°C	7 days
Total Organic Carbon (TOC)	2-40 ml P	Cool, 4°C H ₂ SO ₄ to pH<2	28 days
Total Suspended Solids (TSS)	1000 ml P	Cool, 4°C	7 days
Volatile Organic Acids, priority pollutants	4-40 ml glass vial w/septum caps	Cool, 4°C HCl to pH<2	14 days
Volatile Organics	4-40 ml glass vial w/septum caps	Cool, 4°C HCl to pH<2	14 days

1. Table may include more parameters than required for groundwater sampling. A general discussion on sampling water and industrial wastewater may be found in ASTM, Part 31, pages 72-81 (1976) Method D-3370.
2. Plastic (P) or Glass (G). For metals, polyethylene with a polypropylene cap (no liner) is preferred.
3. Sample preservation should be performed immediately upon sample collection. For composite samples, each aliquot should be preserved at the time of collection. When use of an automated sampler makes it impossible to preserve each aliquot, then samples may be preserved by maintaining at 4 degrees C until compositing and sample splitting is completed.
4. When any sample is to be shipped by common carrier or sent through the United States mail, it must comply with the Department of Transportation Hazardous Materials Regulations (49 CFR Part 172). The person offering such material for transportation is responsible for ensuring such compliance. The Office of Hazardous Materials, Materials Transportation Bureau, Department of Transportation has determined that the Hazardous Materials Regulations do not apply to the following materials: hydrochloric acid (HCl) in water solutions at concentrations of 0.04% by weight or less (pH about 1.96 or greater); nitric acid (HNO₃) in water solutions at concentrations of 0.15% by weight or less (pH about 1.62 or greater); sulfuric acid (H₂SO₄) in water solutions at concentrations of 0.35% by weight or less (pH about 1.15 or greater); sodium hydroxide (NaOH) in water solutions at concentrations of 0.080% by weight or less (pH about 12.30 or less).
5. Samples should be analyzed as soon as possible after collection. The times listed are the maximum times that samples may be held before analysis and still considered valid. Samples may be held for longer periods only if the permittee, or monitoring laboratory, has data on file to show that the specific types of sample under study are stable for the longer time, and has received a variance from the Regional Administrator. Some samples may not be stable for the maximum time period given in the table. A permittee, or monitoring laboratory, is obligated to hold the sample for a shorter time if knowledge exists to show this is necessary to maintain sample stability.
6. Should only be used in the presence of residual chlorine.
7. Maximum holding time is 24 hours when sulfide is present. Optionally, all samples may be tested with lead acetate paper before the pH adjustment in order to determine if sulfide is present. If sulfide is present, it can be removed by the addition of cadmium nitrate powder until a negative spot test is obtained. The sample is filtered and then NaOH is added to pH 12.
8. Sample preservation, handling, and analysis will meet the specifications described by "Test Methods for Evaluating Solid Waste Physical/Chemical Methods, Third Edition (as revised)" (EPA Publication Number SW-846, 1986, December 1987, as revised) or an equivalent substitute.

Table 2 - Methodologies for Testing and Analysis*

<u>Parameter</u>	<u>Method Description</u>	<u>Method</u>
Acid Extractables (priority pollutants)	GC/MS	8270 (D)
Alkalinity	Colorimetric, Automated Methyl Orange	(A) 310.1
Ammonia	Colorimetric; Automated Phenate	(A) 350.1
Base/Neutral Extractables (priority pollutants)	GC/MS	8270 (D)
Biochemical Oxygen Demand, 5 day (BOD ₅)	BOD (5 day, 20°C)	(A) 405.1
Calcium	Atomic Emission Spectrometric, ICP	(A) 200.7/6010 (D)
Chemical Oxygen Demand (COD)	Colorimetric	(A) 410.4
Chloride	Colorimetric, Automated Ferricyanide	(A) 325.2/300.0 A
Coliform (fecal)	Delayed Incubation Procedure	(B) 909 C
Coliform (total)	Standard Membrane Filter Procedure	(B) 909 A
Cyanide (total)	Colorimetric, Automated UV	(A) 335.3/9012 (D)
Fluoride	Potentiometric, Ion Selective Electrode	(A) 340.2
Hardness	Calculation	(C) 2340 B

Table 2 - Methodologies for Testing and Analysis*

<u>Parameter</u>	<u>Method Description</u>	<u>Method</u>
<u>Metals, Dissolved</u>		
Arsenic	Atomic Absorption, furnace technique, ICP	(A) 206.2/6010 (D)
Barium	Atomic Emission Spectrometric, ICP	(A) 200.7/6010 (D)
Boron	Atomic Emission Spectrometric, ICP	(A) 200.7/6010 (D)
Cadmium	Atomic Emission Spectrometric, ICP	(A) 200.7/6010 (D)
Chromium	Atomic Emission Spectrometric, ICP	(A) 200.7/6010 (D)
Chromium (hex)	Atomic Absorption, Chelation, extraction, ICP	(A) 218.4/6010 (D)
Iron	Atomic Emission Spectrometric, ICP	(A) 200.7/6010 (D)
Lead	Atomic Absorption, furnace technique, ICP	(A) 239.2/6010 (D)
Magnesium	Atomic Emission Spectrometric, ICP	(A) 200.7/6010 (D)
Manganese	Atomic Emission Spectrometric, ICP	(A) 200.7/6010 (D)
Mercury	Atomic Absorption, cold vapor technique, ICP	(A) 245.2/7470 (D)
Nickel	Atomic Emission Spectrometric, ICP	(A) 200.7/6010 (D)
Potassium	Atomic Absorption, direct aspiration, ICP	(A) 258.1/6010 (D)
Selenium	Atomic Absorption, furnace technique, ICP	(A) 270.2/6010 (D)
Silver	Atomic Emission Spectrometric, ICP	(A) 200.7/6010 (D)
Sodium	Atomic Emission Spectrometric, ICP	(A) 200.7/6010 (D)
Thallium	Atomic Absorption, furnace technique, ICP	(A) 279.2/6020/6010
Vanadium	Atomic Emission Spectrometric, ICP	(A) 200.7/6010 (D)
Zinc	Atomic Emission Spectrometric, ICP	(A) 200.7/6010 (D)

Table 2 - Methodologies for Testing and Analysis*

<u>Parameter</u>	<u>Method Description</u>	<u>Method</u>
<u>Metals, Total</u>		
Antimony	Atomic Emission Spectrometric, ICP	(A) 200.7/6010/6020 (D)
Arsenic	Atomic Absorption, furnace technique, ICP	(A) 206.2/6010 (D)
Barium	Atomic Emission Spectrometric, ICP	(A) 200.7/6010 (D)
Beryllium	Atomic Emission Spectrometric, ICP	(A) 200.7/60106020 (D)
Boron	Atomic Emission Spectrometric, ICP	(A) 200.7/6010 (D)
Cadmium	Atomic Emission Spectrometric, ICP	(A) 200.7/6010 (D)
Chromium	Atomic Emission Spectrometric, ICP	(A) 200.7/6010 (D)
Cobalt	Atomic Emission Spectrometric, ICP	(A) 200.7/6010 (D)
Copper	Atomic Emission Spectrometric, ICP	(A) 200.7/6010 (D)
Iron	Atomic Emission Spectrometric, ICP	(A) 200.7/6010 (D)
Lead	Atomic Emission Spectrometric, ICP	(A) 200.7/6010 (D)
Magnesium	Atomic Emission Spectrometric, ICP	(A) 200.7/6010 (D)
Manganese	Atomic Emission Spectrometric, ICP	(A) 200.7/6010 (D)
Mercury	Atomic Emission Spectrometric, ICP	(A) 200.7/6010/7470 (D)
Nickel	Atomic Emission Spectrometric, ICP	(A) 200.7/6010 (D)
Potassium	Atomic Absorption, direct aspiration, ICP	(A) 258.1/6010 (D)
Selenium	Atomic Absorption, furnace technique, ICP	(A) 270.2/60106020 (D)
Silver	Atomic Emission Spectrometric, ICP	(A) 200.7/6010 (D)
Sodium	Atomic Emission Spectrometric, ICP	(A) 200.7/6010 (D)
Thallium	Atomic Absorption, furnace technique, ICP	(A) 279.2/6020/6010
Vanadium	Atomic Emission Spectrometric, ICP	(A) 200.7/6010 (D)
Zinc	Atomic Emission Spectrometric, ICP	(A) 200.7/6010 (D)

Table 2 - Methodologies for Testing and Analysis*

<u>Parameter</u>	<u>Method Description</u>	<u>Method</u>
Nitrate	Colorimetric, Automated, Hydrazine Reduction	(A) 353.1/353.2
Nitrite	Colorimetric, Automated, Hydrazine Reduction	(A) 353.1/353.2
Oil and Grease	Gravimetric, Separatory Funnel Extraction or Spectrometric, Infrared	(A) 413.1/9070 (D) or (A) 413.2
PCB (priority pollutants)	Gas Chromatograph	8270 (B)/8080 (D)
Pesticides	Gas Chromatograph	8270 (B)/8080 (D)
pH (field)	Electrometric	(A) 150.1
Phenols	Colorimetric, Automated 4-AAP with Distillation	(A) 420.2/9066 (D)
Phosphorous	Colorimetric, Automated Ascorbic Acid	(A) 365.4
Semi-Volatile Organics	GC/MS Acids & Base Neutrals	8270 (D)
Specific Conductance (field)	Wheatstone bridge	(A) 120.1
Sulfate	Turbidimetric	(A) 375.2/9038/300.0
Temperature (field)	Reversing Thermometer	(B) 212
Total Dissolved Solids Residue on Evaporation (TDS/ROE)	Gravimetric, Dried at 180°C	(A) 160.1
Total Organic Carbon (TOC)	Combustion or Oxidation	(A) 415.1
Total Suspended Solids (TSS)	Gravimetric, Dried at 103°-105°C	(A) 160.2
Volatile Organic Acids (PP/VOA), priority pollutants	Purge and Trap/GC/MS	8240 (D)/8260 (D)
Volatile Organics	Purge and Trap/GC/MS	8240 (D)/8260 (D)
DBCP, EDB	Microextraction	8260 (D)

*NOTE: On occasion, the analytical methods listed above may be substituted provided that they are appropriate for groundwater sampling, and accurately measure hazardous constituents and other monitoring parameters in groundwater samples.

References:

- A: Methods for Chemical Analysis of Water and Wastes, EPA 600/4-79-0920, EMSL, Cincinnati, Revision (March 1983).
- B: Standard Methods for the Examination of Water and Wastewaters, 15th Edition, APHA-AQWQA-WPCF, 1980.
- C*: Standard Methods for the Examination of Water and Wastewaters, 18th Edition, APHA-AWWA-WEF, 1992.
- D: Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 3rd Edition, Final Update 1, July 1992 (as revised).

Table 3 - Background Groundwater Quality Parameter List*

		CAS RN
Total Metals		
(1)	Antimony	Total
(2)	Arsenic	Total
(3)	Barium	Total
(4)	Beryllium	Total
(5)	Cadmium	Total
(6)	Chromium	Total
(7)	Cobalt	Total
(8)	Copper	Total
(9)	Lead	Total
(10)	Nickel	Total
(11)	Selenium	Total
(12)	Silver	Total
(13)	Thallium	Total
(14)	Vanadium	Total
(15)	Zinc	Total
Organic Constituents		
(16)	Acetone	67-64-1
(17)	Acrylonitrile	107-13-1
(18)	Benzene	71-43-2
(19)	Bromochloromethane	74-97-5
(20)	Bromodichloromethane	75-27-4
(21)	Bromoform (tribromomethane)	75-25-2
(22)	Carbon disulfide	75-15-0
(23)	Carbon tetrachloride	56-23-5
(24)	Chlorobenzene	108-90-7
(25)	Chloroethane (ethyl chloride)	75-00-3
(26)	Chloroform (trichloromethane)	67-66-3
(27)	Dibromochloromethane (chlorodibromomethane)	124-48-1
(28)	1,2-Dibromo-3-chloropropane (DBCP)	96-12-8
(29)	1,2-Dibromoethane (ethylene dibromide, EDB)	106-93-4
(30)	o-Dichlorobenzene (1,2-dichlorobenzene)	95-50-1
(31)	p-Dichlorobenzene (1,4-dichlorobenzene)	106-46-7
(32)	trans- 1,4-Dichloro-2-butene	110-57-6

Table 3 - Background Groundwater Quality Parameter List*		
		CAS RN
(33)	1,1-Dichloroethane (ethyldiene chloride)	75-34-4
(34)	1,2-Dichloroethane (ethylene dichloride)	107-06-2
(35)	1,1-Dichloroethylene (1,1-dichloroethene, vinylidene chloride)	75-35-4
(36)	cis-1,2-Dichloroethylene (cis- 1,2-dichloroethene)	156-59-2
(37)	trans-1,2-Dichloroethylene (trans- 1,2-dichloroethene)	156-60-5
(38)	1,2-Dichloropropane (Propylene dichloride)	78-87-5
(39)	cis- 1,3-Dichloropropene	10061-01-5
(40)	trans- 1,3-Dichloropropene	10061-02-6
(41)	Ethylbenzene	10041-4
(42)	2-Hexanone (methyl butyl ketone)	591-78-6
(43)	Methyl bromide (bromomethane)	74-83-9
(44)	Methyl chloride (chloromethane)	74-87-3
(45)	Methylene bromide (dibromomethane)	74-95-3
(46)	Methylene chloride (dichloromethane)	75-09-2
(47)	Methyl ethyl ketone (MEK, 2-butanone)	78-93-3
(48)	Methyl iodide (iodomethane)	74-88-4
(49)	4-Methyl-2-pentanone (methyl isobutyl ketone)	108-10-1
(50)	Styrene	100-42-5
(51)	1,1,1,2-Tetrachloroethane	630-20-6
(52)	1,1,2,2-Tetrachloroethane	79-34-5
(53)	Tetrachloroethylene (tetrachloroethane, perchloroethylene)	127-18-4
(54)	Toluene	108-88-3
(55)	1,1,1-Trichloroethane (methylchloroform)	71-55-6
(56)	1,1,2-Trichloroethane	79-00-5
(57)	Trichloroethylene (trichloroethene)	79-01-6
(58)	Trichlorofluoromethane (CFC-11)	75-69-4
(59)	1,2,3-Trichloropropane	96-18-4
(60)	Vinyl acetate	108-05-4
(61)	Vinyl chloride	75-01-4
(62)	Xylenes (total)	1330-20-7

Table 4 - Detection Monitoring Parameter List*		
		<u>CAS RN</u>
<i>Total Metals</i>		
(1)	Antimony	Total
(2)	Arsenic	Total
(3)	Barium	Total
(4)	Beryllium	Total
(5)	Cadmium	Total
(6)	Chromium	Total
(7)	Cobalt	Total
(8)	Copper	Total
(9)	Lead	Total
(10)	Nickel	Total
(11)	Selenium	Total
(12)	Silver	Total
(13)	Thallium	Total
(14)	Vanadium	Total
(15)	Zinc	Total
<i>Organic Constituents</i>		
(16)	Acetone	67-64-1
(17)	Acrylonitrile	107-13-1
(18)	Benzene	71-43-2
(19)	Bromochloromethane	74-97-5
(20)	Bromodichloromethane	75-27-4
(21)	Bromoform (tribromomethane)	75-25-2
(22)	Carbon disulfide	75-15-0
(23)	Carbon tetrachloride	56-23-5
(24)	Chlorobenzene	108-90-7
(25)	Chloroethane (ethyl chloride)	75-00-3
(26)	Chloroform (trichloromethane)	67-66-3
(27)	Dibromochloromethane (chlorodibromomethane)	124-48-1
(28)	1,2-Dibromo-3-chloropropane (DBCP)	96-12-8
(29)	1,2-Dibromoethane (ethylene dibromide, EDB)	106-93-4
(30)	o-Dichlorobenzene (1,2-dichlorobenzene)	95-50-1
(31)	p-Dichlorobenzene (1,4-dichlorobenzene)	106-46-7

Table 4 - Detection Monitoring Parameter List*		
		CAS RN
(32)	trans- 1,4-Dichloro-2-butene	110-57-6
(33)	1,1-Dichloroethane (ethylidene chloride)	75-34-4
(34)	1,2-Dichloroethane (ethylene dichloride)	107-06-2
(35)	1,1-Dichloroethylene (1,1-dichloroethene, vinylidene chloride)	75-35-4
(36)	cis-1,2-Dichloroethylene (cis- 1,2-dichloroethene)	156-59-2
(37)	trans-1,2-Dichloroethylene (trans- 1,2-dichloroethene)	156-60-5
(38)	1,2-Dichloropropane (Propylene dichloride)	78-87-5
(39)	cis- 1,3-Dichloropropene	10061-01-5
(40)	trans- 1,3-Dichloropropene	10061-02-6
(41)	Ethylbenzene	10041-4
(42)	2-Hexanone (methyl butyl ketone)	591-78-6
(43)	Methyl bromide (bromomethane)	74-83-9
(44)	Methyl chloride (chloromethane)	74-87-3
(45)	Methylene bromide (dibromomethane)	74-95-3
(46)	Methylene chloride (dichloromethane)	75-09-2
(47)	Methyl ethyl ketone (MEK, 2-butanone)	78-93-3
(48)	Methyl iodide (iodomethane)	74-88-4
(49)	4-Methyl-2-pentanone (methyl isobutyl ketone)	108-10-1
(50)	Styrene	100-42-5
(51)	1,1,1,2-Tetrachloroethane	630-20-6
(52)	1,1,2,2-Tetrachloroethane	79-34-5
(53)	Tetrachloroethylene (tetrachloroethane, perchloroethylene)	127-18-4
(54)	Toluene	108-88-3
(55)	1,1,1-Trichloroethane (methylchloroform)	71-55-6
(56)	1,1,2-Trichloroethane	79-00-5
(57)	Trichloroethylene (trichloroethene)	79-01-6
(58)	Trichlorofluoromethane (CFC-11)	75-69-4
(59)	1,2,3-Trichloropropane	96-18-4
(60)	Vinyl acetate	108-05-4
(61)	Vinyl chloride	75-01-4
(62)	Xylenes (total)	1330-20-7

Table 5 - Water Quality Parameters	
Calcium	Total
Magnesium	Total
Sodium	Total
Potassium	Total
Iron	Total
Chromium	Total
Chloride	
Sulfate	
Total Alkalinity	
Ammonia, Nitrogen	
Total Dissolved Solids	

Note: Additional information is provided in Section 5.1.

**WASTE MANAGEMENT SKYLINE LANDFILL
DALLAS AND ELLIS COUNTIES, TEXAS
PERMIT AMENDMENT APPLICATION NO. MSW 42E**

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

Prepared for



March 2026



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

Austin L. Montgomery
3/31/2026

Prepared by



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APPENDIX G1

Landfill Gas Monitoring Probe Plan

APPENDIX G2

Reporting and Recording Forms

APPENDIX G3

Landfill Gas Monitoring Probe Boring/Completion Logs

APPENDIX G4

Landfill Gas Collection and Control System Plan



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

Austin L. Montgomery
3/31/2026

1 INTRODUCTION

30 TAC §§330.63(g), 330.371

1.1 Scope

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

The Skyline Landfill will comply with all applicable federal and state regulations.

1.2 Purpose

§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 (2) the concentration of methane does not exceed five percent methane by volume in monitoring points, probes, subsurface soils, or other matrices at the 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 methane concentrations at the permit boundary and in structures on the permitted site.

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. Post closure land use of the facility will not interfere with the function of gas monitoring and control systems. Any underground utility trenches that cross the permit boundary will be vented and monitored regularly, contingent on approval from the utility easement owner.

2 SITE CHARACTERISTICS

30 TAC §330.371

2.1 Introduction

Thirty-four LFG monitoring probes have been installed outside the perimeter of the waste fill area, near the permit boundary, to detect potential LFG migration. The proposed LFG monitoring network consists of a total of thirty-eight probes. The existing and proposed LFG monitoring probe locations are shown on Drawing G1.1 in Appendix G1.

2.2 Soil Conditions

The site geologic conditions are discussed in Part III, Attachment E.

2.3 Hydrogeologic Conditions

The hydrogeologic conditions are discussed in Part III, Attachment E.

2.4 Hydraulic Conditions

Hydraulic conditions are discussed in Part III, Attachment C1.

2.5 Facility Structures Within the Permit Boundary

There are seven structures within the Skyline Landfill permit boundary including a scalehouse, a maintenance and office facility, a Landfill Gas to Energy (LFGTE) facility, a former LFGTE facility, a hauling facility office and maintenance building, a hauling facility training building, and a storage building. Refer to Drawing G1.1 for the location of the structures.

2.6 Underground Utilities

As shown on Drawing G1.1, an Atmos Energy underground utility line and a sanitary sewer line enter and exit the northeast portion of the Skyline Landfill Permit boundary. In addition, a sales gas line for the site's LFGTE facility exits on the southern portion of the permit boundary.

2.7 Offsite Structures

All known habitable structures located offsite within ¼ mile of the permit boundary are depicted on Drawing G1.3.

3 MONITORING

30 TAC §330.371

3.1 Perimeter Monitoring

3.1.1 Perimeter Monitoring Network

The current LFG monitoring probe network at the landfill consists of thirty-four LFG monitoring probes located outside the perimeter of the waste fill area near the permit boundary. During future development of the site, nine probes, GP-59R through GP-66 and GP-34R, will be abandoned and thirteen probes will be added, resulting in a total of thirty-eight LFG monitoring probes for the proposed LFG monitoring network. Proposed locations of the LFG monitoring probes are shown on Drawing G1.1. Copies of the installation logs for the existing LFG monitoring probes are included in Appendix G3.

Prior to receiving waste in Cells 19-24, all future probes will be installed.

3.1.2 Landfill Gas Monitoring Probes

LFG monitoring probes have been installed along the perimeter of the existing waste fill area. Copies of the installation logs for the existing LFG monitoring probes are included in Appendix G3.

Future LFG monitoring probes will be installed in accordance with the detail shown on Drawing G1.2. Once installation is completed, boring logs and completion logs will be submitted to TCEQ and added to Appendix G3.

Each 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 gas monitoring probes will be a maximum of 1000 feet along the northern and eastern portion of the permit boundary between GP-74 and GP-81, and a maximum of 600 feet along the remainder of the permit boundary. The as-built or design depths and elevations for each of the existing and proposed gas monitoring probes are shown on the table on Drawing G1.1.

3.1.3 Utility Vents

Utility vents have been installed near all locations where underground utilities cross the permit boundary. The utility vent locations are shown on Drawing G1.1 and the details for the utility vents are shown on Drawing G1.2.

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.

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

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

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.

The monitoring device will have a suction sampling line equipped with a quick-disconnect fitting. This fitting will match up with a corresponding quick-disconnect fitting on the top of each probe to enable gas samples to be drawn directly into the monitoring instrument without diluting the sample. The indicator will give a direct reading of the methane concentration in one of two scales, percent of the lower explosive limit (LEL) or percent by volume.

After these parameters are measured, the probe of a liquid level indicator will be lowered into the LFG probe through an opening located at 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 the probe to assure that the 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. 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 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 is observed, it will be reported to the site manager. If it is not possible to repair the LFG monitoring probe and the damage can potentially affect the accuracy of future monitoring results, the LFG monitoring probe 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) as shown in Appendix G2.

3.4 Backup Plan for Monitoring Probes 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

1. Damaged or inoperative perimeter probes 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, 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, a bar-hole will be placed next to the damaged probe and a portable gas monitor will be used until the probe 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 or replaced within 60 days.
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, subsurface soils, or other matrices will be monitored quarterly, at a minimum. Facility structures will be monitored using 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.

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.

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 site 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.

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 site manager will be notified. The immediate emergency response measure will be for the site 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.

4.2 Notification Procedures

Once immediate actions have been completed to protect human health, notifications will be made immediately in accordance with §330.371. Notification will be made to the executive director of the TCEQ; the TCEQ Region 4 office; the City of Ferris City Manager's Office and Department of Public Safety; either the Ellis County Office of Emergency Management or the Dallas County Office of Emergency Management, depending on the probe location; and any owners of property within 1/4 mile of the reading.

The site 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.

5 REMEDIATION PLAN

30 TAC §330.371

5.1 Remediation Plan

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 action 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 manage and control 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 site 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 CONTROL SYSTEM

30 TAC §330.371

6.1 LFG Collection and Control System

An active GCCS exists at the site. As the site develops, additional extraction wells will be installed as needed to control landfill gas and meet regulatory requirements. The locations of the anticipated final vertical LFG extraction wells are shown on Drawing G4.1. The existing GCCS is shown on Drawing G4.2.

The LFG extraction wells will be constructed as shown on Drawings G4.3 and G4.4. Each extraction well will consist of a perforated pipe within a gravel backfill. The LFG extraction wells will be installed in phases as needed based on waste placement patterns. The exact number and location of extraction points, piping, and proposed future LFG facilities will be determined based on field conditions at the time of installation. Upon completion of each phase of the GCCS installation, an updated Drawing G4.2 suitable for inclusion in this permit will be submitted to the TCEQ and a copy placed in the site operating record.

Blowers, flares, and piping will be installed as needed to provide the vacuum and capacity to handle the predicted maximum flow rate of LFG. In addition, LFG may also be sent to a Landfill Gas to Energy Facility. Each extraction well will be equipped with a control valve and monitoring port, as shown on Drawings G4.3 and G4.4. 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.

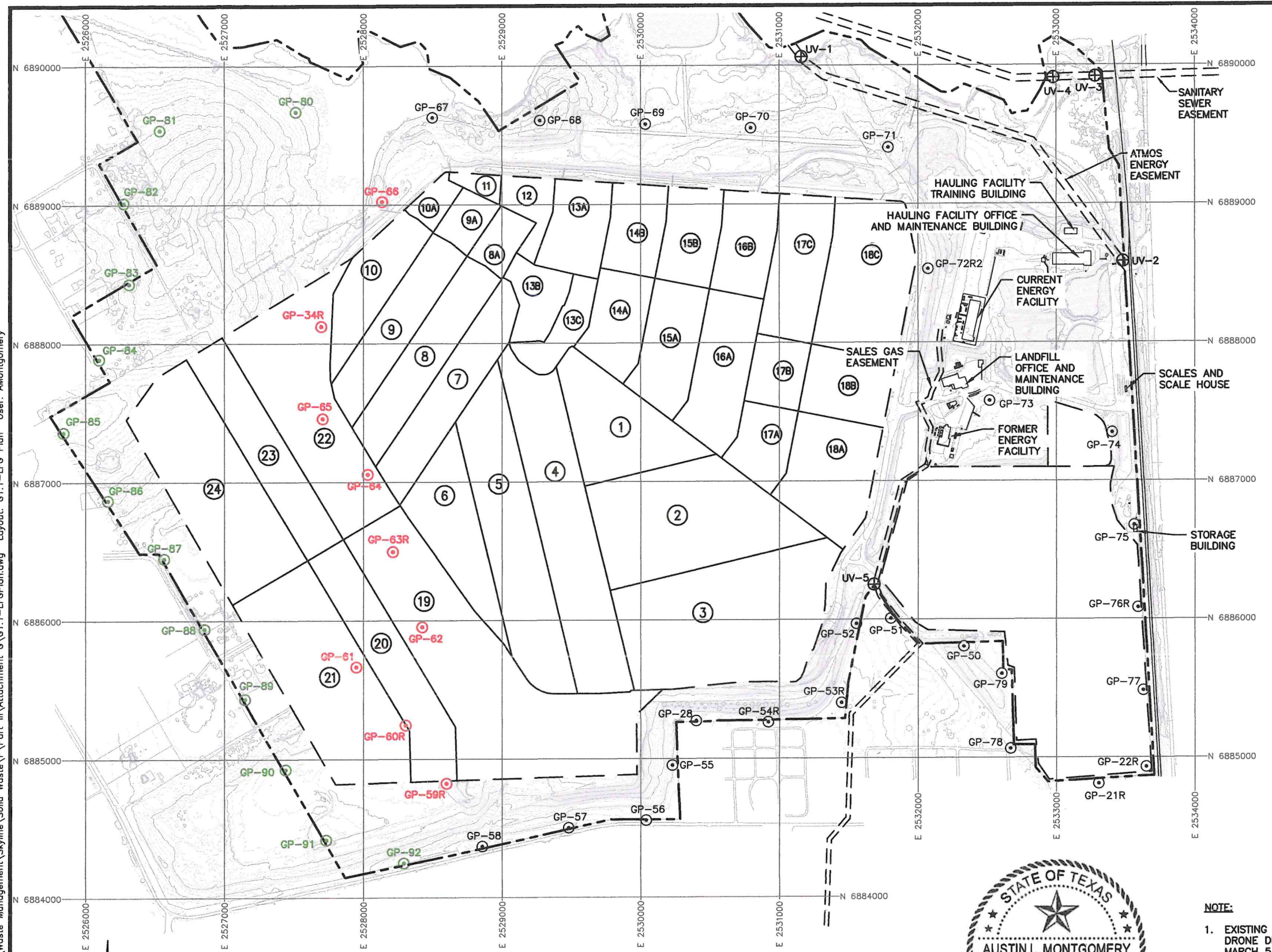
The operation and maintenance of the proposed LFG system will be performed consistent with industry guidelines and practices. Wellhead and system monitoring will be performed on a routine basis to monitor overall system performance. As needed, system adjustments will be made to optimize the extraction 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 limiting oxygen intrusion into the landfill.
- Condensate sumps will be checked for proper operation.
- Blowers and flares will be inspected for proper operation.

The final GCCS will include isolation valves and a looped piping network to allow the system to be adjusted, maintained, and quickly repaired.

**APPENDIX G1
LANDFILL GAS MONITORING PROBE PLAN**

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GAS MONITORING PROBE INFORMATION			
GAS PROBE	GROUND ELEVATION (FT-MSL)	PROBE DEPTH (FT-BGS)	BOTTOM OF PROBE ELEVATION (FT-MSL)
EXISTING GAS MONITORING PROBES			
GP-21R	450	45	405
GP-22R	452	45	407
GP-28	488	30	438
GP-34R	440	35	405
GP-50	485	81	404
GP-51	479	71	408
GP-52	472	79	393
GP-53R	467	32	435
GP-54R	477	36	440
GP-55	487	45	442
GP-56	486	47	439
GP-57	480	50	430
GP-58	473	34	439
GP-59R	541	104	437
GP-60R	523	85	438
GP-61	492	64	428
GP-62R	482	53	429
GP-63R	494	68.5	425.5
GP-64	475	51	424
GP-65	448	25	423
GP-66	421	37	384
GP-67	417	35	382
GP-68	455	73	382
GP-69	409	29	380
GP-70	414	33	381
GP-71	427	46	381
GP-72R2	456	71	386
GP-73	461	69	392
GP-74	447	39	408
GP-75	440	31	409
GP-76R	446	36	410
GP-77	449	40	409
GP-78	492	86	406
GP-79	494	91	403
PROPOSED GAS MONITORING PROBES			
GP-80	420	18	382
GP-81	451	48	403
GP-82	472	69	403
GP-83	472	69	403
GP-84	462	59	403
GP-85	444	41	403
GP-86	479	76	403
GP-87	502	99	403
GP-88	502	99	403
GP-89	498	70	428
GP-90	516	88	428
GP-91	522	94	428
GP-92	482	60	428

- LEGEND:**
- ⊙ EXISTING LFG MONITORING PROBE
 - ⊕ EXISTING UTILITY VENT
 - ⊙ PROPOSED LFG MONITORING PROBE
 - ⊙ EXISTING LFG MONITORING PROBE (TO BE ABANDONED)



Austin L. Montgomery
3/31/2026

NOTE:
1. EXISTING CONTOURS COMPILED BY HYDREX DRONE DIVISION, FROM AERIAL SURVEY FLOWN MARCH 5, 2025.

REVISIONS			
REV	DATE	DESCRIPTION	DWN BY

LANDFILL GAS MONITORING PROBE PLAN

WASTE MANAGEMENT OF TEXAS, INC. SKYLINE LANDFILL

BME

BIGGS & MATHEWS ENVIRONMENTAL
1700 ROBERT ROAD, STE. 100
MANSFIELD, TEXAS 76063
817-563-1144

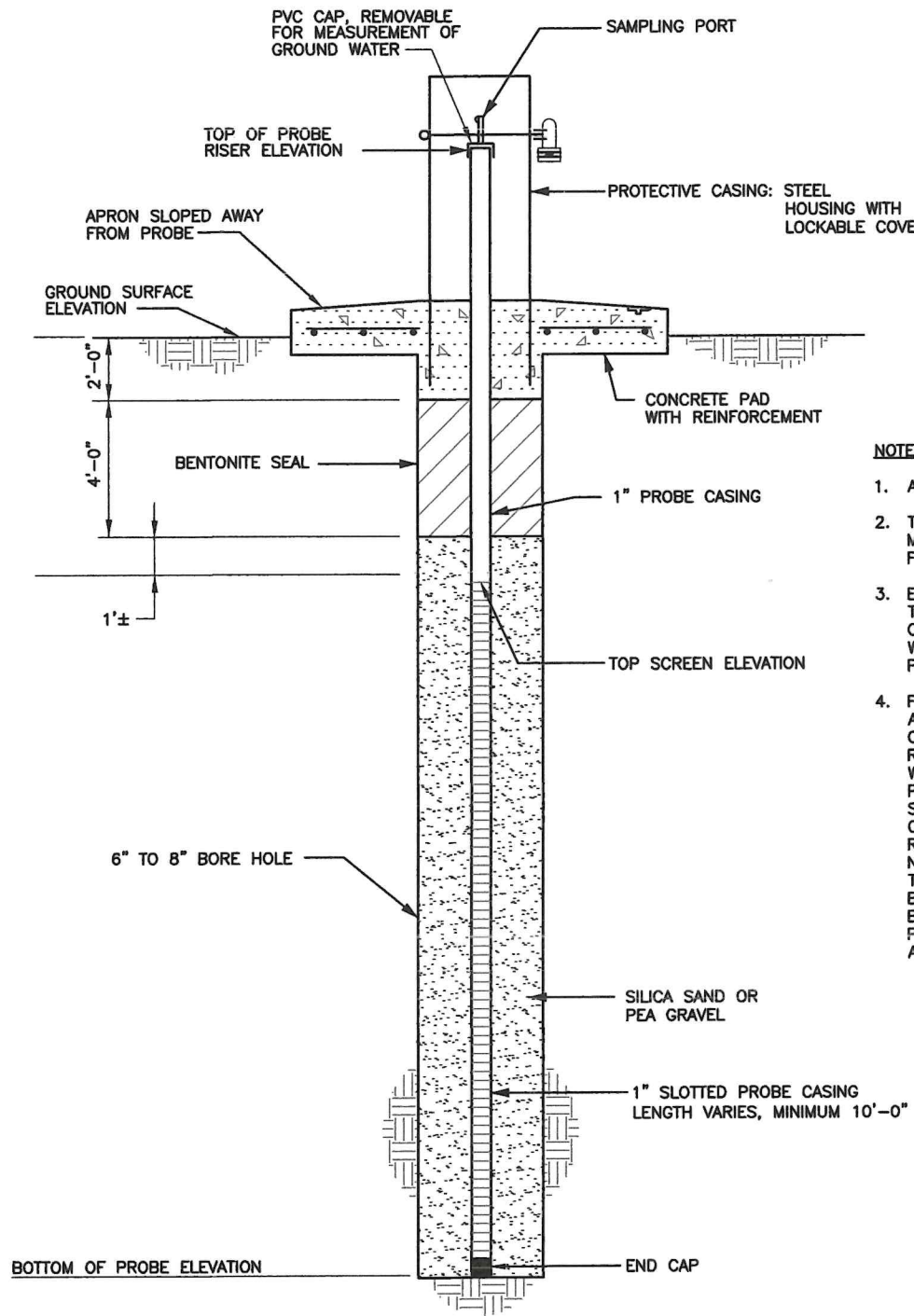
TBPELS FIRM NO. F-256 AND NO. 10194895

DRAWING

TBPG FIRM NO. 50222

G1.1

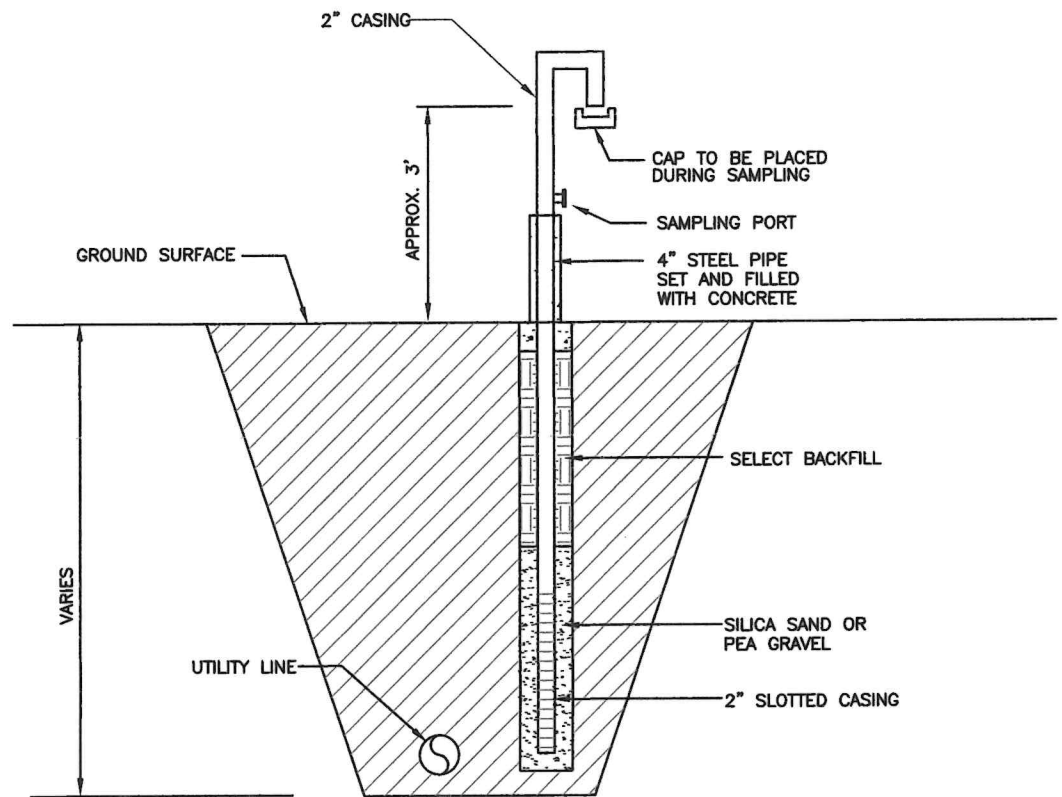
D:\Projects\Waste Management\Skylines\Solid Waste\Part III\Attachment G1.2-Probe&Vent\Drawings\G1.2-ProbeDetail.dwg User: AMontgomery



MONITORING PROBE DETAIL MP-1
NTS G1.2

NOTES

1. ALL SIZES AND DIMENSIONS ARE APPROXIMATE.
2. THIS DETAIL APPLIES ONLY TO NEW MONITORING PROBES. REFER TO APPENDIX G3 FOR INSTALLATION LOGS OF EXISTING PROBES.
3. EACH GAS PROBE IS DESIGNED TO MONITOR THE SOIL STRATA ABOVE THE LOWEST CURRENT OR PLANNED FUTURE ELEVATION OF WASTE WITHIN 1,000 FEET OF THE MONITORING PROBE.
4. FOR PROBES INSTALLED IN SOIL STOCKPILE AREAS, THIS DETAIL REPRESENTS COMPLETION OF THE PROBE AFTER THE SOIL STOCKPILE IS REMOVED. DURING TEMPORARY CONDITIONS WHILE SOIL STOCKPILE EXISTS, THE UPPER PORTION OF THE PROBE WITHIN THE SOIL STOCKPILE WILL CONSIST OF SOLID PROBE CASING ONLY TO ALLOW FOR THE EVENTUAL REMOVAL OF THE SOIL STOCKPILE WITHOUT NEGATIVELY INFLUENCING THE OPERATION OF THE PROBE. A BOREHOLE CASING MAY ALSO BE INSTALLED TEMPORARILY WITHIN THE BOREHOLE ABOVE NATURAL GROUND TO PROTECT THE PROBE CASING DURING REMOVAL ACTIVITIES.



UTILITY VENT UV-1
NTS G1.2

NOTE

1. ALL SIZES AND DIMENSIONS ARE APPROXIMATE.

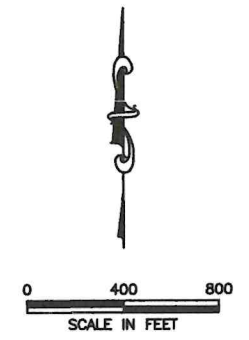


Austin L. Montgomery
3/31/2026




REVISIONS			
REV	DATE	DESCRIPTION	DWN BY

MONITORING PROBE/VENT DETAIL	
WASTE MANAGEMENT OF TEXAS, INC. SKYLINE LANDFILL	
BME	BIGGS & MATHEWS ENVIRONMENTAL 1700 ROBERT ROAD, STE. 100 MANSFIELD, TEXAS 76063 817-563-1144
TBPELS FIRM NO. F-256 AND NO. 10194895	DRAWING
TBPG FIRM NO. 50222	G1.2

D:\Projects\Waste Management\Skylines\Solid Waste\Part III\Attachment G\G1.3-QuartMile.dwg Layout: G1.3-Otr Mile Struct User: A.Montgomery



LEGEND:

-  PERMIT BOUNDARY
-  LANDFILL FOOTPRINT
-  1/4 MILE PERMIT BOUNDARY RADIUS

NOTE:

1. AERIAL PHOTOGRAPH TAKEN FROM GOOGLE EARTH, AERIAL DATE JULY 3, 2025.



Austin L. Montgomery
3/31/2026

STRUCTURES WITHIN 1/4 MILE OF PERMIT BOUNDARY

WASTE MANAGEMENT OF TEXAS, INC. SKYLINE LANDFILL



BIGGS & MATHEWS ENVIRONMENTAL
1700 ROBERT ROAD, STE. 100
MANSFIELD, TEXAS 76063
817-563-1144

REVISIONS			
REV	DATE	DESCRIPTION	DWN BY

TBPELS FIRM NO. F-256 AND NO. 10194895

TBPG FIRM NO. 50222

DRAWING

G1.3

**APPENDIX G2
REPORTING AND RECORDING FORMS**

**SKYLINE LANDFILL
QUARTERLY LANDFILL GAS MONITORING REPORT**

Sampled by: _____ Date: _____

Time Start: _____ Time Finish: _____ Temperature: _____

Weather: _____ Bar. Pressure (Optional): _____

Monitoring Equipment: _____ Date of Calibration: _____

Field Calibration:

Date: _____ Time: _____ CH4: _____ CO2: _____ O2: _____ Balance: _____

GAS MONITORING PROBES

Probe Name	Ground Surface Elevation (ft-MSL)	Bottom of Probe Elevation (ft-MSL)	% Methane	% LEL	% O ₂ (Optional)	Static Pressure (in-W.C)	Depth to Water (ft)	Probe Integrity Verified (Yes/No)

ON-SITE STRUCTURES

Structure	Verify if Continuous LFG Alarm is Operational (Circle One)		Continuous LFG Alarm Activated (LEL > 25%) Since Last Monitoring Event (Circle One)	
	Yes	No	Yes	No
	Yes	No	Yes	No

GENERAL COMMENTS:

**APPENDIX G3
LANDFILL GAS MONITORING
PROBE BORING/COMPLETION LOGS**

**(EXISTING MONITORING PROBE LOCATIONS FOR GP-21R THROUGH
GP-79 WERE SURVEYED USING NAD-27 DATUM)**

LOG OF BORING **ENVIRONMENTAL SAMPLING**

Apex geoscience inc.

Project Number: 307-052 Name: Skyline Landfill Boring No: GP - 21R

Location/Description: IH-45, Ferris, Texas Date: 8/27/2007

SANDS & SANDS	CONSISTENCY	COLORS	MATERIALS	SAND TYPE	CHARACTERISTICS
VLo - Very Loose Lo - Loose MDe - Medium Dense De - Dense VDe - Very Dense	Vso - Very Soft So - Soft Mst - Medium Stiff St - Stiff Vst - Very Stiff H - Hard	Bk - Black, Bl - Blue Br - Brown, Dk - Dark G - Gray, Gr - Green Li - Light, R - Red Rdish - Reddish Y - Yellow, W - White	Cl - Clay, Clayey Gr - Gravel Ls - Limestone Sa - Sand, Sandy SS - Sandstone Sh - Shale, Si - Silt, Silty SiS - Siltstone	F - Fine M - Medium Co - Coarse Si - Silty	Calc - Calcareous Lam - Laminated Lig - Lignite Nod - Nodules Org - Organic Sm - Seam, Sl - Slightly Sls - Slickensided

S A M P L E #	D E P T H F T	CONDITION OR CONSISTENCY	COLOR	MINOR MATERIALS OR ADJECTIVES	PREDOMINATE MATERIAL	CHARACTERISTICS OR MODIFICATIONS	M O I S T U R E DESC.	PID	L E L
	0	So	Br	Si	Cl	Compacted fill	Dry		
		"	"	"	"	"	"		
		"	"	"	"	"	"		
		"	"	"	"	"	"		
	5	"	"	"	"	"	"		
		"	"	"	"	"	"		
		"	"	"	"	"	"		
		"	"	"	"	"	"		
		"	"	"	"	"	"		
	10	"	"	"	"	"	"		
		"	"	"	"	"	"		
		"	"	"	"	"	"		
		"	"	"	"	"	"		
		"	"	"	"	"	"		
	15	"	"	"	"	"	"		
		"	"	"	"	"	"		
		"	"	"	"	"	"		
		"	"	"	"	"	"		
		"	"	"	"	"	"		
	20	Vst	Lt Br	"	"	Calc	"		
		"	"	"	"	"	"		
		"	"	"	"	"	"		
		"	"	"	"	"	"		
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		"	"	"	"	"	"		
		"	"	"	"	"	"		
		"	"	"	"	"	"		
	35	"	"	"	"	"	"		
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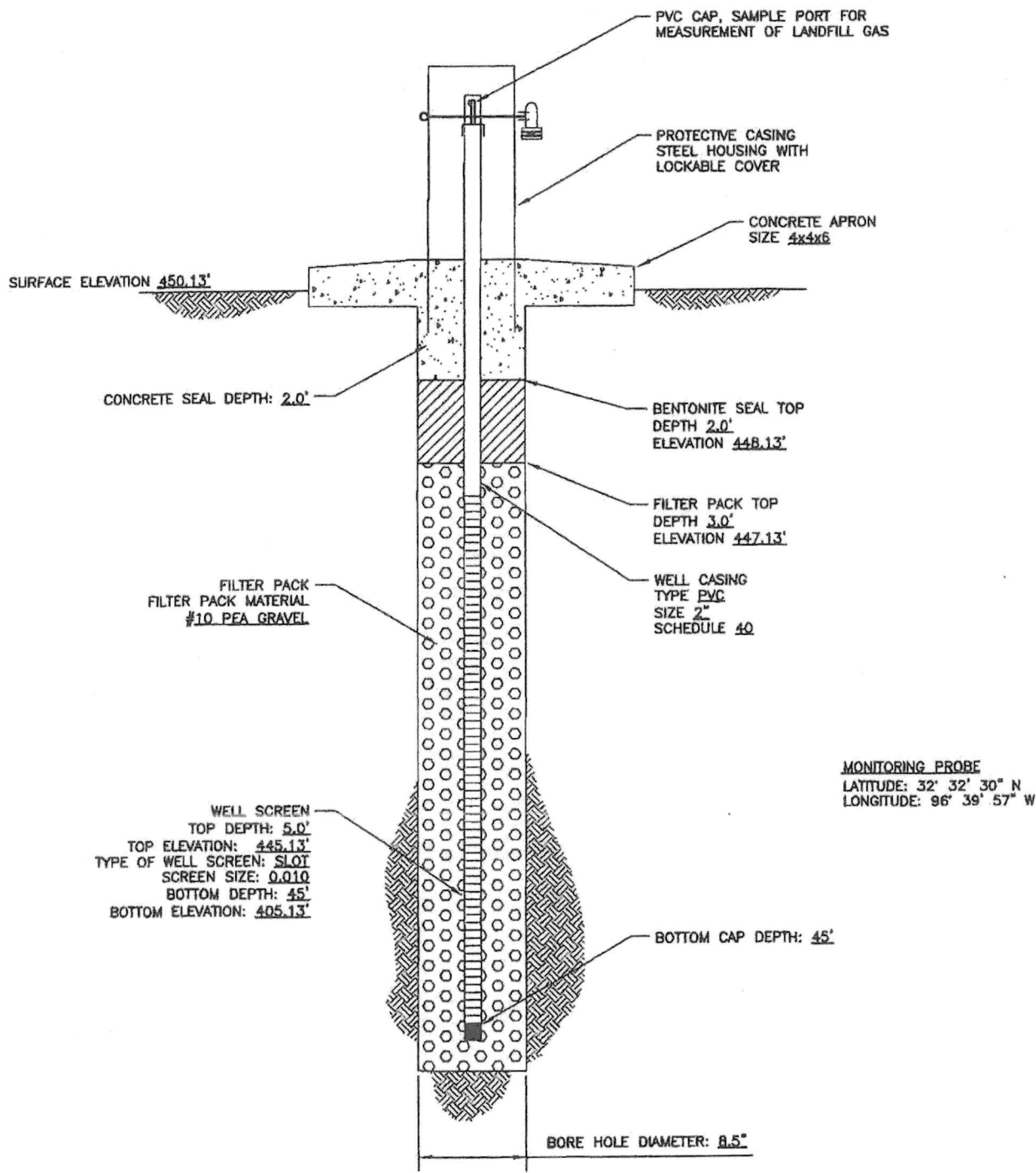
Project Number: 307-052		Name: Skyline Landfill			Boring No: GP - 21R		
Location/Description: IH-45, Ferris, Texas					Date: 8/27/2007		
SILTS & SANDS		CONSISTENCY		COLORS	MATERIALS	SAND TYPE	CHARACTERISTICS
VLo- Very Loose Lo- Loose MDe - Medium Dense De - Dense VDe - Very Dense		Vso - Very Soft So - Soft Mst - Medium Stiff St - Stiff Vst - Very Stiff H - Hard		Bk - Black, Bl - Blue Br - Brown, Dk - Dark G - Gray, Gr - Green Li - Light, R - Red Rdish - Reddish Y - Yellow, W - White	Cl - Clay, Clayey Gr - Gravel Ls - Limestone Sa - Sand, Sandy SS - Sandstone Sh - Shale, Si - Silt, Silty SiS - Siltstone	F - Fine M - Medium Co - Coarse Si - Silty	Calc - Calcareous Lam - Laminated Lig - Lignite Nod - Nodules Org - Organic Sm - Seam, Sl - Slightly Sls - Slickensided

S A M P L E #	D E P T H F T	CONDITION OR CONSISTENCY	COLOR	MINOR MATERIALS OR ADJECTIVES	PREDOMINATE MATERIAL	CHARACTERISTICS OR MODIFICATIONS	M O I S T U R E DESC.	PID	L E L
	40	Vst	Li, Br	Si	Cl	Calc	Dry		
		"	"	"	"	"	"		
		"	"	"	"	"	"		
		"	"	"	"	"	"		
	45	"	"	"	"	TD - 45'	"		

COMPLETION RECORD

Type of Boring: <input checked="" type="checkbox"/> HSA <input type="checkbox"/> Other _____	Logged By: B. Collier	W.L. @ _____ Dry _____ Ft. On Completion; Caved to _____ 0 _____ Ft.
From: _____ 5 _____ Ft. to _____ 45 _____ Ft.	Riser From _____ 0 _____ Ft. to _____ 5 _____ Ft.	Surface Completion <input type="checkbox"/> Flush <input type="checkbox"/> 2x2 Pad <input checked="" type="checkbox"/> 4x4 Pad <input type="checkbox"/> 6x6 Pad <input type="checkbox"/> Other _____
Gravel: _____ 3 _____ Ft. to _____ 45 _____ Ft.; Bentonite _____ 3 _____ Ft. to _____ 4 _____ Ft.		TD @ _____ 45 _____ Ft.

Installation Report\MontProbe21R.dwg Layout: 21R User: wml



MONITORING PROBE
 LATITUDE: 32° 32' 30" N
 LONGITUDE: 96° 39' 57" W

**GAS MONITORING PROBE DETAIL
GP-21R**

**WASTE MANAGEMENT
 SKYLINE LANDFILL
 GAS MONITORING PROBE AS-BUILTS**



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

ISSUED FOR INFORMATIONAL PURPOSES ONLY

REVISIONS							DSN. MRW	DATE : 02/08	DRAWING 1
REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY	DWN. RMP	SCALE : GRAPHIC	
							CHK. MRW	DWG : MontProbe21R.dwg	

LOG OF BORING Apex geoscience inc. **ENVIRONMENTAL SAMPLING**

Project Number: 307-052 Name: Skyline Landfill Boring No: GP - 22R
 Location/Description: IH-45, Ferris, Texas Date: 8/27/2007

SILTS & SANDS	CONSISTENCY	COLORS	MATERIALS	SAND TYPE	CHARACTERISTICS
VLo - Very Loose Lo - Loose MDe - Medium Dense De - Dense VDe - Very Dense	Vso - Very Soft So - Soft Mst - Medium Stiff St - Stiff Vst - Very Stiff H - Hard	Bk - Black, Bl - Blue Br - Brown, Dk - Dark G - Gray, Gr - Green Lt - Light, R - Red Rdish - Reddish Y - Yellow, W - White	Cl - Clay, Clayey Gr - Gravel Ls - Limestone Sa - Sand, Sandy SS - Sandstone Sh - Shale, Si - Silt, Silty SiS - Siltstone	F - Fine M - Medium Co - Coarse Si - Silty	Calc - Calcareous Lam - Laminated Lig - Lignite Nod - Nodules Org - Organic Sm - Seam, Sl - Slightly Sls - Slickensided

S A M P L E #	D E P T H F T	CONDITION OR CONSISTENCY	COLOR	MINOR MATERIALS OR ADJECTIVES	PREDOMINATE MATERIAL	CHARACTERISTICS OR MODIFICATIONS	M O I S T U R E	P I D	L E L
							DESC.		
	0	So	Br	Si	Cl	Compacted fill	Dry		
		"	"	"	"	"	"		
		"	"	"	"	"	"		
		"	"	"	"	"	"		
	5	"	"	"	"	"	"		
		"	"	"	"	"	"		
		"	"	"	"	"	"		
		"	"	"	"	"	"		
	10	"	"	"	"	"	"		
		"	"	"	"	"	"		
		"	"	"	"	"	"		
		"	"	"	"	"	"		
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		"	"	"	"	"	"		
		"	"	"	"	"	"		
		"	"	"	"	"	"		
	20	Vst	Lt Br	"	"	Calc	"		
		"	"	"	"	"	"		
		"	"	"	"	"	"		
		"	"	"	"	"	"		
	25	"	"	"	"	"	"		
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		"	"	"	"	"	"		
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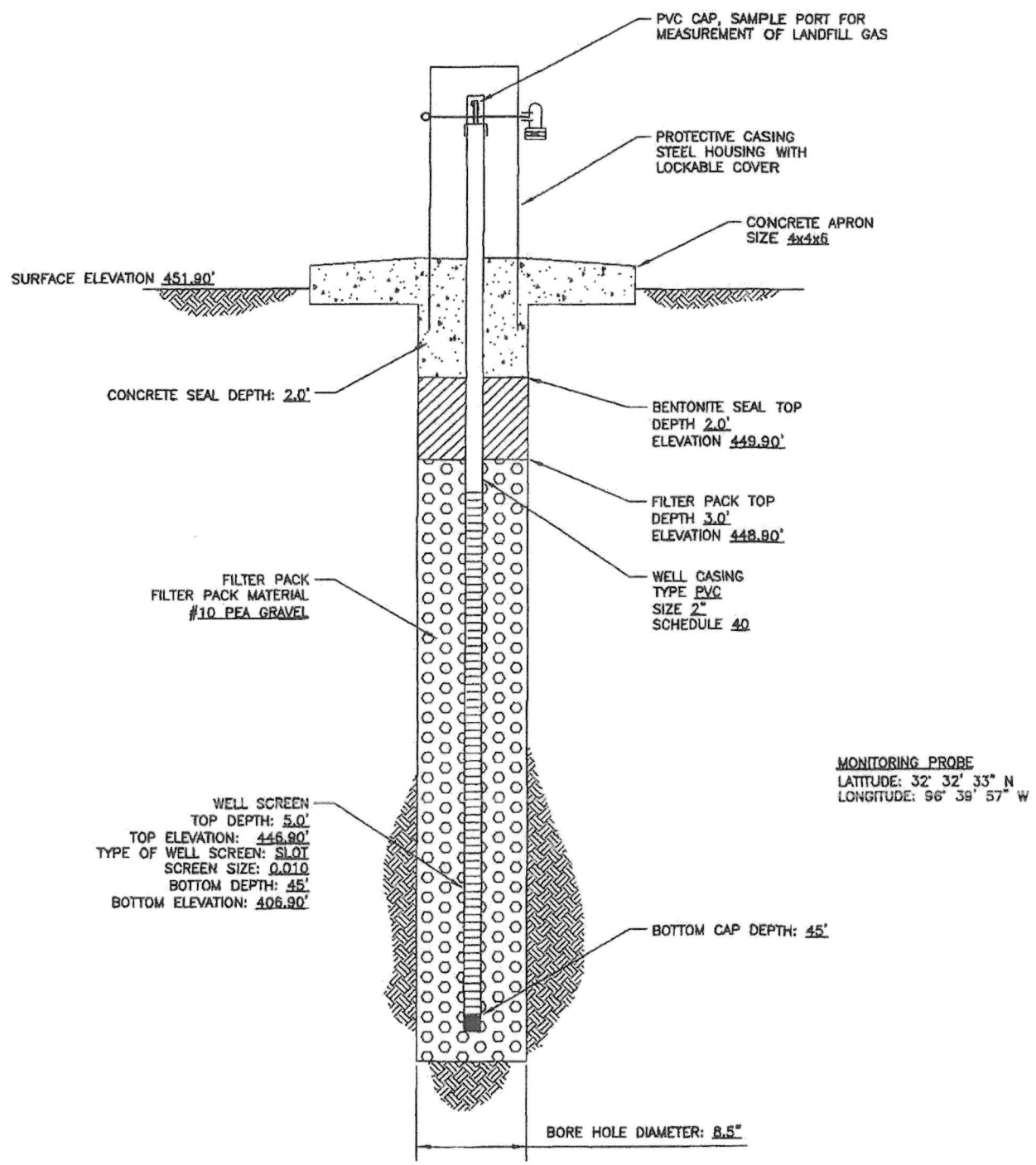
Project Number: 307-052		Name: Skyline Landfill		Boring No: GP - 22R	
Location/Description: IH-45, Ferris, Texas				Date: 8/27/2007	
SILTS & SANDS	CONSISTENCY	COLORS	MATERIALS	SAND TYPE	CHARACTERISTICS
VLo- Very Loose Lo- Loose MDe - Medium Dense De - Dense VDe - Very Dense	Vso - Very Soft So - Soft Mst - Medium Stiff St - Stiff Vst - Very Stiff H - Hard	Bk - Black, Bl - Blue Br - Brown, Dk - Dark G - Gray, Gr - Green Li - Light, R - Red Rdsh - Reddish Y - Yellow, W - White	Cl - Clay, Clayey Gr - Gravel Ls - Limestone Sa - Sand, Sandy SS - Sandstone Sh - Shale, Si - Silt, Silty SiS - Siltstone	F - Fine M - Medium Co - Coarse Si - Silty	Calc - Calcareous Lam - Laminated Lig - Lignite Nod - Nodules Org - Organic Sm - Seam, Sl - Slightly SlS - Slickensided

S A M P L E #	D E P T H F T	CONDITION OR CONSISTENCY	COLOR	MINOR MATERIALS OR ADJECTIVES	PREDOMINATE MATERIAL	CHARACTERISTICS OR MODIFICATIONS	M O I S T U R E DESC.	PID	L E L
	40	Vst	Li, Br	Si	Cl	Calc	Dry		
		"	"	"	"	"	"		
		"	"	"	"	"	"		
	45	"	"	"	"	TD - 45'	"		

COMPLETION RECORD

Type of Boring: <input checked="" type="checkbox"/> HSA <input type="checkbox"/> Other _____	Logged By: B. Collier	W.L. @ _____ Dry _____ Ft. On Completion; Caved to _____ 0 _____ Ft.
Pen From: _____ 5 _____ Ft. to _____ 45 _____ Ft.	Riser From _____ 0 _____ Ft. to _____ 5 _____ Ft.	Surface Completion <input type="checkbox"/> Flush <input type="checkbox"/> 2x2 Pad <input checked="" type="checkbox"/> 4x4 Pad <input type="checkbox"/> 6x6 Pad <input type="checkbox"/> Other _____
Gravel: _____ 3 _____ Ft. to _____ 45 _____ Ft.; Bentonite _____ 3 _____ Ft. to _____ 4 _____ Ft.		TD @ _____ 45 _____ Ft.

Installation Report\MontProbe22R.dwg Layout: 22R User: wrm



**GAS MONITORING PROBE DETAIL
GP-22R**

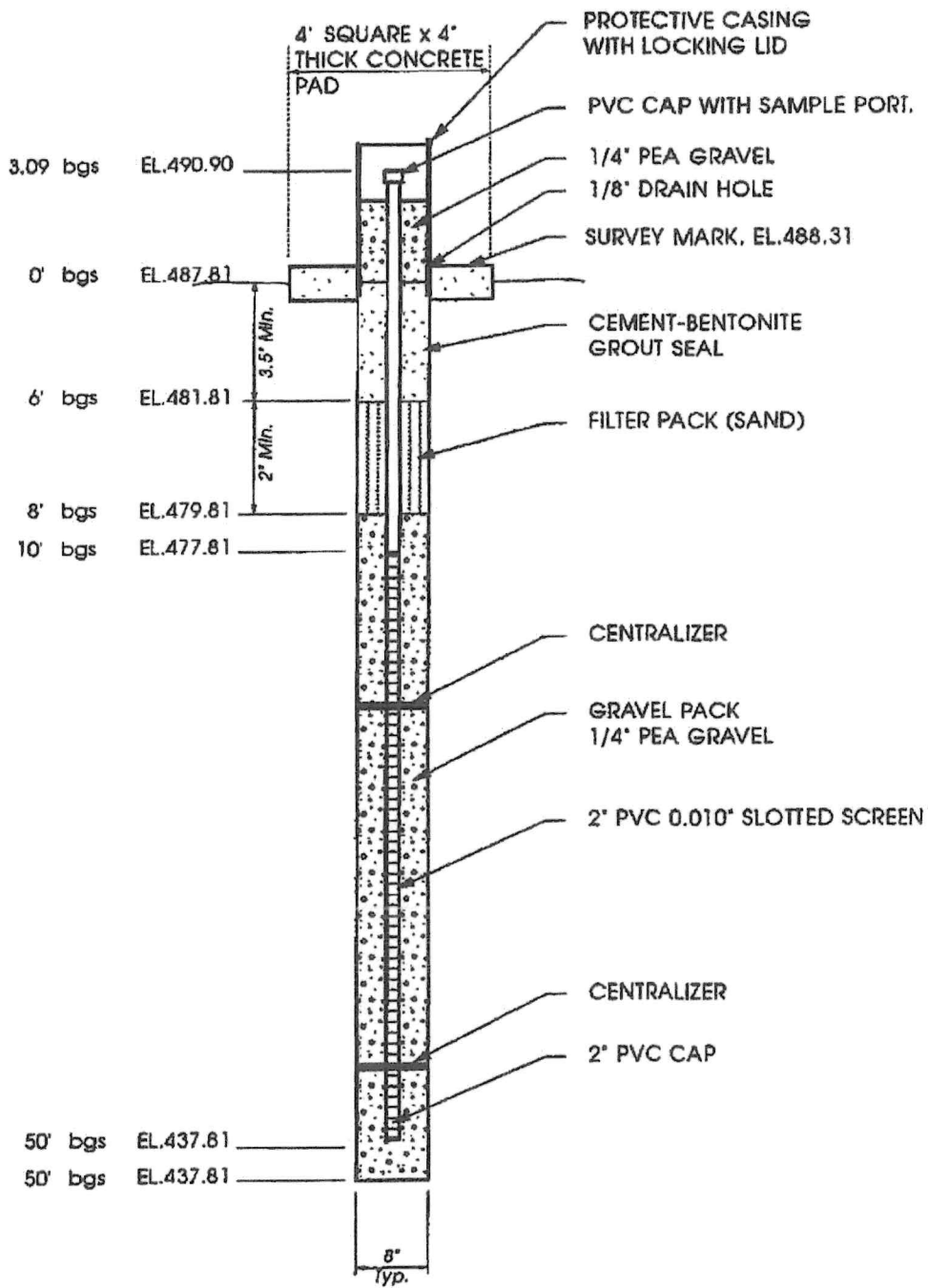
**WASTE MANAGEMENT
SKYLINE LANDFILL
GAS MONITORING PROBE AS-BUILTS**



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

ISSUED FOR INFORMATIONAL PURPOSES ONLY

REVISIONS						DSN.	MRW	DATE :	02/08	DRAWING	
REV	DATE	DESCRIPTION	DNM BY	DES BY	CHK BY	APP BY	CHK.	MRW	SCALE :		1
									GRAPHIC		
								CHK.	MRW	DWG :	MontProbe22R.dwg



**GAS PROBE
INSTALLATION**

**Skyline Landfill & Recycling Center
GAS PROBE 28**


BLACK & VEATCH

8/17/95 20285.100

LOG OF BORING GAS PROBE GP-28

WASTE MANAGEMENT OF TEXAS
MSW Permit 42-C
Dallas & Ellis County, Texas

TYPE OF BORING: HSA

LOCATION: I-94
57+20

DEPTH, FT.

SYMBOL SAMPLE

SOIL DESCRIPTION

ELEVATION: Top Pipe 490.90
Ground 487.81

			Firm to stiff, dark brown CLAY.	
				(CH)
5			Firm to very stiff, tan and gray CLAY (Weathered Taylor) with iron stains and occasional selenite crystals.	
10				
			Occasional light gray and iron staining.	
15				
20			Tan and light gray.	
25				
30				
35			Iron staining.	

7/28/95 26286.110

LOG OF BORING GAS PROBE GP-28 (cont.)

WASTE MANAGEMENT OF TEXAS
MSW Permit 42-C
Dallas & Ellis County, Texas

TYPE OF BORING: HSA			LOCATION:
DEPTH, FT.	SYMBOL	SAMPLES	ELEVATION:
40	/ / / / /		
			Occasional dark gray.
45	/ / / / /		
			46' (CH)
			Hard, dark gray CLAY (Taylor Marl).
50	- - - - -		
			Total Depth 50' (CH)
55			
60			
65			
70			

Notes:

7/28/95 26264.110

LOG OF BORING NO. GP-34R

Project Description: **Skyline Landfill**
1201 North Central Avenue, Ferris, Texas

Biggs and Mathews
 1700 Robert Road Ste 100
 Mansfield TX 76063
 Phone: 817-563-1144

Depth, feet	Samples	Symbol / USCS	Location: E 2251191.100 N 322529.990 Top of Casing El.: 443.53 ft. msl Surface El.: 440.46 ft. msl Completion Depth: 35.0 ft. Date Boring Started: 8/1/2019 Date Boring Completed: 8/1/2019	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
MATERIAL DESCRIPTION												
5			Clay, dark brown and gray									
10												
15												
20				420.46								
25			Clay, weathered shale, light gray, hard									
30												
35			Clay (marl), unweathered, gray to dark gray, hard									
40												
45												
50												

BME LOG SKYLINE.GPJ B&M DATA TEMPLATE.GDT 4/2/20

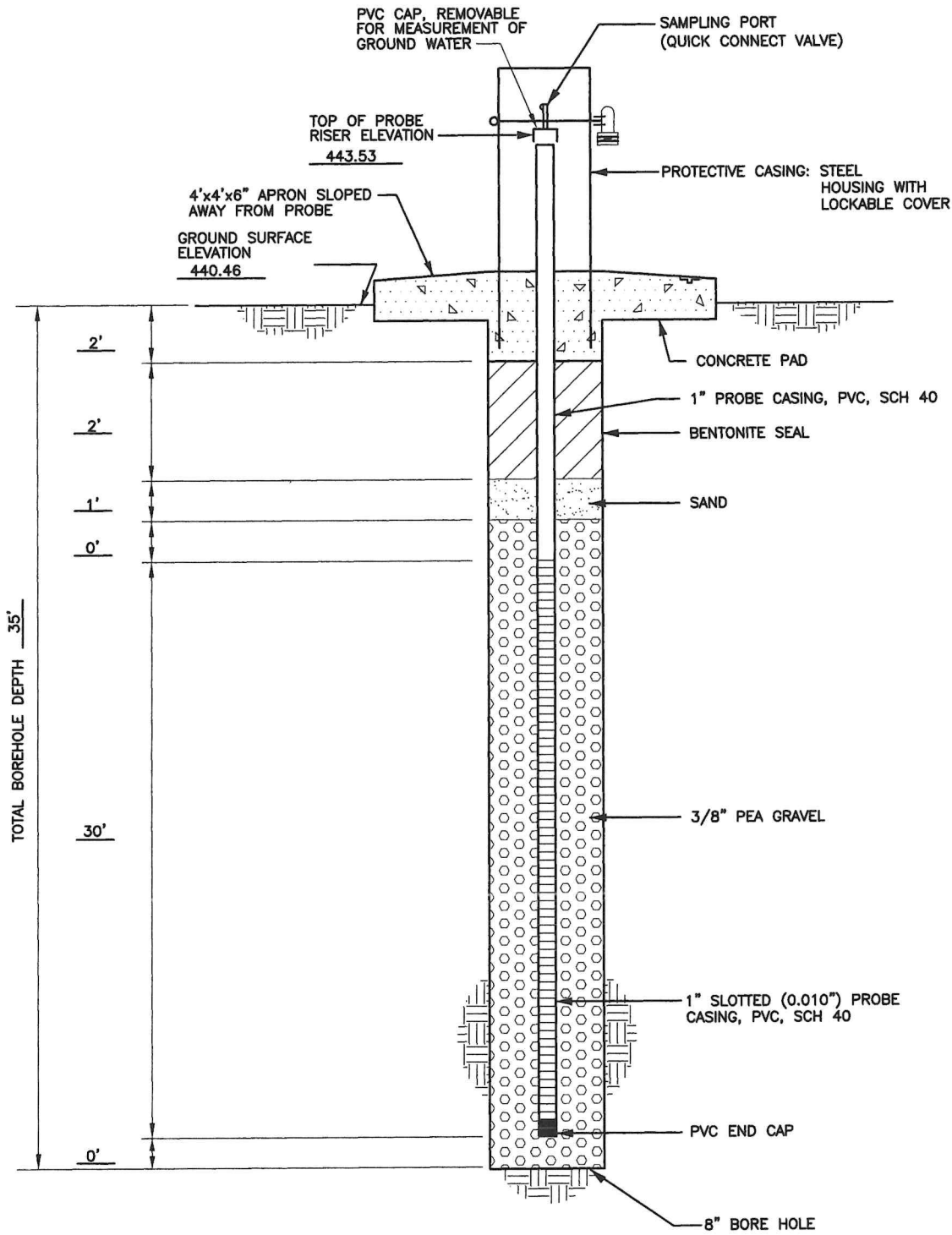
Contractor: **H/ET**
 Method: **Hollow Stem Auger**
 Sampling Method: **Cuttings**
 Geologist/Engineer: **S. Stamoulis**
 Project No.: **101.01.120**

Groundwater Observations	
Date	Depth

Remarks: Installed gas probe upon completion of borehole



C:\Users\hparker\OneDrive\Work From Home\Skyline\F Drive\2020 Probe Installation Report\Skyline ProbeDetail.dwg User: HParker Layout: GP-34R



**INSTALLATION REPORT
GAS MONITORING PROBE**

**WASTE MANAGEMENT OF TEXAS, INC.
SKYLINE LANDFILL**



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

REVISIONS						
REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY

DSN.	JHP	DATE :	04/2020	FIGURE
DWN.	SRC	SCALE :	GRAPHIC	GP-34R
CHK.	JHP	DWG :	Skyline ProbeDetail.dwg	

LOG OF GAS MONITORING PROBE NO. GP-50

Project Description: **Skyline Landfill**

1201 North Central Avenue, Ferris, Texas

Biggs and Mathews Environmental, Inc.
 1700 Robert Rd. Ste 100
 Mansfield, TX 76063
 Phone: 817-563-1144

Depth, feet	Samples	Symbol / USCS	Location: E 2255827.930 N 320210.231 Top of Casing El.: 488.18 ft. msl Surface El.: 485.38 ft. msl Completion Depth: 81.0 ft. Date Boring Started: 6/29/15 Date Boring Completed: 6/29/15	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
MATERIAL DESCRIPTION												
5			CLAY, dark brown and black, with rootlets, stiff									
10			- tan to light brown, with trace calcareous nodules, stiff to very stiff									
15												
20												
25												
30												
35												
40												
45				440.38								
50			SHALE (unweathered), dark gray, hard									

BME LOG SKYLINE.GPJ B&M DATA TEMPLATE.GDT 2/19/16

Drilling Contractor: **H/ET**
 Drilling Method: **Solid Flight Augers**
 Sampling Method:
 Geologist/Engineer: **S. Stamoulis**
 Project No.: **101.01.120**

Groundwater Observations	
Date	Depth

Remarks: Installed gas probe upon completion of borehole.




The stratification lines represent approximate strata boundaries. In situ, the transition may be gradual.
 LOGS ARE NOT INTENDED TO BE USED SEPARATELY FROM THE ORIGINAL REPORT.

LOG OF GAS MONITORING PROBE NO. GP-50

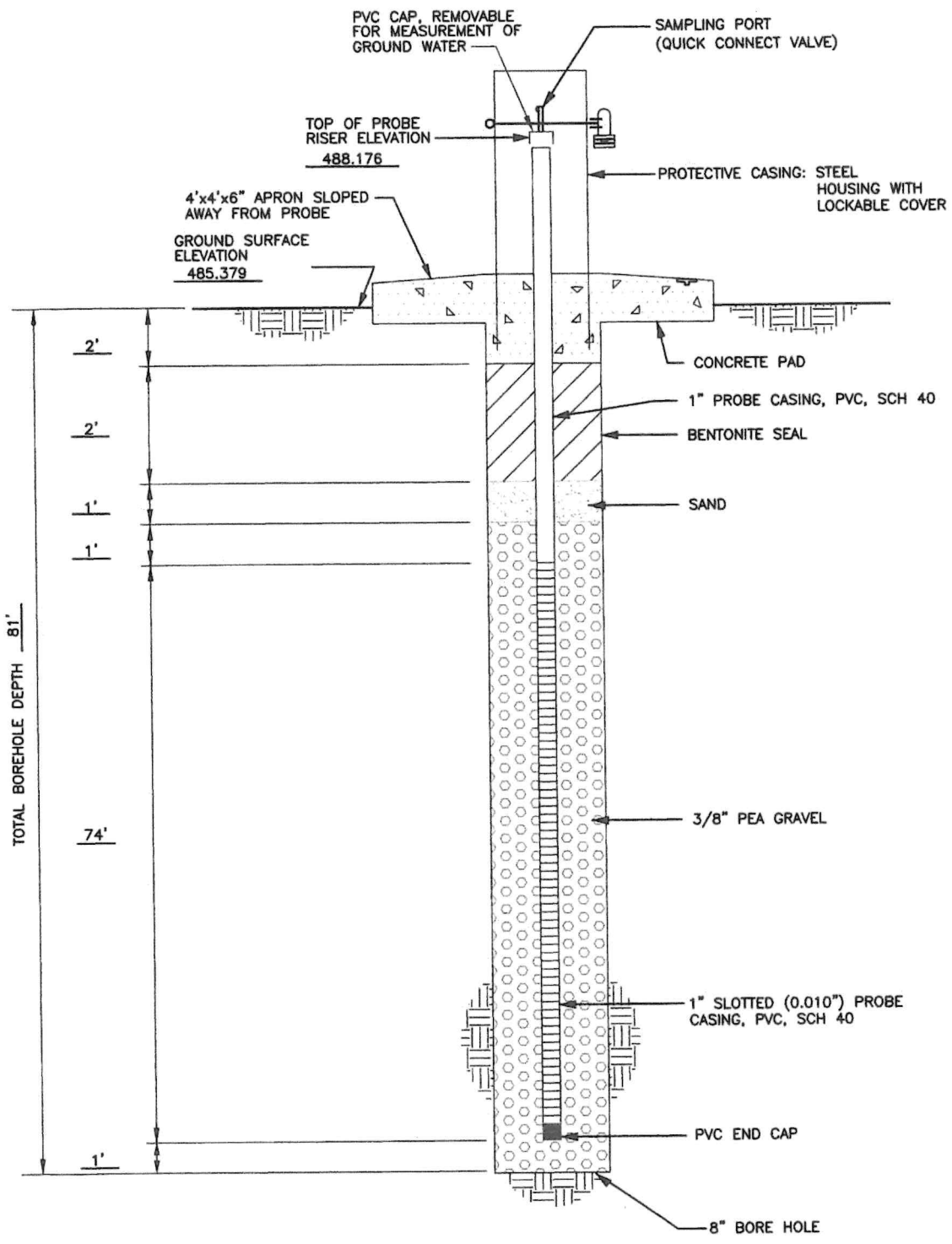
Biggs and Mathews Environmental, Inc.
1700 Robert Rd. Ste 100
Mansfield, TX 76063
Phone: 817-563-1144

Project Description: **Skyline Landfill**
1201 North Central Avenue, Ferris, Texas

Depth, feet	Samples	Symbol / USCS	Location: E 2255827.930 N 320210.231 Top of Casing El.: 488.18 ft. msl Surface El.: 485.38 ft. msl Completion Depth: 81.0 ft. Date Boring Started: 6/29/15 Date Boring Completed: 6/29/15	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							
MATERIAL DESCRIPTION																			
55			SHALE (unweathered), dark gray, hard (continued)																
60																			
65																			
70																			
75																			
80				404.38															
85																			
90																			
95																			
100																			
Drilling Contractor: H/ET Drilling Method: Solid Flight Augers Sampling Method: Geologist/Engineer: S. Stamoulis Project No.: 101.01.120				Groundwater Observations <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">Date</th> <th style="width: 50%;">Depth</th> </tr> </thead> <tbody> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </tbody> </table>		Date	Depth							Remarks: Installed gas probe upon completion of borehole.					
Date	Depth																		

BME LOG SKYLINE GPJ B&M DATA TEMPLATE.GDT 2/19/16

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**INSTALLATION REPORT
GAS MONITORING PROBE**

**WASTE MANAGEMENT OF TEXAS, INC.
SKYLINE LANDFILL**



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

REVISIONS						
REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY

DSN. JHP	DATE : 01/06	FIGURE GP-50
DWN. SRC	SCALE : GRAPHIC	
CHK. JHP	DWG : Skyline ProbeDetail.dwg	

LOG OF GAS MONITORING PROBE NO. GP-51

Project Description: **Skyline Landfill**

1201 North Central Avenue, Ferris, Texas

Biggs and Mathews Environmental, Inc.
1700 Robert Rd. Ste 100
Mansfield, TX 76063
Phone: 817-563-1144

Depth, feet	Samples	Symbol / USCS	Location: E 2255301.618 N 320413.004	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
			MATERIAL DESCRIPTION									
5			CLAY, dark brown to black, hard - light brown to tan, stiff to very stiff									
10												
15												
20												
25												
30			- brown to greenish brown									
35												
40												
45				434.57								
45			SHALE (unweathered), dark gray, hard									
50												

BME LOG_SKYLINE.GPJ_B&M DATA TEMPLATE.GDT 2/19/16

Drilling Contractor: H/ET	Groundwater Observations	
Drilling Method: Solid Flight Augers	Date	
Sampling Method:	Depth	
Geologist/Engineer: S. Stamoulis		
Project No.: 101.01.120		

Remarks: Installed gas probe upon completion of borehole.



LOG OF GAS MONITORING PROBE NO. GP-51

Project Description: **Skyline Landfill**

1201 North Central Avenue, Ferris, Texas

Biggs and Mathews Environmental, Inc.
 1700 Robert Rd. Ste 100
 Mansfield, TX 76063
 Phone: 817-563-1144

Depth, feet	Samples	Symbol / USCS	Location: E 2255301.618 N 320413.004	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
			Top of Casing El.: 481.42 ft. msl Surface El.: 478.57 ft. msl Completion Depth: 71.0 ft. Date Boring Started: 7/7/15 Date Boring Completed: 7/7/15									
			MATERIAL DESCRIPTION									
55			SHALE (unweathered), dark gray, hard <i>(continued)</i>									
60												
65												
70				407.57								
75												
80												
85												
90												
95												
100												

BME LOG SKYLINE.GPJ B&M DATA TEMPLATE.GDT 2/19/16

Drilling Contractor: **H/ET**
 Drilling Method: **Solid Flight Augers**
 Sampling Method:
 Geologist/Engineer: **S. Stamoulis**
 Project No.: **101.01.120**

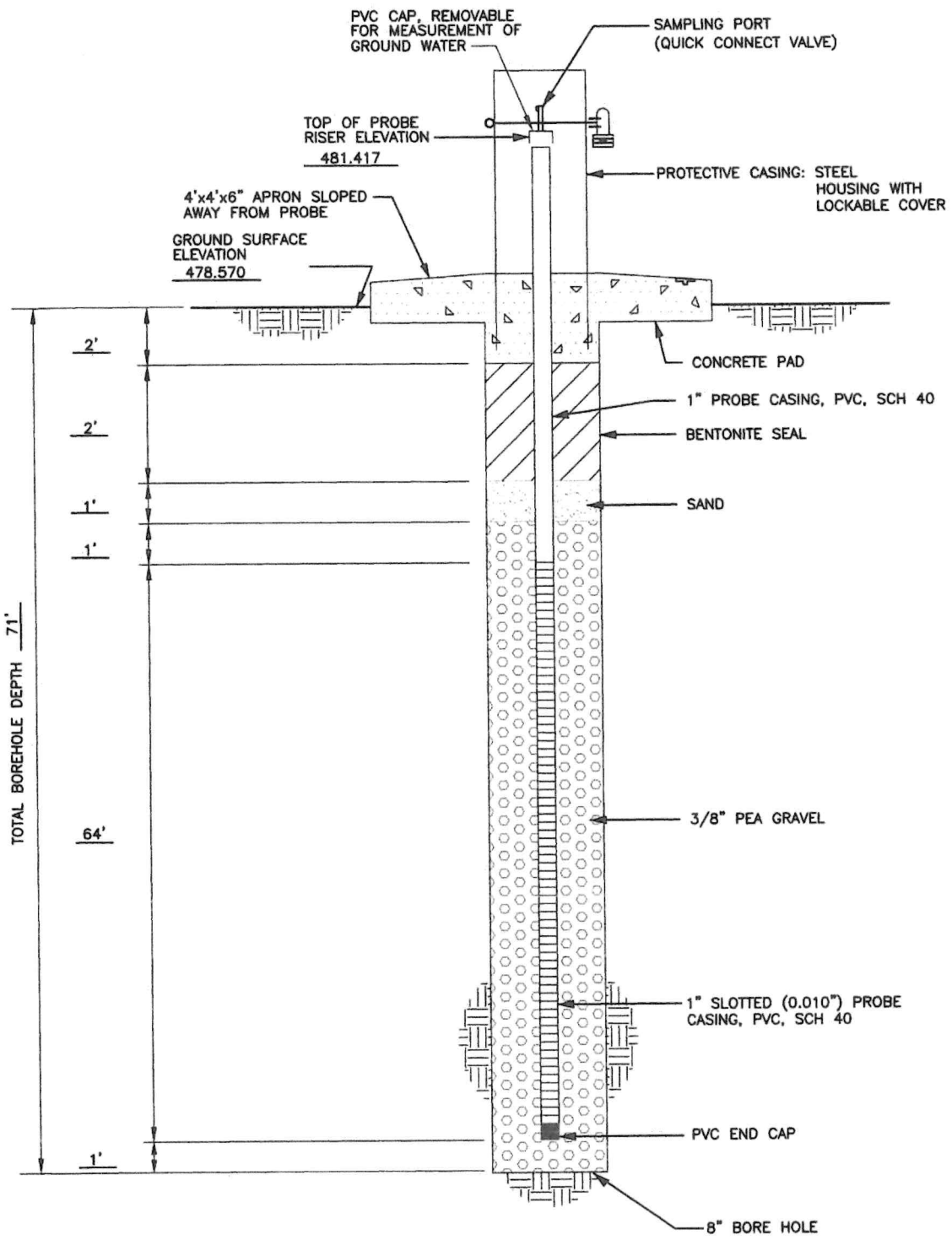
Groundwater Observations	
Date	Depth


Remarks: Installed gas probe upon completion of borehole.



The stratification lines represent approximate strata boundaries. In situ, the transition may be gradual.
 LOGS ARE NOT INTENDED TO BE USED SEPARATELY FROM THE ORIGINAL REPORT.

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INSTALLATION REPORT GAS MONITORING PROBE																												
WASTE MANAGEMENT OF TEXAS, INC. SKYLINE LANDFILL																												
	BIGGS & MATHEWS ENVIRONMENTAL CONSULTING ENGINEERS MANSFIELD • WICHITA FALLS 817-563-1144																											
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="7">REVISIONS</th> </tr> <tr> <th>REV</th> <th>DATE</th> <th>DESCRIPTION</th> <th>DWN BY</th> <th>DES BY</th> <th>CHK BY</th> <th>APP BY</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	REVISIONS							REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY								<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>DSN. JHP</td> <td>DATE : 01/06</td> </tr> <tr> <td>DWN. SRC</td> <td>SCALE : GRAPHIC</td> </tr> <tr> <td>CHK. JHP</td> <td>DWG : Skyline ProbeDetail.dwg</td> </tr> </table>	DSN. JHP	DATE : 01/06	DWN. SRC	SCALE : GRAPHIC	CHK. JHP	DWG : Skyline ProbeDetail.dwg
REVISIONS																												
REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY																						
DSN. JHP	DATE : 01/06																											
DWN. SRC	SCALE : GRAPHIC																											
CHK. JHP	DWG : Skyline ProbeDetail.dwg																											
FIGURE GP-51																												

LOG OF GAS MONITORING PROBE NO. GP-52

Project Description: **Skyline Landfill**

1201 North Central Avenue, Ferris, Texas

Biggs and Mathews Environmental, Inc.
 1700 Robert Rd. Ste 100
 Mansfield, TX 76063
 Phone: 817-563-1144

Depth, feet	Samples	Symbol / USCS	Location: E 2255055.769 N 320377.508	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
Top of Casing El.: 474.31 ft. msl Surface El.: 471.59 ft. msl Completion Depth: 79.0 ft. Date Boring Started: 7/7/15 Date Boring Completed: 7/7/15												
MATERIAL DESCRIPTION												
5			CLAY, dark brown and black, hard									
10			- tan and light brown, stiff to very stiff									
15												
20			- brown and very stiff below 20.0'									
25												
30												
35												
40												
45												
50												
			SHALE (unweathered), dark gray, hard	435.59								

BME LOG SKYLINE.GPJ B&M DATA TEMPLATE.GDT 2/19/16

Drilling Contractor: **H/ET**
 Drilling Method: **Solid Flight Augers**
 Sampling Method:
 Geologist/Engineer: **S. Stamoulis**
 Project No.: **101.01.120**

Groundwater Observations	
Date	Depth

Remarks: Installed gas probe upon completion of borehole.




LOG OF GAS MONITORING PROBE NO. GP-52

Project Description: **Skyline Landfill**

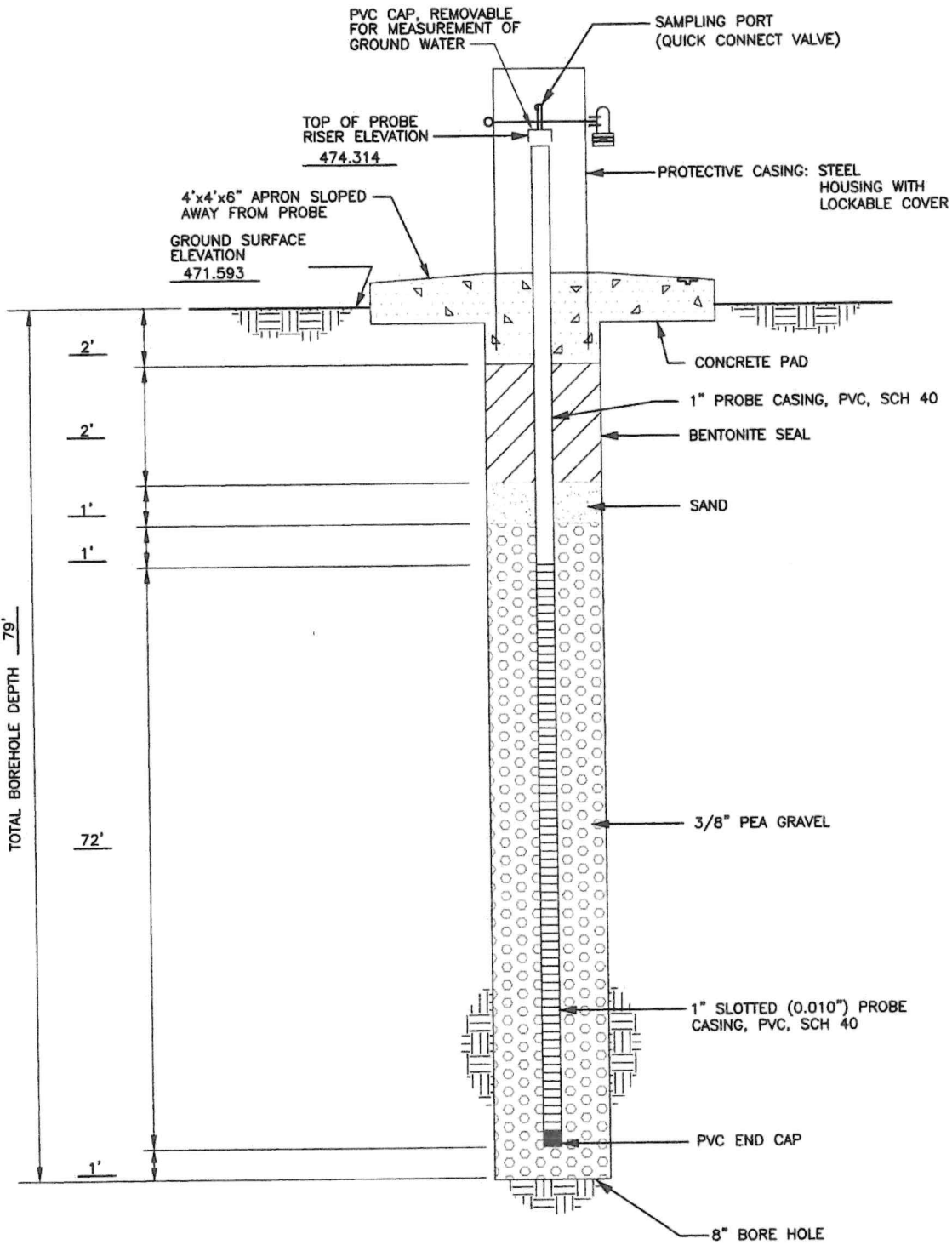
1201 North Central Avenue, Ferris, Texas

Biggs and Mathews Environmental, Inc.
 1700 Robert Rd. Ste 100
 Mansfield, TX 76063
 Phone: 817-563-1144

Depth, feet	Samples	Symbol / USCS	Location: E 2255055.769 N 320377.508	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
			Top of Casing El.: 474.31 ft. msl Surface El.: 471.59 ft. msl Completion Depth: 79.0 ft. Date Boring Started: 7/7/15 Date Boring Completed: 7/7/15									
			MATERIAL DESCRIPTION									
55 60 65 70 75 80 85 90 95 100		SHALE	SHALE (unweathered), dark gray, hard (continued)	392.59								
Drilling Contractor: H/ET Drilling Method: Solid Flight Augers Sampling Method: Geologist/Engineer: S. Stamoulis Project No.: 101.01.120			Groundwater Observations Date _____ Depth _____		Remarks: Installed gas probe upon completion of borehole.							


BME LOG SKYLINE.GPJ B&M DATA TEMPLATE.GDT 2/19/16

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**INSTALLATION REPORT
GAS MONITORING PROBE**

**WASTE MANAGEMENT OF TEXAS, INC.
SKYLINE LANDFILL**



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

REVISIONS						DSN.	JHP	DATE :	01/06	FIGURE
REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY	DWN.	SRC	SCALE :	GRAPHIC
							CHK.	JHP	DWG :	Skyline ProbeDetail.dwg

GP-52

LOG OF GAS MONITORING PROBE NO. GP-53R

Project Description: **Skyline Landfill**

1201 North Central Avenue, Ferris, Texas

Biggs and Mathews Environmental
 1700 Robert Road, Ste 100
 Mansfield, Texas 76063-5892
 Phone: 817-563-1144

Depth, feet	Samples	Symbol / USCS	Location: E 2254946.15 N 319808.92	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
			Surface El.: 467.31 ft. msl Completion Depth: 32.0 ft. Date Boring Started: 3/24/2025 Date Boring Completed: 3/25/2025									
			MATERIAL DESCRIPTION									
			Clay, dark brown, calcareous nodules									
5			Clay, light brown to tan, weathered		462.31							
10			- calcareous nodules									
15												
20												
25			- with ferrous stains									
30					435.31							
35												
40												
45												
50												

BME LOG SKYLINE.GPJ B&M DATA TEMPLATE.GDT 5/7/25

Contractor: **H/ET**
 Method: **Hollow Stem Auger**
 Sampling Method: **Cuttings**
 Geologist/Engineer: **S. Stamoulis**
 Project No.: **101.01.925**

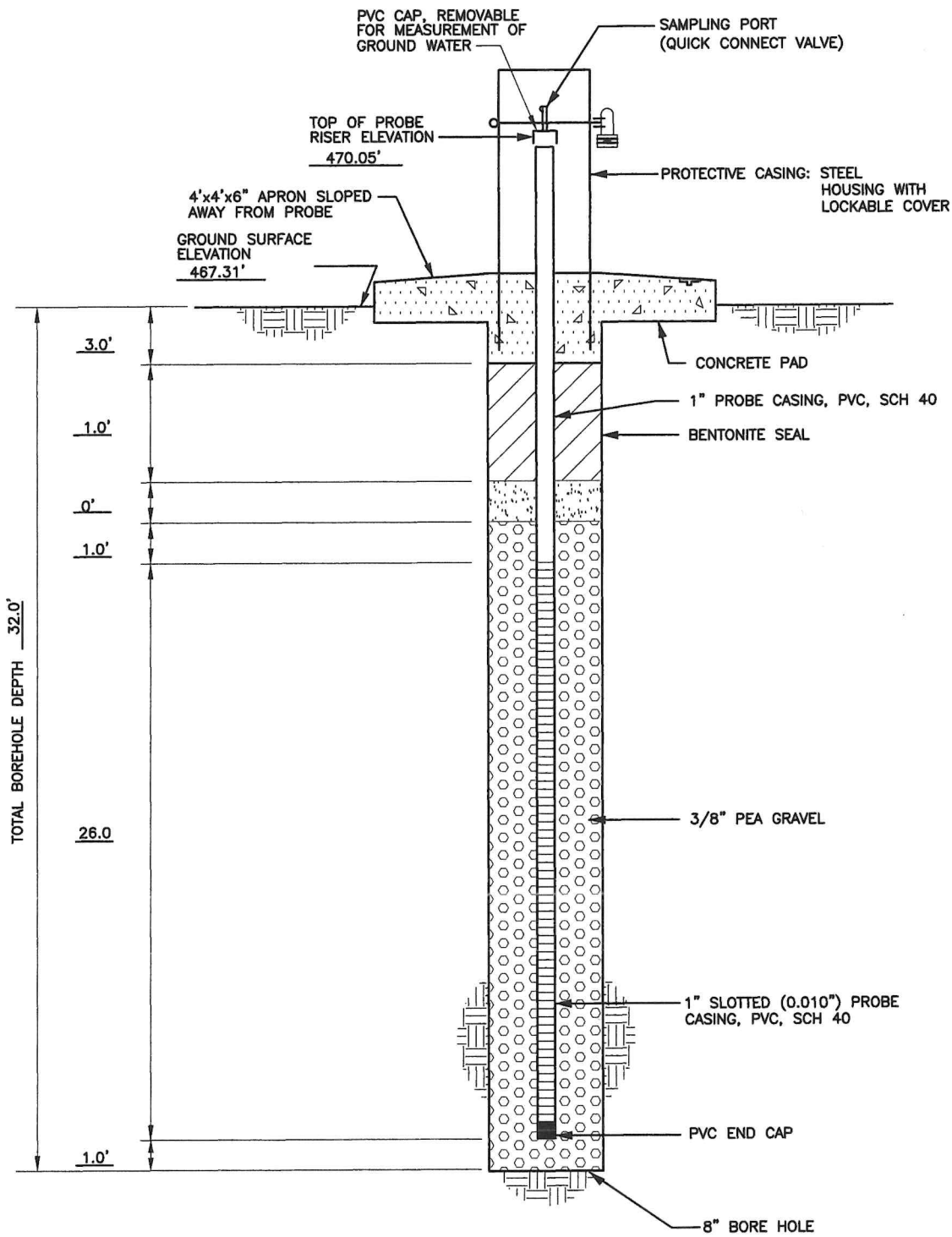
Groundwater Observations	
Date	Depth


Remarks: Installed gas probe upon completion of borehole.



The stratification lines represent approximate strata boundaries. In situ, the transition may be gradual.
LOGS ARE NOT INTENDED TO BE USED SEPARATELY FROM THE ORIGINAL REPORT.

O:\Waste Management\Skylines\LF\2025 Probe Installation Report\03-25 Probr s.dwg User: NBazil Layout: GP-53R



INSTALLATION REPORT GAS MONITORING PROBE		
WASTE MANAGEMENT OF TEXAS, INC. SKYLINE LANDFILL		
 HYDROGEOLOGIC/ENVIRONMENTAL TESTING GROUNDWATER SPECIALISTS ALVIN, TEXAS 409-927-4500		
DSN.	DATE : 03-25-25	FIGURE
DWN.	SCALE : GRAPHIC	GP-53R
CHK.	DWG : 03-25 ProbeDetails.dwg	

LOG OF GAS MONITORING PROBE NO. GP-54R

Project Description: **Skyline Landfill**

1201 North Central Avenue, Ferris, Texas

Biggs and Mathews Environmental
 1700 Robert Road, Ste 100
 Mansfield, Texas 76063-5892
 Phone: 817-563-1144

Depth, feet	Samples	Symbol / USCS	Location: E 2254416.29 N 319669.94	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
			Surface El.: 477.04 ft. msl Completion Depth: 36.0 ft. Date Boring Started: 3/24/2025 Date Boring Completed: 3/25/2025									
			MATERIAL DESCRIPTION									
			Clay, dark brown, with calcareous nodules									
5			Clay, tan to light brown, weathered									
10			- with calcareous nodules									
15												
20												
25			- ferrous stains									
30												
35												
40												
45												
50												

BME LOG SKYLINE.GPJ B&M DATA TEMPLATE.GDT 5/7/25

Contractor: **H/ET**
 Method: **Hollow Stem Auger**
 Sampling Method: **Cuttings**
 Geologist/Engineer: **S. Stamoulis**
 Project No.: **101.01.925**

Groundwater Observations	
Date	Depth

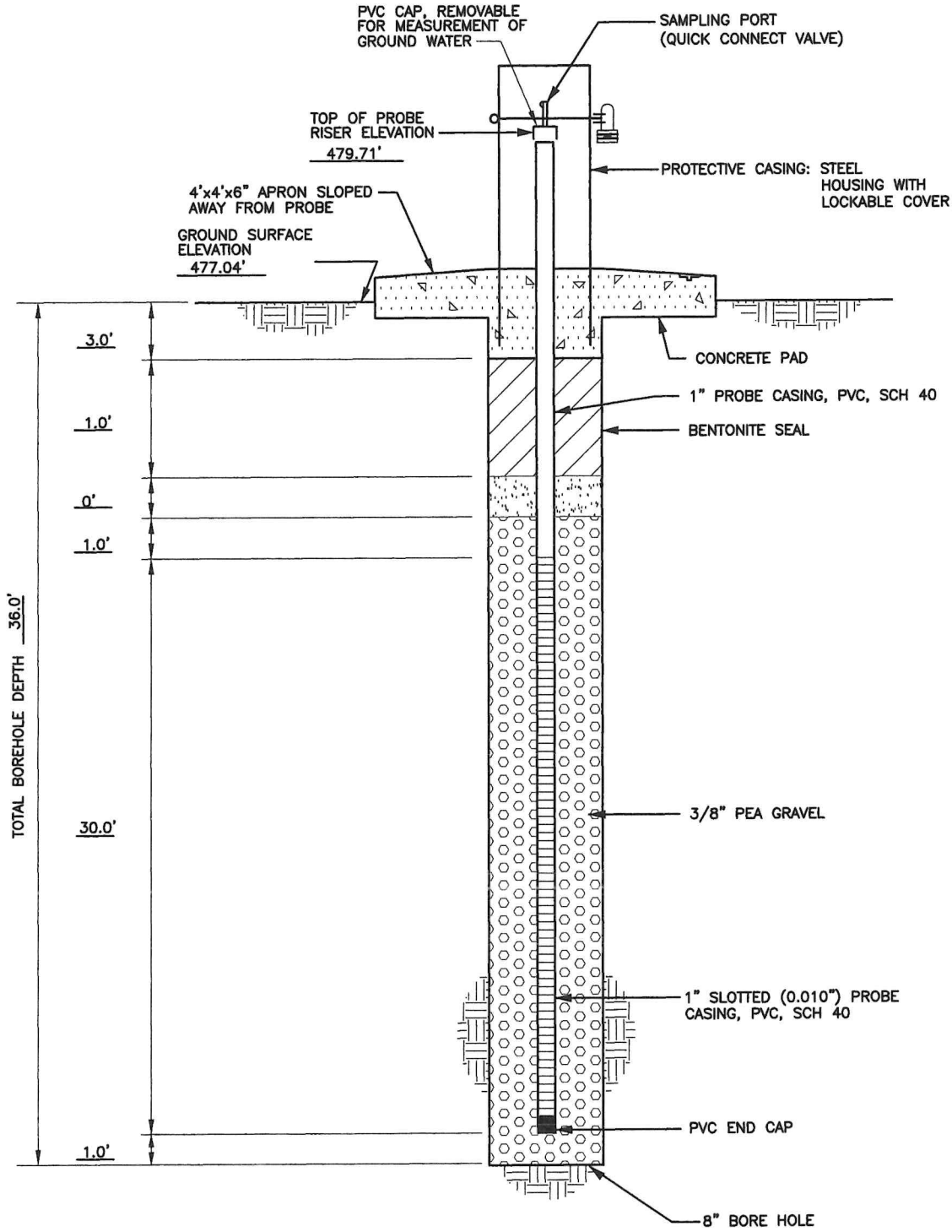
Remarks: Installed gas probe upon completion of borehole.




LOG OF GAS MONITORING PROBE NO. GP-54R

The stratification lines represent approximate strata boundaries. In situ, the transition may be gradual.
 LOGS ARE NOT INTENDED TO BE USED SEPARATELY FROM THE ORIGINAL REPORT.

O:\Waste Management\Skylines\FC\2025 Probe Installation Report\03-25 Probe Details.dwg User: NBazil Layout: GP-54R




INSTALLATION REPORT GAS MONITORING PROBE		
WASTE MANAGEMENT OF TEXAS, INC. SKYLINE LANDFILL		
 HYDROGEOLOGIC/ENVIRONMENTAL TESTING GROUNDWATER SPECIALISTS ALVIN, TEXAS 409-927-4500		
DSN.	DATE : 03-25-25	FIGURE
DWN.	SCALE : GRAPHIC	GP-54R
CHK.	DWG : 03-25 ProbeDetails.dwg	

LOG OF GAS MONITORING PROBE NO. GP-55

Project Description: **Skyline Landfill**

1201 North Central Avenue, Ferris, Texas

Biggs and Mathews Environmental, Inc.
1700 Robert Rd. Ste 100
Mansfield, TX 76063
Phone: 817-563-1144

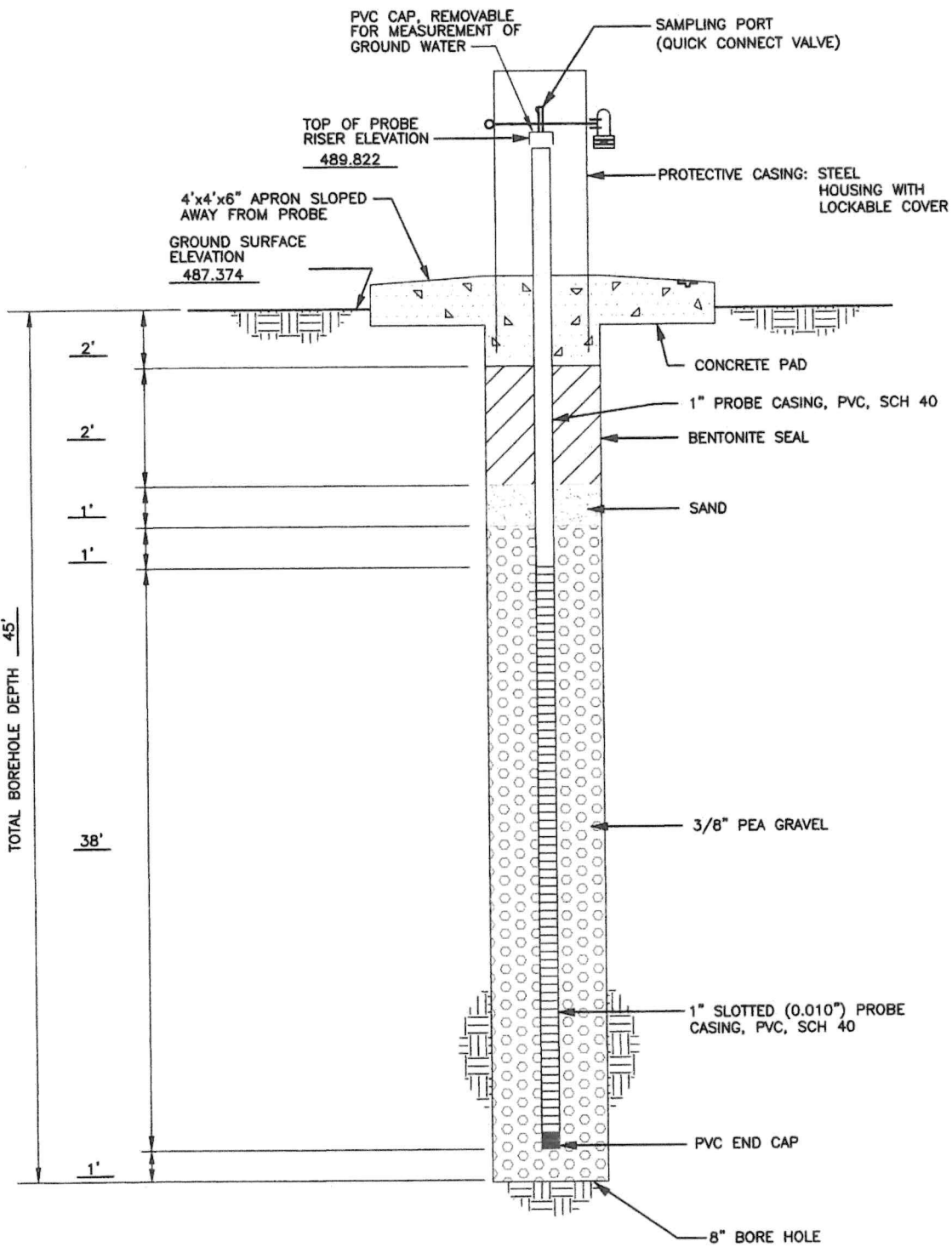
Depth, feet	Samples	Symbol / USCS	Location: E 2253723.866 N 319361.216 Top of Casing El.: 489.82 ft. msl Surface El.: 487.37 ft. msl Completion Depth: 45.0 ft. Date Boring Started: 6/29/15 Date Boring Completed: 6/29/15	Hand Penetrometer, tsf	Penetration Blows/Foot	Moisture Content, %	Unit Dry Weight, lb/cu ft.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
MATERIAL DESCRIPTION												
5		[Hatched]	CLAY, dark brown and black, with rootlets, stiff									
10		[Hatched]	- tan to light brown, with trace calcareous nodules, stiff to very stiff									
15		[Hatched]										
20		[Hatched]										
25		[Hatched]										
30		[Hatched]	- brown									
35		[Hatched]										
40		[Hatched]										
45		[Hatched]		442.37								
50		[Hatched]										
Drilling Contractor: H/ET Drilling Method: Solid Flight Augers Sampling Method: Geologist/Engineer: S. Stamoulis Project No.: 101.01.120				Groundwater Observations Date: _____ Depth: _____		Remarks: Installed gas probe upon completion of borehole.						


BME LOG SKYLINE.GPJ B&M DATA TEMPLATE.GDT 2/19/16

LOG OF GAS MONITORING PROBE NO. GP-55

The stratification lines represent approximate strata boundaries. In situ, the transition may be gradual.
LOGS ARE NOT INTENDED TO BE USED SEPARATELY FROM THE ORIGINAL REPORT.

F:\Pro\101\01\120\Attachment G\Probe Logs\Skyline ProbeDetail.dwg Layout 55 User: aholderness



INSTALLATION REPORT GAS MONITORING PROBE	
WASTE MANAGEMENT OF TEXAS, INC. SKYLINE LANDFILL	
	BIGGS & MATHEWS ENVIRONMENTAL CONSULTING ENGINEERS MANSFIELD • WICHITA FALLS 817-563-1144
DSN. JHP DATE : 01/06 DWN. SRC SCALE : GRAPHIC CHK. JHP DWG : Skyline ProbeDetail.dwg	FIGURE GP-55

REVISIONS						
REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY

LOG OF GAS MONITORING PROBE NO. GP-56

Biggs and Mathews Environmental, Inc.
1700 Robert Rd. Ste 100
Mansfield, TX 76063
Phone: 817-563-1144

Project Description: **Skyline Landfill**
1201 North Central Avenue, Ferris, Texas

Depth, feet	Samples	Symbol / USCS	Location: E 2253536.216 N 318962.404	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
			Top of Casing El.: 488.41 ft. msl Surface El.: 485.91 ft. msl Completion Depth: 47.0 ft. Date Boring Started: 6/29/15 Date Boring Completed: 6/29/15									
MATERIAL DESCRIPTION												
5			CLAY, dark brown and black, with rootlets, stiff to hard									
10			- light brown and tan									
15												
20												
25												
30			- brown and tan									
35												
40												
45												
50				438.91								

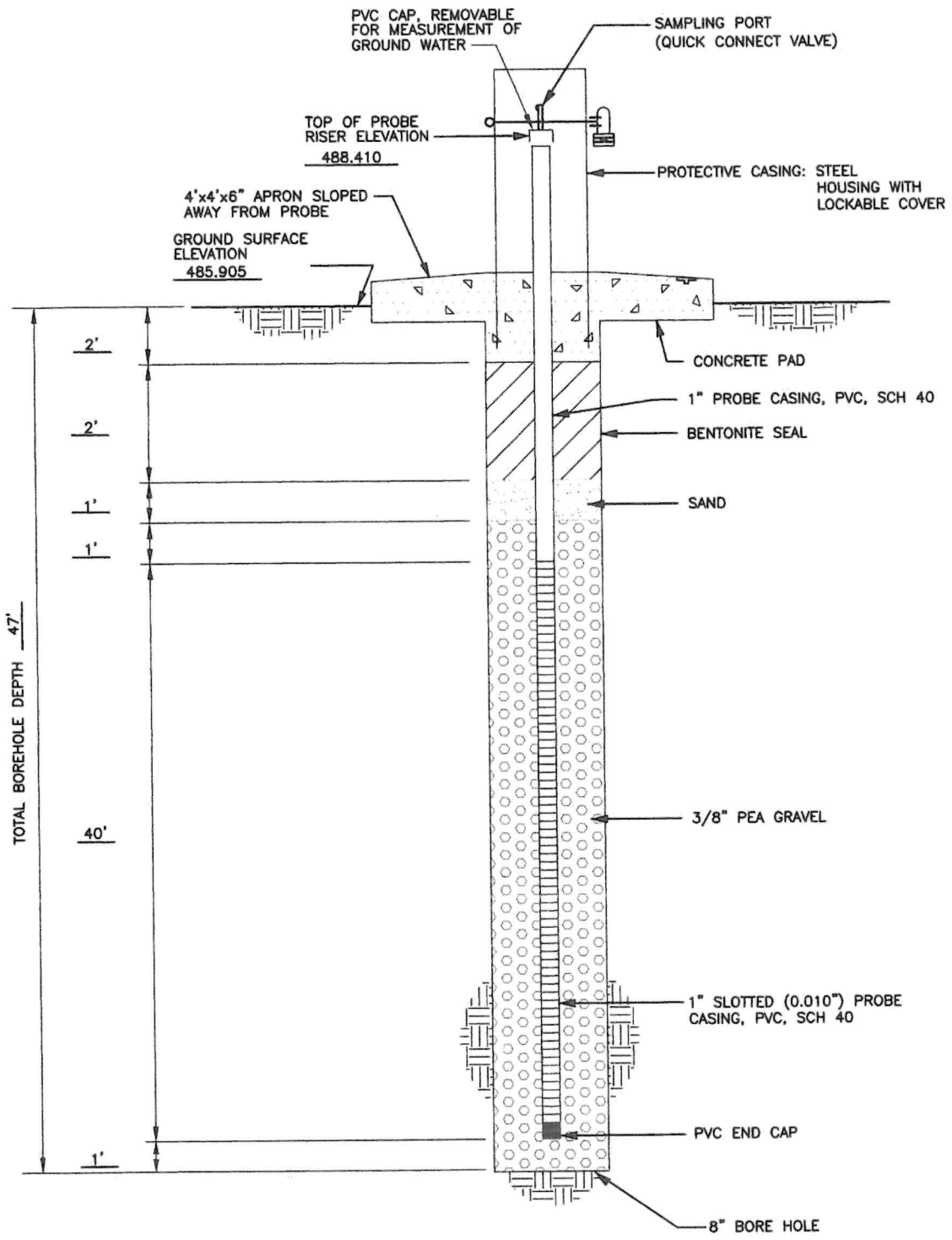
BME LOG SKYLINE GPJ B&M DATA TEMPLATE.GDT 2/19/16

Drilling Contractor: H/ET	Groundwater Observations	Remarks: Installed gas probe upon completion of borehole.
Drilling Method: Solid Flight Augers	Date	
Sampling Method:	Depth	
Geologist/Engineer: S. Stamoulis		
Project No.: 101.01.120		




The stratification lines represent approximate strata boundaries. In situ, the transition may be gradual.
LOGS ARE NOT INTENDED TO BE USED SEPARATELY FROM THE ORIGINAL REPORT.

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**INSTALLATION REPORT
GAS MONITORING PROBE**

**WASTE MANAGEMENT OF TEXAS, INC.
SKYLINE LANDFILL**



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


REVISIONS						
REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY

DSN. JHP	DATE : 01/06	FIGURE GP-56
DWN. SRC	SCALE : GRAPHIC	
CHK. JHP	DWG : Skyline ProbeDetail.dwg	

LOG OF GAS MONITORING PROBE NO. GP-57

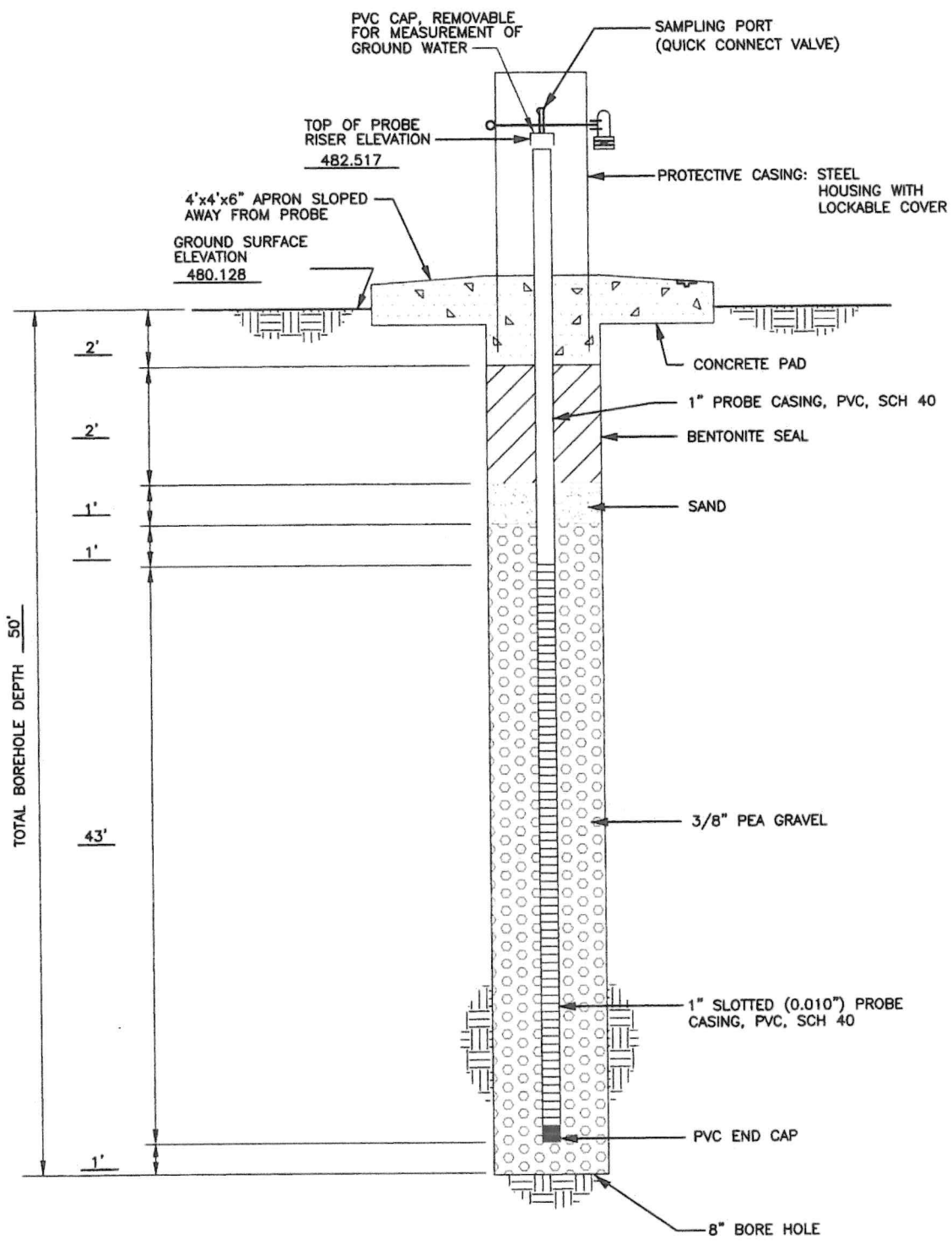
Biggs and Mathews Environmental, Inc.
1700 Robert Rd. Ste 100
Mansfield, TX 76063
Phone: 817-563-1144

Project Description: **Skyline Landfill**
1201 North Central Avenue, Ferris, Texas

Depth, feet	Samples	Symbol / USCS	Location: E 2252978.531 N 318909.625 Top of Casing El.: 482.52 ft. msl Surface El.: 480.13 ft. msl Completion Depth: 50.0 ft. Date Boring Started: 6/29/15 Date Boring Completed: 6/29/15	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
MATERIAL DESCRIPTION												
50 45 40 35 30 25 20 15 10 5		[Hatched Box]	CLAY, dark brown and black, stiff - tan to light brown, stiff to very stiff									
				430.13								
Drilling Contractor: H/ET Drilling Method: Solid Flight Augers Sampling Method: Geologist/Engineer: S. Stamoulis Project No.: 101.01.120			Groundwater Observations Date: _____ Depth: _____ _____ _____		Remarks: Installed gas probe upon completion of borehole.							

BME LOG SKYLINE.GPJ B&M DATA TEMPLATE.GDT 2/19/16

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**INSTALLATION REPORT
GAS MONITORING PROBE**

**WASTE MANAGEMENT OF TEXAS, INC.
SKYLINE LANDFILL**



BIGGS & MATHEWS
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MANSFIELD • WICHITA FALLS
817-563-1144

DSN. JHP	DATE : 01/06	FIGURE GP-57
DWN. SRC	SCALE : GRAPHIC	
CHK. JHP	DWG : Skyline ProbeDetail.dwg	


REVISIONS						
REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY

LOG OF GAS MONITORING PROBE NO. GP-58

Project Description: **Skyline Landfill**

1201 North Central Avenue, Ferris, Texas

Biggs and Mathews Environmental, Inc.
1700 Robert Rd. Ste 100
Mansfield, TX 76063
Phone: 817-563-1144

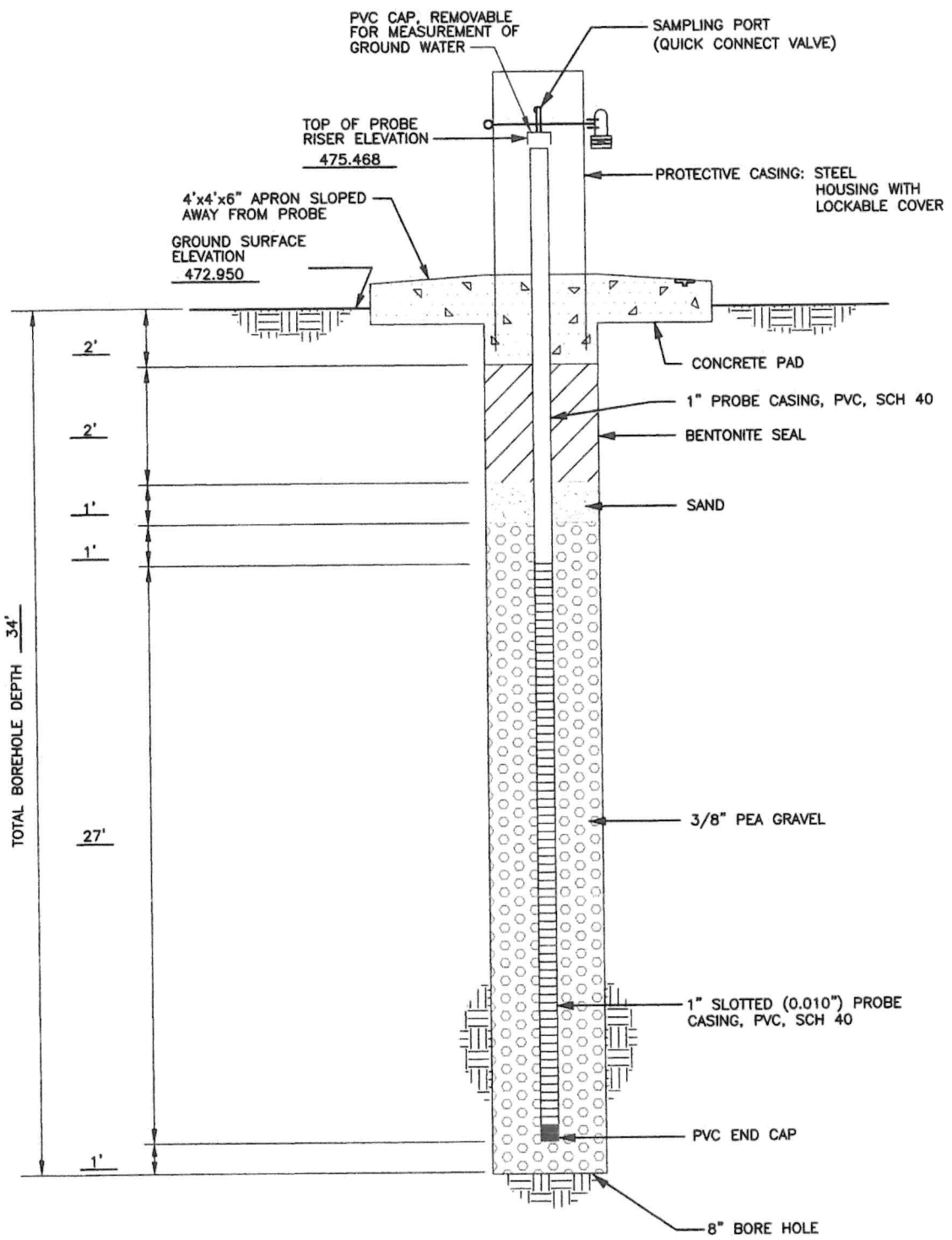
Depth, feet	Samples	Symbol / USCS	Location: E 2252355.070 N 318776.008	Hand Penetrometer, tsf	Penetration Blows/Foot	Moisture Content, %	Unit Dry Weight, lb/cu ft.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
			Top of Casing El.: 475.47 ft. msl Surface El.: 472.95 ft. msl Completion Depth: 34.0 ft. Date Boring Started: 7/8/15 Date Boring Completed: 7/8/15									
			MATERIAL DESCRIPTION									
5			CLAY, dark brown and black, with rootlets, stiff									
10			- light brown and tan, stiff to very stiff									
15												
20												
25												
30												
35				438.95								
40												
45												
50												
Drilling Contractor: H/ET Drilling Method: Solid Flight Augers Sampling Method: Geologist/Engineer: S. Stamoulis Project No.: 101.01.120				Groundwater Observations Date: _____ Depth: _____		Remarks: Installed gas probe upon completion of borehole.						

BME LOG SKYLINE.GPJ B&M DATA TEMPLATE.GDT 2/19/16

LOG OF GAS MONITORING PROBE NO. GP-58

The stratification lines represent approximate strata boundaries. In situ, the transition may be gradual.
LOGS ARE NOT INTENDED TO BE USED SEPARATELY FROM THE ORIGINAL REPORT.

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**INSTALLATION REPORT
GAS MONITORING PROBE**

**WASTE MANAGEMENT OF TEXAS, INC.
SKYLINE LANDFILL**



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817-563-1144

REVISIONS						
REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY

DSN. JHP	DATE : 01/06
DWN. SRC	SCALE : GRAPHIC
CHK. JHP	DWG : Skyline ProbeDetail.dwg

FIGURE
GP-58

LOG OF GAS MONITORING PROBE NO. GP-59R

Project Description: **Skyline Landfill**

1201 North Central Avenue, Ferris, Texas

Biggs and Mathews Environmental
 1700 Robert Road, Ste 100
 Mansfield, Texas 76063-5892
 Phone: 817-563-1144

Depth, feet	Samples	Symbol / USCS	Location: E 2252187.8 N 319258.1	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
			Top of Casing El.: 543.81 ft. msl Surface El.: 540.72 ft. msl Completion Depth: 104.0 ft. Date Boring Started: 9/2/2021 Date Boring Completed: 9/3/2021									
			MATERIAL DESCRIPTION									
5			Clay, brown and gray, very stiff (Fill)									
10												
15												
20			- brown and light brown, very stiff (Fill)									
25												
30												
35												
40			- brown and gray, very stiff (Fill)									
45												
50												

BME LOG SKYLINE.GPJ B&M DATA TEMPLATE.GDT 1/19/22

Contractor: **H/ET**
 Method: **Hollow Stem Auger**
 Sampling Method: **Cuttings**
 Geologist/Engineer: **S. Stamoulis**
 Project No.: **101.01.120**

Groundwater Observations	
Date	Depth

Remarks: Wet at 80.0'



LOG OF GAS MONITORING PROBE NO. GP-59R

Project Description: **Skyline Landfill**

1201 North Central Avenue, Ferris, Texas

Biggs and Mathews Environmental
 1700 Robert Road, Ste 100
 Mansfield, Texas 76063-5892
 Phone: 817-563-1144

Depth, feet	Samples	Symbol / USCS	Location: E 2252187.8 N 319258.1	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
			Top of Casing El.: 543.81 ft. msl Surface El.: 540.72 ft. msl Completion Depth: 104.0 ft. Date Boring Started: 9/2/2021 Date Boring Completed: 9/3/2021									
			MATERIAL DESCRIPTION									
55			Clay, brown and gray, very stiff (Fill) <i>(continued)</i>									
60				480.72								
65			Clay, brown and dark gray, hard, dry									
70												
75												
80			- brown and light brown, with gray, hard, wet									
85												
90												
95				445.72								
95			Shale (unweathered), dark gray, hard									
100												

BME LOG SKYLINE.GPJ B&M DATA TEMPLATE.GDT 1/19/22

Contractor: **H/ET**
 Method: **Hollow Stem Auger**
 Sampling Method: **Cuttings**
 Geologist/Engineer: **S. Stamoulis**
 Project No.: **101.01.120**

Groundwater Observations	
Date	Depth

Remarks: Wet at 80.0'



LOG OF GAS MONITORING PROBE NO. GP-59R

Project Description: Skyline Landfill
1201 North Central Avenue, Ferris, Texas

Biggs and Mathews Environmental
 1700 Robert Road, Ste 100
 Mansfield, Texas 76063-5892
 Phone: 817-563-1144

Depth, feet	Samples	Symbol / USCS	Location: E 2252187.8 N 319258.1	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
			Top of Casing El.: 543.81 ft. msl Surface El.: 540.72 ft. msl Completion Depth: 104.0 ft. Date Boring Started: 9/2/2021 Date Boring Completed: 9/3/2021									
			MATERIAL DESCRIPTION									
		[Hatched Pattern]	Shale (unweathered), dark gray, hard <i>(continued)</i>									
			436.72									
-105												
-110												
-115												
-120												
-125												
-130												
-135												
-140												
-145												
-150												

BME LOG SKYLINE.GPJ B&M DATA TEMPLATE.GDT 1/19/22

Contractor: **H/ET**
 Method: **Hollow Stem Auger**
 Sampling Method: **Cuttings**
 Geologist/Engineer: **S. Stamoulis**
 Project No.: **101.01.120**

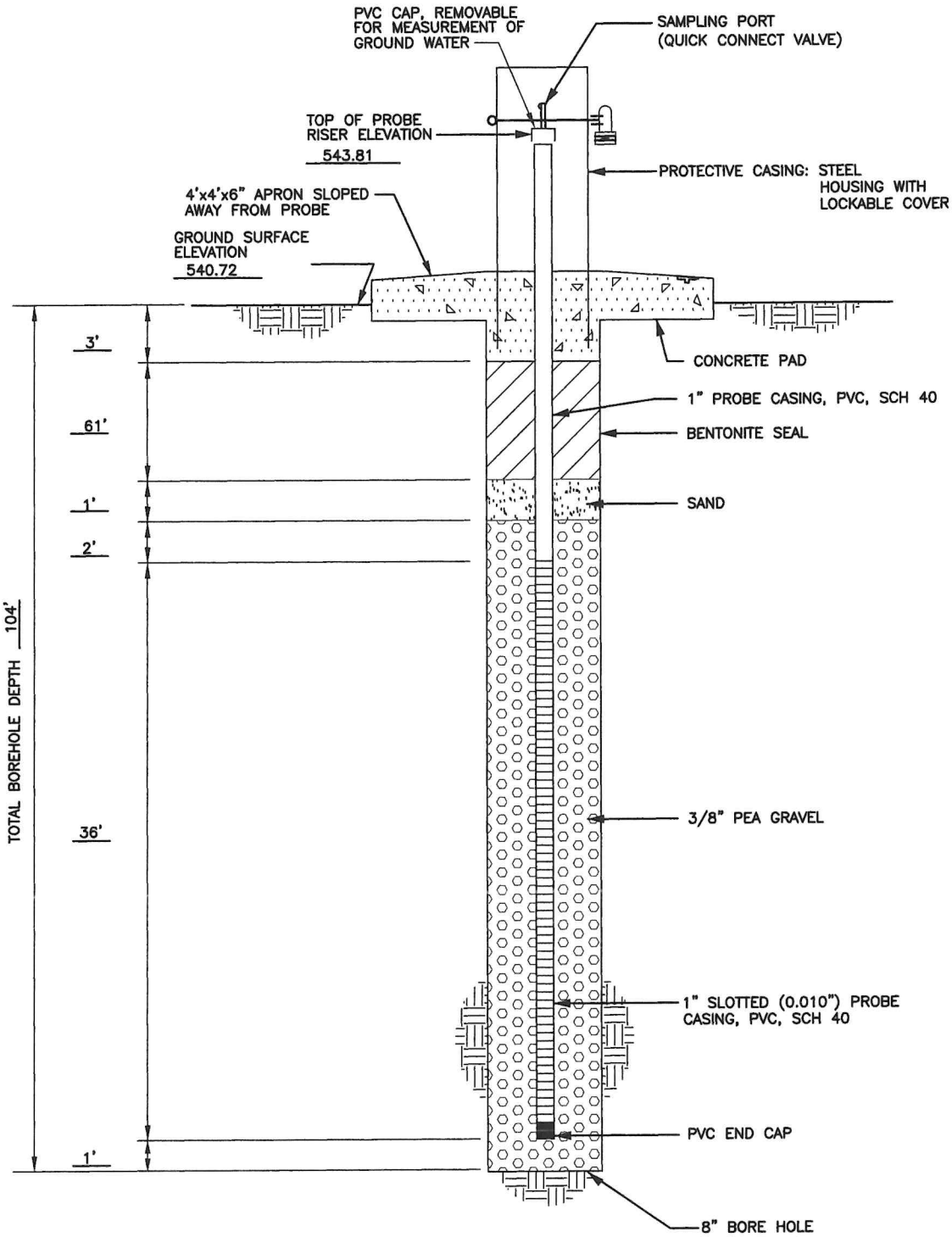
Groundwater Observations	
Date	Depth

Remarks: Wet at 80.0'



The stratification lines represent approximate strata boundaries. In situ, the transition may be gradual.
 LOGS ARE NOT INTENDED TO BE USED SEPARATELY FROM THE ORIGINAL REPORT.

O:\Waste Management\Skylines\LFG\2021 Probe Installation Report\Skylines Probe.dwg Layout: GP-59R User: HParker



**INSTALLATION REPORT
GAS MONITORING PROBE**

**WASTE MANAGEMENT OF TEXAS, INC.
SKYLINE LANDFILL**



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

DSN.	JHP	DATE :	01/2022	FIGURE
DWN.	SRC	SCALE :	GRAPHIC	GP-59R
CHK.	JHP	DWG :	Skylines ProbeDetail.dwg	

REVISIONS						
REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY

LOG OF GAS MONITORING PROBE NO. GP-60R

Project Description: **Skyline Landfill**

1201 North Central Avenue, Ferris, Texas

Biggs and Mathews Environmental
 1700 Robert Road, Ste 100
 Mansfield, Texas 76063-5892
 Phone: 817-563-1144

Depth, feet	Samples	Symbol / USCS	Location: E 2251737.4 N 319661.7 Top of Casing El.: 525.22 ft. msl Surface El.: 522.60 ft. msl Completion Depth: 85.0 ft. Date Boring Started: 9/2/2021 Date Boring Completed: 9/3/2021	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
MATERIAL DESCRIPTION												
5			Clay, brown and dark brown, dark gray, very stiff (Fill)									
10												
15												
20												
25												
30												
35				487.60								
40			Clay, brown and dark brown, stiff to hard, dry									
45												
50												

BME LOG SKYLINE.GPJ B&M DATA TEMPLATE.GDT 1/19/22

Contractor: **H/ET**
 Method: **Hollow Stem Auger**
 Sampling Method: **Cuttings**
 Geologist/Engineer: **S. Stamoulis**
 Project No.: **101.01.120**

Groundwater Observations	
Date	Depth

Remarks: Dry upon completion



LOG OF GAS MONITORING PROBE NO. GP-60R

Project Description: **Skyline Landfill**

1201 North Central Avenue, Ferris, Texas

Biggs and Mathews Environmental
 1700 Robert Road, Ste 100
 Mansfield, Texas 76063-5892
 Phone: 817-563-1144

Depth, feet	Samples	Symbol / USCS	Location: E 2251737.4 N 319661.7	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
			Top of Casing El.: 525.22 ft. msl Surface El.: 522.60 ft. msl Completion Depth: 85.0 ft. Date Boring Started: 9/2/2021 Date Boring Completed: 9/3/2021									
			MATERIAL DESCRIPTION									
55			Clay, brown and dark brown, stiff to hard, dry (<i>continued</i>)									
60												
65												
70												
75				448.10								
80			Shale (unweathered), dark gray, hard									
85				437.60								
90												
95												
100												

BME LOG SKYLINE.GPJ B&M DATA TEMPLATE.GDT 1/19/22

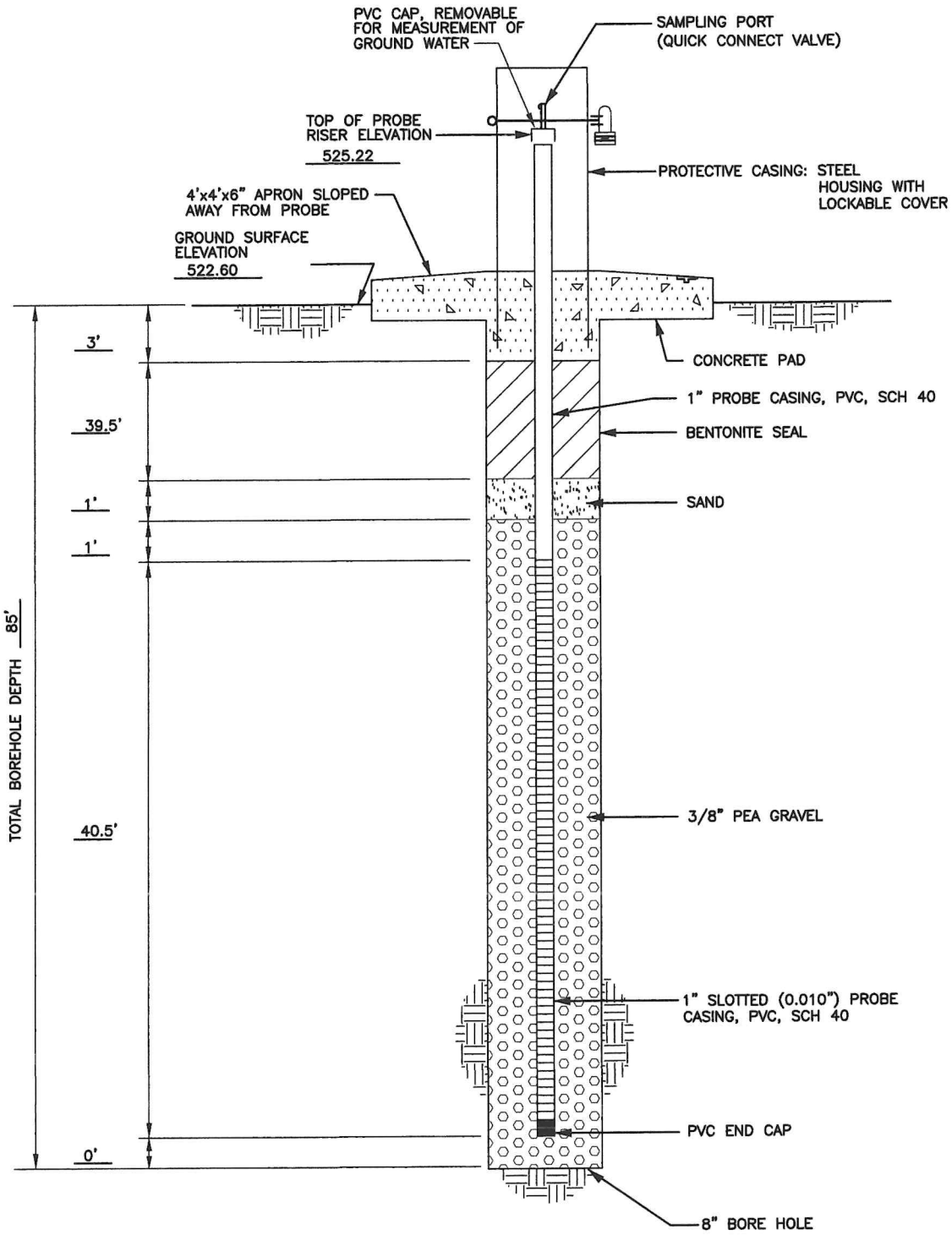
Contractor: **H/ET**
 Method: **Hollow Stem Auger**
 Sampling Method: **Cuttings**
 Geologist/Engineer: **S. Stamoulis**
 Project No.: **101.01.120**

Groundwater Observations	
Date	Depth

Remarks: Dry upon completion




The stratification lines represent approximate strata boundaries. In situ, the transition may be gradual.
 LOGS ARE NOT INTENDED TO BE USED SEPARATELY FROM THE ORIGINAL REPORT.



**INSTALLATION REPORT
GAS MONITORING PROBE**

**WASTE MANAGEMENT OF TEXAS, INC.
SKYLINE LANDFILL**



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

REVISIONS						
REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY

DSN. JHP	DATE : 01/2022	FIGURE GP-60R
DWN. SRC	SCALE : GRAPHIC	
CHK. JHP	DWG : Skyline ProbeDetail.dwg	

LOG OF GAS MONITORING PROBE NO. GP-61

Project Description: **Skyline Landfill**

1201 North Central Avenue, Ferris, Texas

Biggs and Mathews Environmental, Inc.
 1700 Robert Rd. Ste 100
 Mansfield, TX 76063
 Phone: 817-563-1144

Depth, feet	Samples	Symbol / USCS	Location: E 2251443.570 N 320073.957	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
Top of Casing El.: 494.91 ft. msl Surface El.: 492.36 ft. msl Completion Depth: 64.0 ft. Date Boring Started: 7/8/15 Date Boring Completed: 7/8/15												
MATERIAL DESCRIPTION												
5			CLAY, dark brown and black, stiff									
10			- tan and light brown, stiff to very stiff									
15												
20												
25												
30												
35			- brown and olive below 35'									
40				451.36								
45			SHALE (unweathered), dark gray, hard									
50												

BME LOG SKYLINE:GPJ B&M DATA TEMPLATE.GDT 2/19/16

Drilling Contractor:	H/ET	Groundwater Observations	
Drilling Method:	Solid Flight Augers	Date	Depth
Sampling Method:			
Geologist/Engineer:	S. Stamoulis		
Project No.:	101.01.120		

Remarks: Installed gas probe upon completion of borehole.



LOG OF GAS MONITORING PROBE NO. GP-61

Project Description: **Skyline Landfill**

1201 North Central Avenue, Ferris, Texas

Biggs and Mathews Environmental, Inc.
1700 Robert Rd. Ste 100
Mansfield, TX 76063
Phone: 817-563-1144

Depth, feet	Samples	Symbol / USCS	Location: E 2251443.570 N 320073.957	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
			Top of Casing El.: 494.91 ft. msl Surface El.: 492.36 ft. msl Completion Depth: 64.0 ft. Date Boring Started: 7/8/15 Date Boring Completed: 7/8/15									
			MATERIAL DESCRIPTION									
55			SHALE (unweathered), dark gray, hard <i>(continued)</i>									
60												
65				428.36								
70												
75												
80												
85												
90												
95												
100												
Drilling Contractor: H/ET Drilling Method: Solid Flight Augers Sampling Method: Geologist/Engineer: S. Stamoulis Project No.: 101.01.120			Groundwater Observations Date _____ Depth _____		Remarks: Installed gas probe upon completion of borehole.							

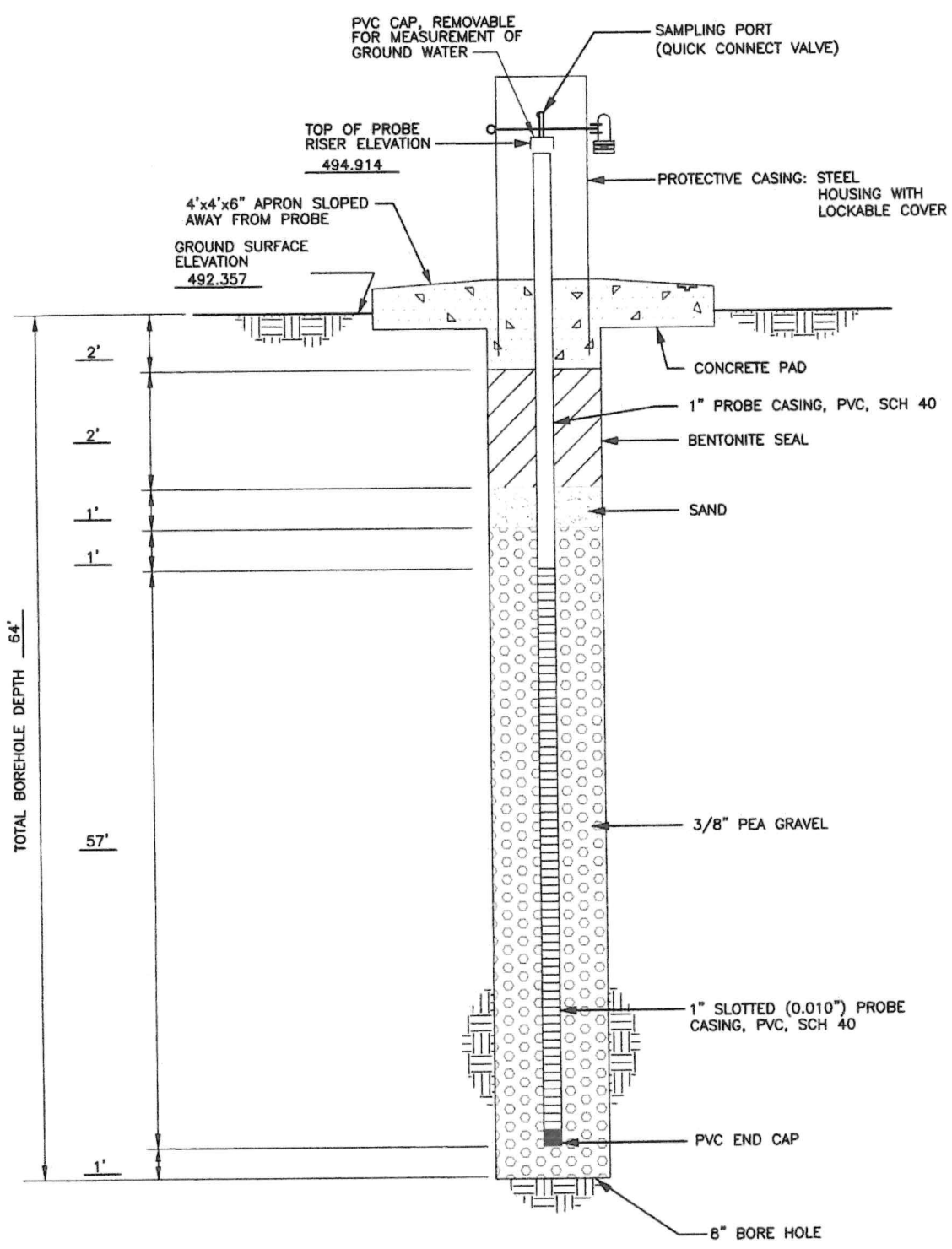


BME LOG SKYLINE.GPJ B&M DATA TEMPLATE.GDT 2/19/16

LOG OF GAS MONITORING PROBE NO. GP-61


The stratification lines represent approximate strata boundaries. In situ, the transition may be gradual.
LOGS ARE NOT INTENDED TO BE USED SEPARATELY FROM THE ORIGINAL REPORT.

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**INSTALLATION REPORT
GAS MONITORING PROBE**

**WASTE MANAGEMENT OF TEXAS, INC.
SKYLINE LANDFILL**



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

DSN. JHP	DATE : 01/06	FIGURE
DWN. SRC	SCALE : GRAPHIC	GP-61
CHK. JHP	DWG : Skyline ProbeDetail.dwg	

REVISIONS						
REV	DATE	DESCRIPTION	OWN BY	DES BY	CHK BY	APP BY

LOG OF GAS MONITORING PROBE NO. GP-62

Project Description: **Skyline Landfill**

1201 North Central Avenue, Ferris, Texas

Biggs and Mathews Environmental, Inc.
1700 Robert Rd. Ste 100
Mansfield, TX 76063
Phone: 817-563-1144

Depth, feet	Samples	Symbol / USCS	Location: E 2251917.296 N 320361.399	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
			Top of Casing El.: 483.57 ft. msl Surface El.: 480.93 ft. msl Completion Depth: 52.0 ft. Date Boring Started: 7/8/15 Date Boring Completed: 7/8/15									
			MATERIAL DESCRIPTION									
			CLAY, dark brown and black, with rootlets, stiff									
5			- brown to tan, stiff to very stiff									
10												
15												
20												
25												
30												
35			- brown and tan									
40												
45				435.43								
			SHALE (unweathered), dark gray, hard									
50												

BME LOG SKYLINE.GPJ B&M DATA TEMPLATE.GDT 2/19/16

Drilling Contractor: **H/ET**
 Drilling Method: **Solid Flight Augers**
 Sampling Method:
 Geologist/Engineer: **S. Stamoulis**
 Project No.: **101.01.120**

Groundwater Observations	
Date	Depth

Remarks: Installed gas probe upon completion of borehole.



LOG OF GAS MONITORING PROBE NO. GP-62

Biggs and Mathews Environmental, Inc.
1700 Robert Rd. Ste 100
Mansfield, TX 76063
Phone: 817-563-1144

Project Description: **Skyline Landfill**
1201 North Central Avenue, Ferris, Texas

Depth, feet	Samples	Symbol / USCS	Location: E 2251917.296 N 320361.399 Top of Casing El.: 483.57 ft. msl Surface El.: 480.93 ft. msl Completion Depth: 52.0 ft. Date Boring Started: 7/8/15 Date Boring Completed: 7/8/15	Hand Penetrometer, Isf	Penetration Blows/Foot	Moisture Content, %	Unit Dry Weight, lb/cu ft.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, Isf
MATERIAL DESCRIPTION												
		[Symbol]	SHALE (unweathered), dark gray, hard <i>(continued)</i>	428.93								
55												
60												
65												
70												
75												
80												
85												
90												
95												
100												

BME LOG SKYLINE.GPJ B&M DATA TEMPLATE.GDT 2/19/16

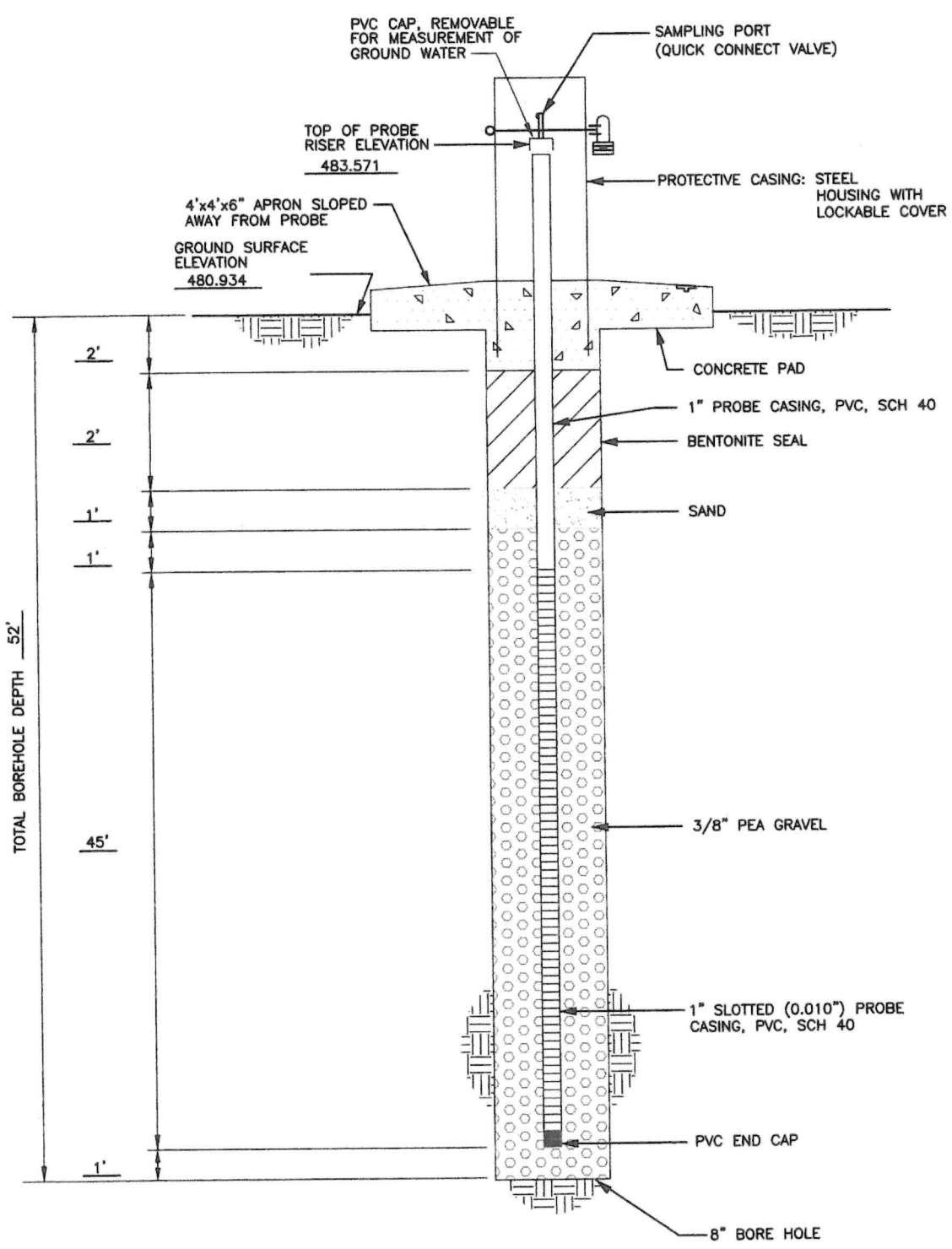
Drilling Contractor: **H/ET**
Drilling Method: **Solid Flight Augers**
Sampling Method:
Geologist/Engineer: **S. Stamoulis**
Project No.: **101.01.120**

Groundwater Observations	
Date	Depth

Remarks: Installed gas probe upon completion of borehole.




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**INSTALLATION REPORT
GAS MONITORING PROBE**

**WASTE MANAGEMENT OF TEXAS, INC.
SKYLINE LANDFILL**



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

DSN. JHP	DATE : 01/06	SCALE : GRAPHIC	FIGURE
DWN. SRC	DWG : Skyline ProbeDetail.dwg		GP-62
CHK. JHP			

REVISIONS						
REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY

LOG OF GAS MONITORING PROBE NO. GP-63R

Project Description: **Skyline Landfill**

1201 North Central Avenue, Ferris, Texas

Biggs and Mathews
1700 Robert Road Ste 100
Mansfield TX 76063
Phone: 817-563-1144

Depth, feet	Samples	Symbol / USCS	Location: E 2251879.116 N 320963.149	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
			Top of Casing El.: 496.27 ft. msl Surface El.: 494.17 ft. msl Completion Depth: 68.5 ft. Date Boring Started: 11/18/2019 Date Boring Completed: 11/18/2019									
			MATERIAL DESCRIPTION									
5			Shale, clayey, clay, dark gray and dark brown with gray, stiff									
10												
15												
20												
25				469.17								
30			Clay, brown and black, stiff									
35												
40												
45												
50				444.17								

BME LOG SKYLINE.GPJ B&M DATA TEMPLATE.GDT 4/2/20

Contractor: **H/ET**
 Method: **Hollow Stem Auger**
 Sampling Method:
 Geologist/Engineer: **S. Stamoulis**
 Project No.: **101.01.120**

Groundwater Observations	
Date	Depth

Remarks: Installed gas probe upon completion of borehole. Borehole dry upon completion.



LOG OF GAS MONITORING PROBE NO. GP-63R

Project Description: **Skyline Landfill**

1201 North Central Avenue, Ferris, Texas

Biggs and Mathews
 1700 Robert Road Ste 100
 Mansfield TX 76063
 Phone: 817-563-1144

Depth, feet	Samples	Symbol / USCS	Location: E 2251879.116 N 320963.149	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
			Top of Casing El.: 496.27 ft. msl Surface El.: 494.17 ft. msl Completion Depth: 68.5 ft. Date Boring Started: 11/18/2019 Date Boring Completed: 11/18/2019									
			MATERIAL DESCRIPTION									
			Clay, dark brown and dark gray, stiff to very stiff									
55				439.17								
			Shale, dark gray, hard									
60												
65												
				425.67								
70												
75												
80												
85												
90												
95												
100												

BME LOG SKYLINE.GPJ B&M DATA TEMPLATE.GDT 4/2/20

Contractor: **H/ET**
 Method: **Hollow Stem Auger**
 Sampling Method:
 Geologist/Engineer: **S. Stamoulis**
 Project No.: **101.01.120**

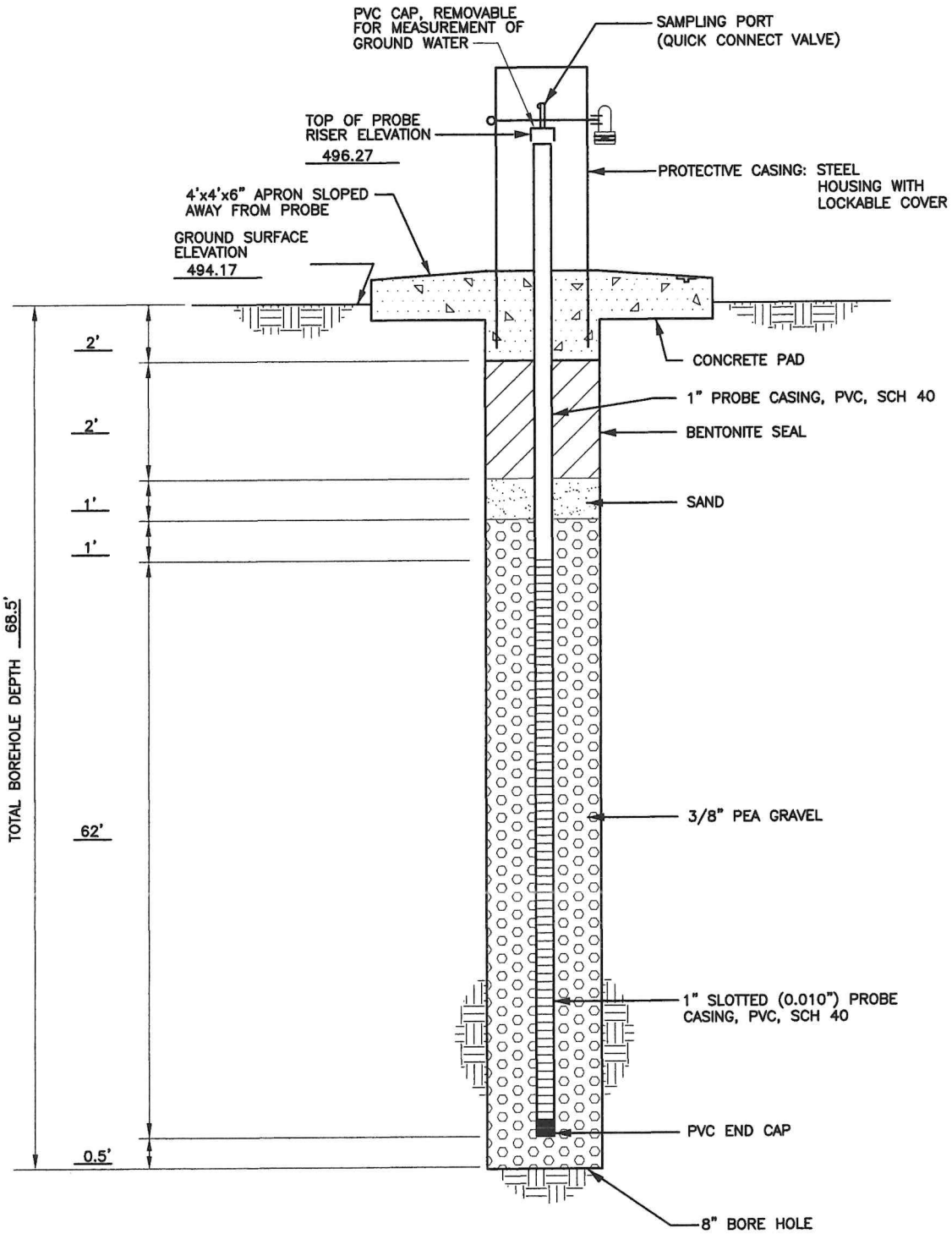
Groundwater Observations

Date	Depth

Remarks: Installed gas probe upon completion of borehole. Borehole dry upon completion.



LOG OF GAS MONITORING PROBE NO. GP-63R



**INSTALLATION REPORT
GAS MONITORING PROBE**

**WASTE MANAGEMENT OF TEXAS, INC.
SKYLINE LANDFILL**



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

REVISIONS						
REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY

DSN.	JHP	DATE :	04/2020
DWN.	SRC	SCALE :	GRAPHIC
CHK.	JHP	DWG :	Skyline ProbeDetail.dwg

FIGURE
GP-63R

LOG OF GAS MONITORING PROBE NO. GP-64

Project Description: **Skyline Landfill**

1201 North Central Avenue, Ferris, Texas

Biggs and Mathews Environmental, Inc.
 1700 Robert Rd. Ste 100
 Mansfield, TX 76063
 Phone: 817-563-1144

Depth, feet	Samples	Symbol / USCS	Location: E 2251525.274 N 321461.509	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
Top of Casing El.: 477.73 ft. msl Surface El.: 475.15 ft. msl Completion Depth: 58.0 ft. Date Boring Started: 7/22/15 Date Boring Completed: 7/22/15												
MATERIAL DESCRIPTION												
5			CLAY, light brown and tan, stiff to very stiff.									
10												
15				459.15								
20			SHALE (unweathered), dark gray, hard.									
25												
30												
35												
40												
45												
50												

BME LOG SKYLINE.GPJ B&M DATA TEMPLATE.GDT 2/19/16

Drilling Contractor:	H/ET	Groundwater Observations
Drilling Method:	Solid Flight Augers	Date <input type="text"/> Depth <input type="text"/>
Sampling Method:		
Geologist/Engineer:	S. Stamoulis	
Project No.:	101.01.120	

Remarks: Installed gas probe upon completion of borehole.



The stratification lines represent approximate strata boundaries. In situ, the transition may be gradual.
 LOGS ARE NOT INTENDED TO BE USED SEPARATELY FROM THE ORIGINAL REPORT.


Continued Next Page

LOG OF GAS MONITORING PROBE NO. GP-64

Project Description: **Skyline Landfill**

1201 North Central Avenue, Ferris, Texas

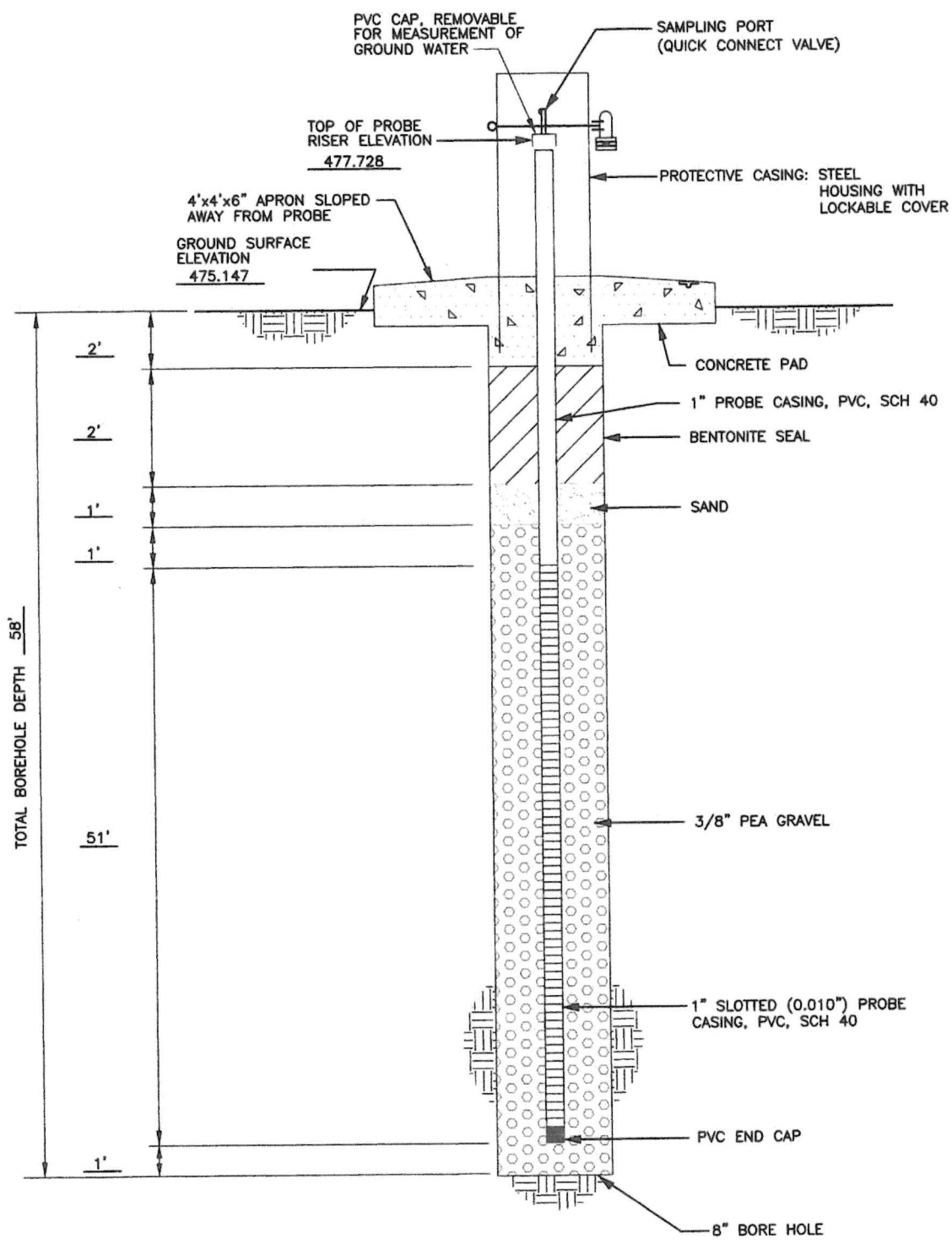
Biggs and Mathews Environmental, Inc.
1700 Robert Rd. Ste 100
Mansfield, TX 76063
Phone: 817-563-1144


Depth, feet	Samples	Symbol / USCS	Location: E 2251525.274 N 321461.509	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
			Top of Casing El.: 477.73 ft. msl Surface El.: 475.15 ft. msl Completion Depth: 58.0 ft. Date Boring Started: 7/22/15 Date Boring Completed: 7/22/15									
			MATERIAL DESCRIPTION									
55			SHALE (unweathered), dark gray, hard. <i>(continued)</i>									
			417.15									
60												
65												
70												
75												
80												
85												
90												
95												
100												
Drilling Contractor: H/ET Drilling Method: Solid Flight Augers Sampling Method: Geologist/Engineer: S. Stamoulis Project No.: 101.01.120			Groundwater Observations Date _____ Depth _____ _____ _____		Remarks: Installed gas probe upon completion of borehole.							

BME LOG SKYLINE.GPJ B&M DATA TEMPLATE.GDT 2/19/16

The stratification lines represent approximate strata boundaries. In situ, the transition may be gradual.
LOGS ARE NOT INTENDED TO BE USED SEPARATELY FROM THE ORIGINAL REPORT.

F:\Proj\101\01\120\Attachment G\Probe Logs\Skyline ProbeDetail.dwg Layout: 64 User: aholderness



INSTALLATION REPORT GAS MONITORING PROBE	
WASTE MANAGEMENT OF TEXAS, INC. SKYLINE LANDFILL	
 BIGGS & MATHEWS ENVIRONMENTAL CONSULTING ENGINEERS MANSFIELD • WICHITA FALLS 817-563-1144	
DSN. JHP	DATE : 01/06
DWN. SRC	SCALE : GRAPHIC
CHK. JHP	DWG : Skyline ProbeDetail.dwg
FIGURE GP-64	

REVISIONS						
REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY

LOG OF GAS MONITORING PROBE NO. GP-65

Project Description: **Skyline Landfill**

1201 North Central Avenue, Ferris, Texas

Biggs and Mathews Environmental, Inc.
1700 Robert Rd. Ste 100
Mansfield, TX 76063
Phone: 817-563-1144

Depth, feet	Samples	Symbol / USCS	Location: E 2251200.994 N 321862.909 Top of Casing El.: 450.85 ft. msl Surface El.: 448.45 ft. msl Completion Depth: 25.0 ft. Date Boring Started: 7/22/15 Date Boring Completed: 7/22/15	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
			MATERIAL DESCRIPTION									
			CLAY, light brown and tan, stiff to very stiff.									
5			SHALE (unweathered), dark gray, hard.		444.45							
10												
15												
20												
25					423.45							
30												
35												
40												
45												
50												

BME LOG SKYLINE.GPJ BSM DATA TEMPLATE.GDT 2/19/16

Drilling Contractor: **H/ET**
 Drilling Method: **Solid Flight Augers**
 Sampling Method:
 Geologist/Engineer: **S. Stamoulis**
 Project No.: **101.01.120**

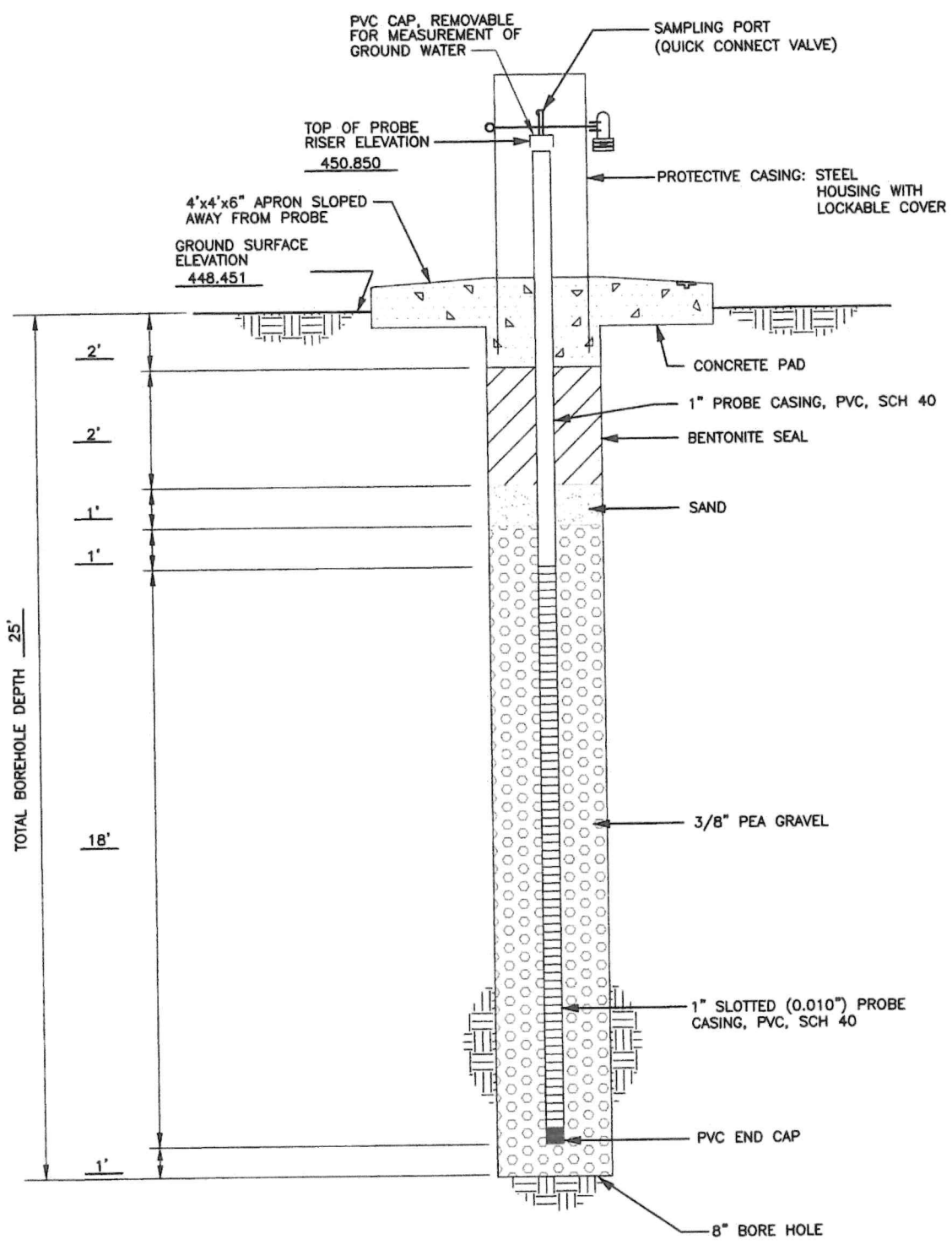
Groundwater Observations	
Date	Depth

Remarks: Installed gas probe upon completion of borehole.




The stratification lines represent approximate strata boundaries. In situ, the transition may be gradual.
 LOGS ARE NOT INTENDED TO BE USED SEPARATELY FROM THE ORIGINAL REPORT.

F:\Proj\101\01\120\Attachment G\Probe Logs\Skyline ProbeDetail.dwg Layout: 35 User: aholderness



**INSTALLATION REPORT
GAS MONITORING PROBE**

**WASTE MANAGEMENT OF TEXAS, INC.
SKYLINE LANDFILL**



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

REVISIONS				DSN.	JHP	DATE :	01/06	FIGURE
REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY	SCALE :	GP-65
							GRAPHIC	
							DWG : Skyline ProbeDetail.dwg	

LOG OF GAS MONITORING PROBE NO. GP-66

Project Description: **Skyline Landfill**

1201 North Central Avenue, Ferris, Texas

Biggs and Mathews Environmental, Inc.
1700 Robert Rd. Ste 100
Mansfield, TX 76063
Phone: 817-563-1144

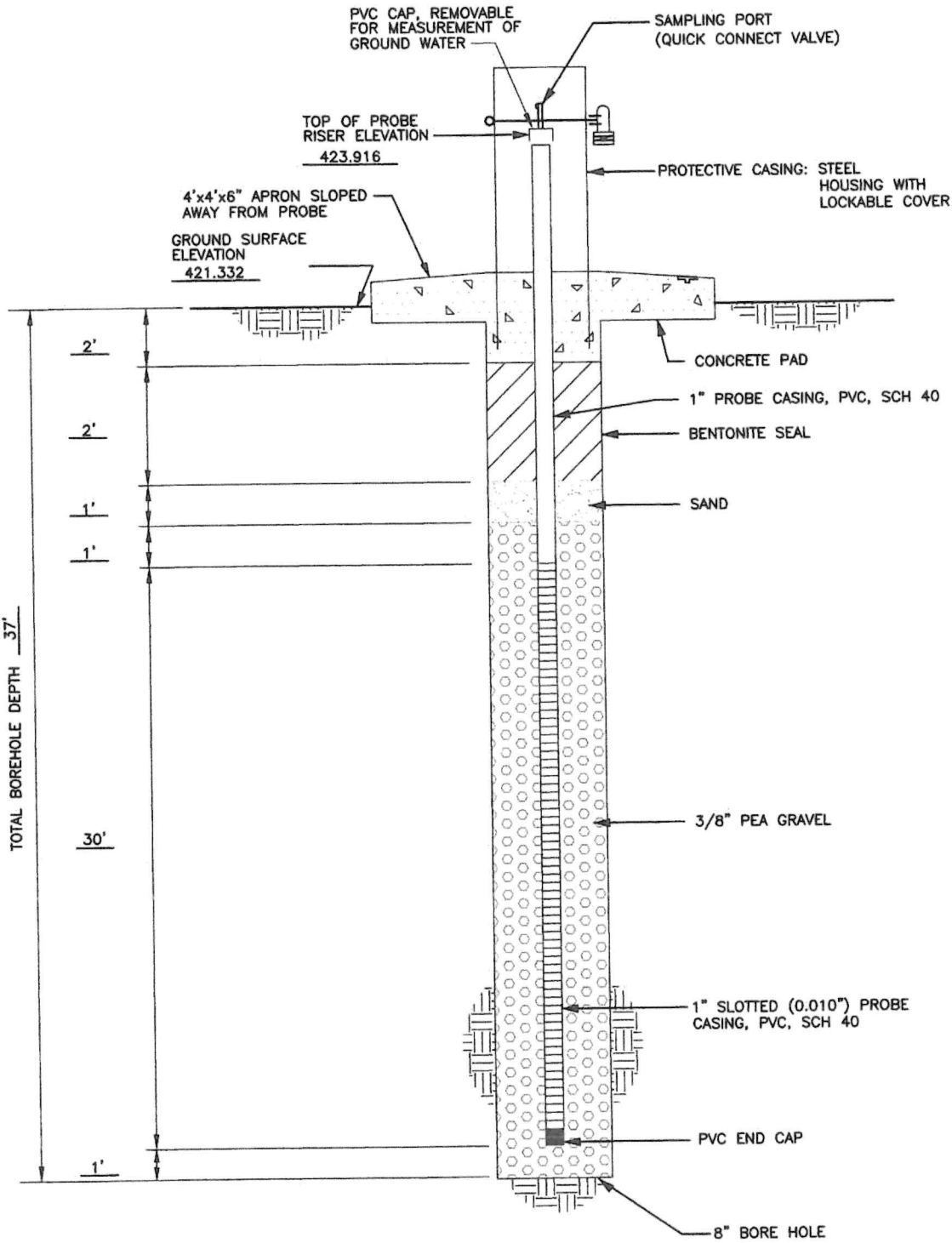
Depth, feet	Samples	Symbol / USCS	Location: E 2251525.605 N 323316.631	Hand Penetrometer, tsf	Penetration Blows/Foot	Moisture Content, %	Unit Dry Weight, lb/cu ft.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
Top of Casing El.: 423.92 ft. msl Surface El.: 421.33 ft. msl Completion Depth: 37.0 ft. Date Boring Started: 7/22/15 Date Boring Completed: 7/22/15												
MATERIAL DESCRIPTION												
5			CLAY, brown to dark brown, stiff.									
10			-tan to light brown, stiff to very stiff									
15												
20												
25				398.33								
30			SHALE (unweathered), dark gray, hard.									
35												
40												
45												
50												
Drilling Contractor: H/ET Drilling Method: Solid Flight Augers Sampling Method: Geologist/Engineer: S. Stamoulis Project No.: 101.01.120				Groundwater Observations Date _____ Depth _____		Remarks: Installed gas probe upon completion of borehole.						

BME LOG SKYLINE.GPJ B&M DATA TEMPLATE.GDT 2/19/16




The stratification lines represent approximate strata boundaries. In situ, the transition may be gradual.
LOGS ARE NOT INTENDED TO BE USED SEPARATELY FROM THE ORIGINAL REPORT.

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**INSTALLATION REPORT
GAS MONITORING PROBE**

**WASTE MANAGEMENT OF TEXAS, INC.
SKYLINE LANDFILL**



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

REVISIONS				DSN. JHP	DATE : 01/06	FIGURE
REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	

DWN. SRC

CHK. JHP

SCALE : GRAPHIC

DWG : Skyline ProbeDetail.dwg

GP-66

LOG OF GAS MONITORING PROBE NO. GP-67

Project Description: **Skyline Landfill**

1201 North Central Avenue, Ferris, Texas

Biggs and Mathews Environmental, Inc.
 1700 Robert Rd. Ste 100
 Mansfield, TX 76063
 Phone: 817-563-1144

Depth, feet	Samples	Symbol / USCS	Location: E 2251993.904 N 324034.828	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
			Top of Casing El.: 420.00 ft. msl Surface El.: 417.45 ft. msl Completion Depth: 35.0 ft. Date Boring Started: 7/22/15 Date Boring Completed: 7/22/15									
			MATERIAL DESCRIPTION									
5			CLAY, brown to dark brown, stiff.									
10			-light brown to tan, stiff to very stiff									
				404.45								
15			SHALE (unweathered), dark gray, hard.									
20												
25												
30												
35												
				382.45								
40												
45												
50												
Drilling Contractor: H/ET Drilling Method: Solid Flight Augers Sampling Method: Geologist/Engineer: S. Stamoulis Project No.: 101.01.120			Groundwater Observations Date _____ Depth _____ _____ _____		Remarks: Installed gas probe upon completion of borehole.							

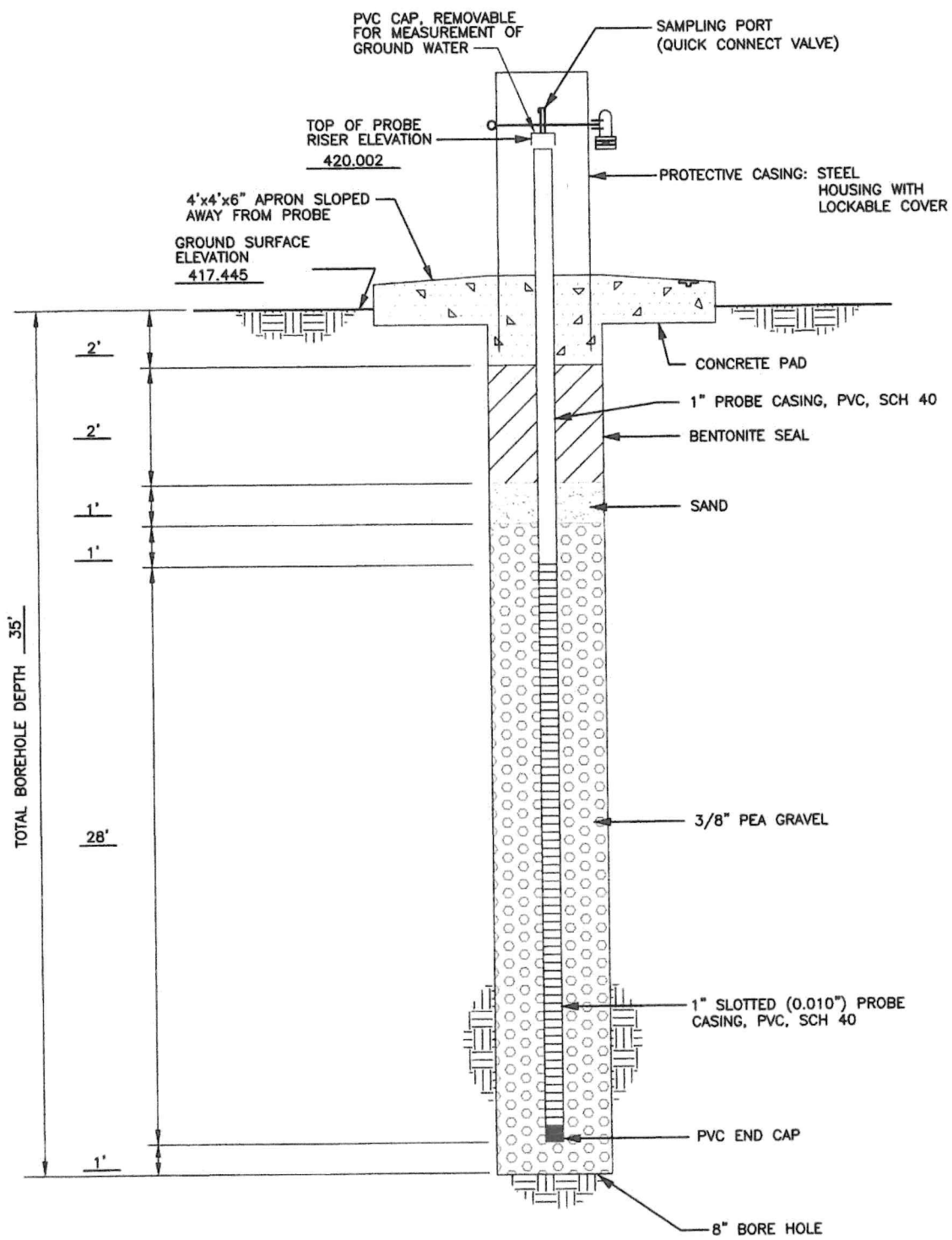



BME LOG SKYLINE.GPJ BSM DATA TEMPLATE.GDT 2/19/16

LOG OF GAS MONITORING PROBE NO. GP-67

The stratification lines represent approximate strata boundaries. In situ, the transition may be gradual.
 LOGS ARE NOT INTENDED TO BE USED SEPARATELY FROM THE ORIGINAL REPORT.

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INSTALLATION REPORT GAS MONITORING PROBE	
WASTE MANAGEMENT OF TEXAS, INC. SKYLINE LANDFILL	
	BIGGS & MATHEWS ENVIRONMENTAL CONSULTING ENGINEERS MANSFIELD • WICHITA FALLS 817-563-1144
DSN. JHP DATE : 01/06 DWN. SRC SCALE : GRAPHIC CHK. JHP DWG : Skyline ProbeDetail.dwg	FIGURE GP-67



REVISIONS						
REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY

LOG OF GAS MONITORING PROBE NO. GP-68

Project Description: **Skyline Landfill**

1201 North Central Avenue, Ferris, Texas

Biggs and Mathews Environmental, Inc.
1700 Robert Rd. Ste 100
Mansfield, TX 76063
Phone: 817-563-1144

Depth, feet	Samples	Symbol / USCS	Location: E 2252767.859 N 324014.794	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
			Top of Casing El.: 457.85 ft. msl Surface El.: 455.48 ft. msl Completion Depth: 73.0 ft. Date Boring Started: 7/22/15 Date Boring Completed: 7/22/15									
			MATERIAL DESCRIPTION									
5			CLAY, light brown and tan, stiff to very stiff.									
10			SHALE (unweathered), dark gray, hard.		446.48							
15												
20												
25												
30												
35												
40												
45												
50												

BME LOG SKYLINE.GPJ B&M DATA TEMPLATE.GDT 2/19/16

Drilling Contractor: **H/ET**
 Drilling Method: **Solid Flight Augers**
 Sampling Method:
 Geologist/Engineer: **S. Stamoulis**
 Project No.: **101.01.120**

Groundwater Observations	
Date	Depth


Remarks: Installed gas probe upon completion of borehole.



LOG OF GAS MONITORING PROBE NO. GP-68

Biggs and Mathews Environmental, Inc.
1700 Robert Rd. Ste 100
Mansfield, TX 76063
Phone: 817-563-1144

Project Description: **Skyline Landfill**
1201 North Central Avenue, Ferris, Texas

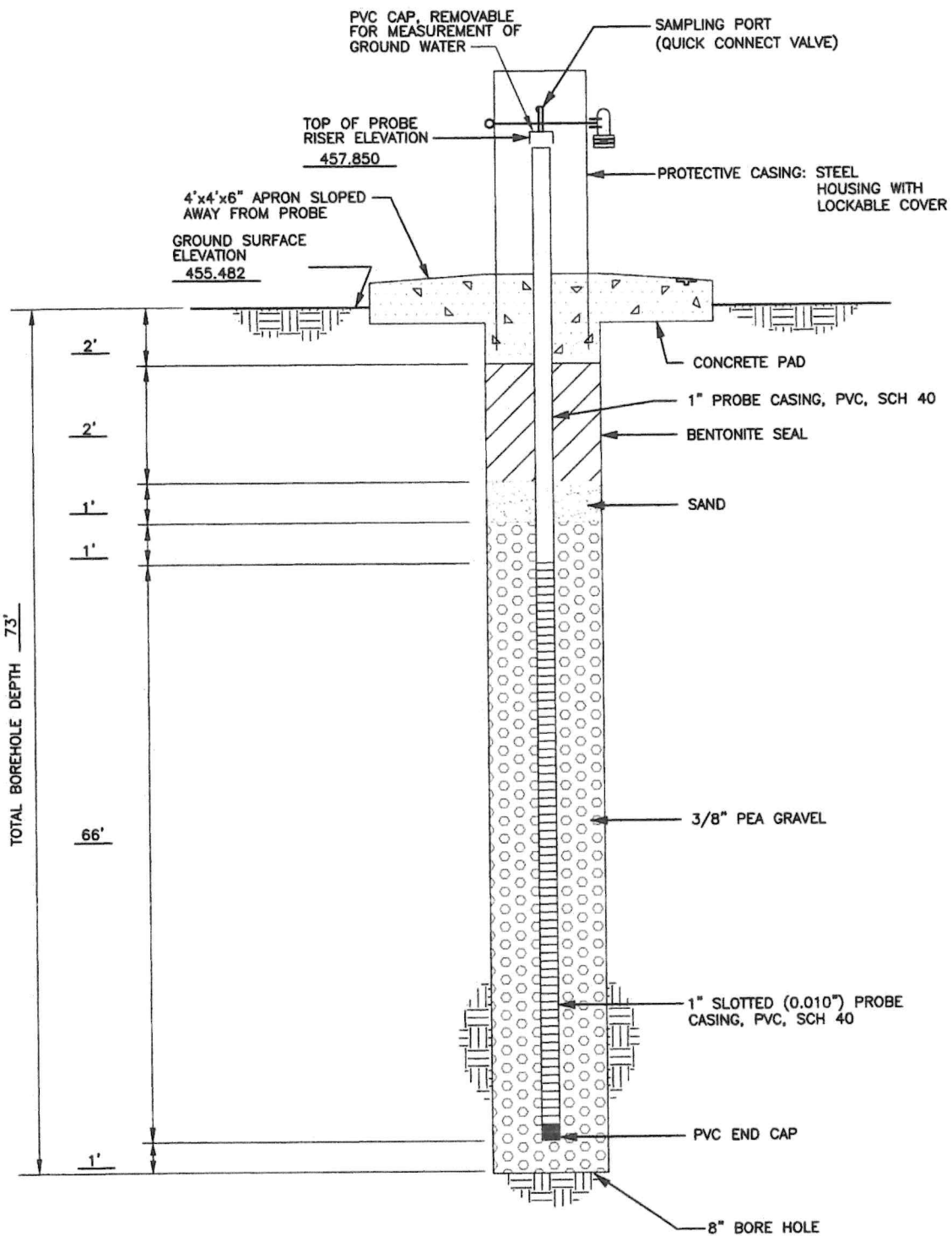
Depth, feet	Samples	Symbol / USCS	Location: E 2252767.859 N 324014.794 Top of Casing El.: 457.85 ft. msl Surface El.: 455.48 ft. msl Completion Depth: 73.0 ft. Date Boring Started: 7/22/15 Date Boring Completed: 7/22/15	Hand Penetrometer, tsf	Penetration Blows/Foot	Moisture Content, %	Unit Dry Weight, lb/cu ft.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
			MATERIAL DESCRIPTION									
55			SHALE (unweathered), dark gray, hard. (continued)									
60												
65												
70												
75				382.48								
80												
85												
90												
95												
100												
Drilling Contractor: H/ET Drilling Method: Solid Flight Augers Sampling Method: Geologist/Engineer: S. Stamoulis Project No.: 101.01.120				Groundwater Observations Date _____ Depth _____ _____ _____		Remarks: Installed gas probe upon completion of borehole.						

BME LOG SKYLINE.GPJ B&M DATA TEMPLATE.GDT 2/19/16

LOG OF GAS MONITORING PROBE NO. GP-68

The stratification lines represent approximate strata boundaries. In situ, the transition may be gradual.
LOGS ARE NOT INTENDED TO BE USED SEPARATELY FROM THE ORIGINAL REPORT.

F:\Pro\101\01\120\Attachment G\Probe Logs\Skyline ProbeDetail.dwg Layout -68 User: aholderness



**INSTALLATION REPORT
GAS MONITORING PROBE**

**WASTE MANAGEMENT OF TEXAS, INC.
SKYLINE LANDFILL**



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

REVISIONS						
REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY

DSN. JHP	DATE : 01/06	FIGURE GP-68
DWN. SRC	SCALE : GRAPHIC	
CHK. JHP	DWG : Skyline ProbeDetail.dwg	

LOG OF GAS MONITORING PROBE NO. GP-69

Project Description: **Skyline Landfill**

1201 North Central Avenue, Ferris, Texas

Biggs and Mathews Environmental, Inc.
 1700 Robert Rd. Ste 100
 Mansfield, TX 76063
 Phone: 817-563-1144

Depth, feet	Samples	Symbol / USCS	Location: E 2253530.221 N 323986.696	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
			Top of Casing El.: 411.26 ft. msl Surface El.: 408.70 ft. msl Completion Depth: 29.0 ft. Date Boring Started: 7/23/15 Date Boring Completed: 7/23/15									
			MATERIAL DESCRIPTION									
5			CLAY, brown to dark brown, stiff.									
10			-light brown to tan, stiff to very stiff									
15												
20												
25												
30												
35												
40												
45												
50												

379.70

BME LOG SKYLINE.GPJ B&M DATA TEMPLATE.GDT 2/19/16

Drilling Contractor: **H/ET**
 Drilling Method: **Solid Flight Augers**
 Sampling Method:
 Geologist/Engineer: **S. Stamoulis**
 Project No.: **101.01.120**

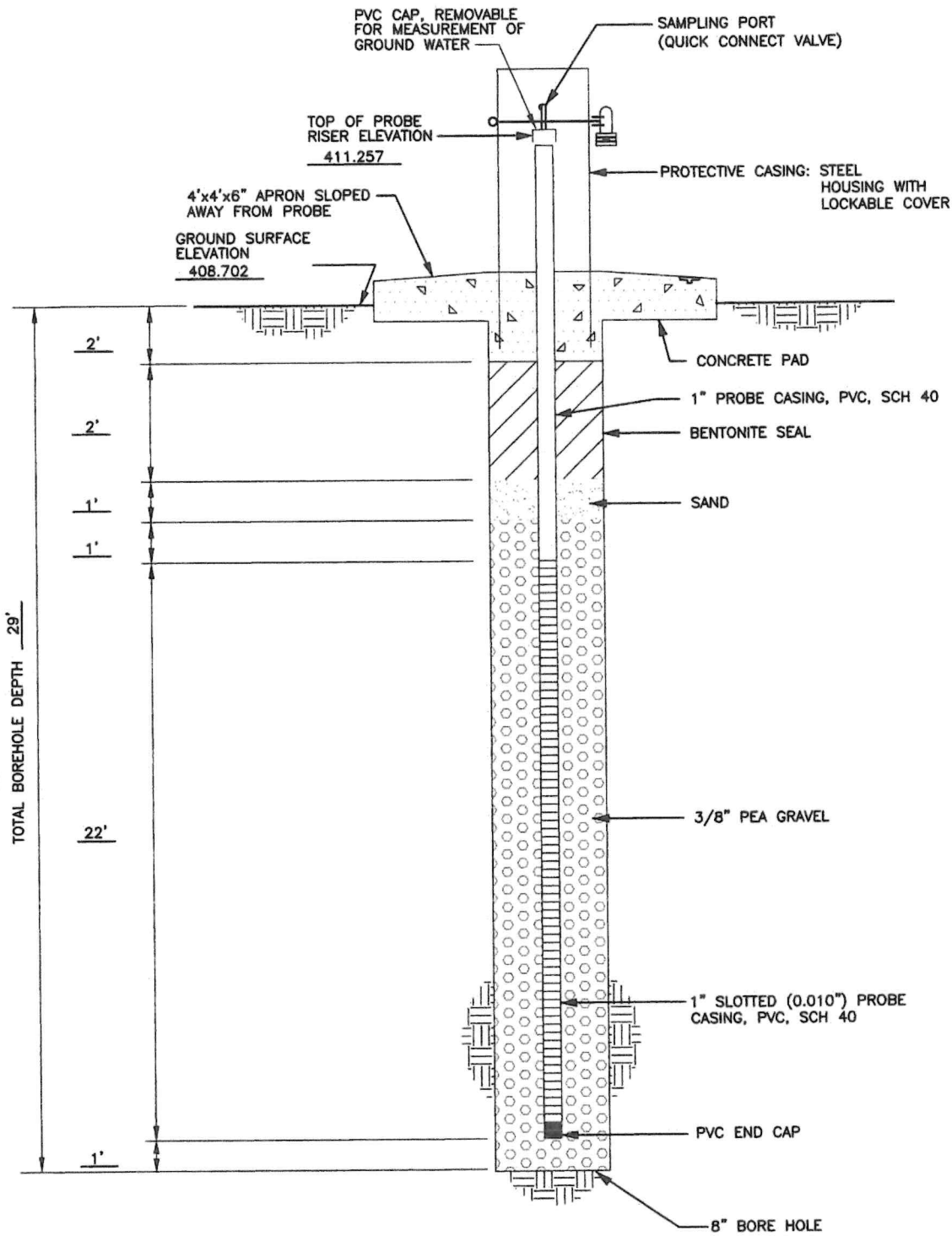
Groundwater Observations	
Date	Depth

Remarks: Installed gas probe upon completion of borehole.



The stratification lines represent approximate strata boundaries. In situ, the transition may be gradual.
 LOGS ARE NOT INTENDED TO BE USED SEPARATELY FROM THE ORIGINAL REPORT.

F:\Proj\101\01\120\Attachment G\Probe Logs\Skyline ProbeDetail.dwg Layer: -69 User: oholderness



**INSTALLATION REPORT
GAS MONITORING PROBE**

**WASTE MANAGEMENT OF TEXAS, INC.
SKYLINE LANDFILL**



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

REVISIONS						
REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY

DSN. JHP	DATE : 01/06
DWN. SRC	SCALE : GRAPHIC
CHK. JHP	DWG : Skyline ProbeDetail.dwg

FIGURE
GP-69

LOG OF GAS MONITORING PROBE NO. GP-70

Project Description: **Skyline Landfill**

1201 North Central Avenue, Ferris, Texas

Biggs and Mathews Environmental, Inc.
1700 Robert Rd. Ste 100
Mansfield, TX 76063
Phone: 817-563-1144

Depth, feet	Samples	Symbol / USCS	Location: E 2254292.018 N 323955.248	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
			Top of Casing El.: 416.52 ft. msl Surface El.: 413.52 ft. msl Completion Depth: 33.0 ft. Date Boring Started: 7/23/15 Date Boring Completed: 7/23/15									
			MATERIAL DESCRIPTION									
5			CLAY, dark brown and black, stiff.									
10			-light brown and tan, stiff to very stiff									
15												
20												
25												
30												
35												
40												
45												
50				380.52								

BME LOG SKYLINE.GPJ B&M DATA TEMPLATE.GDT 2/19/16

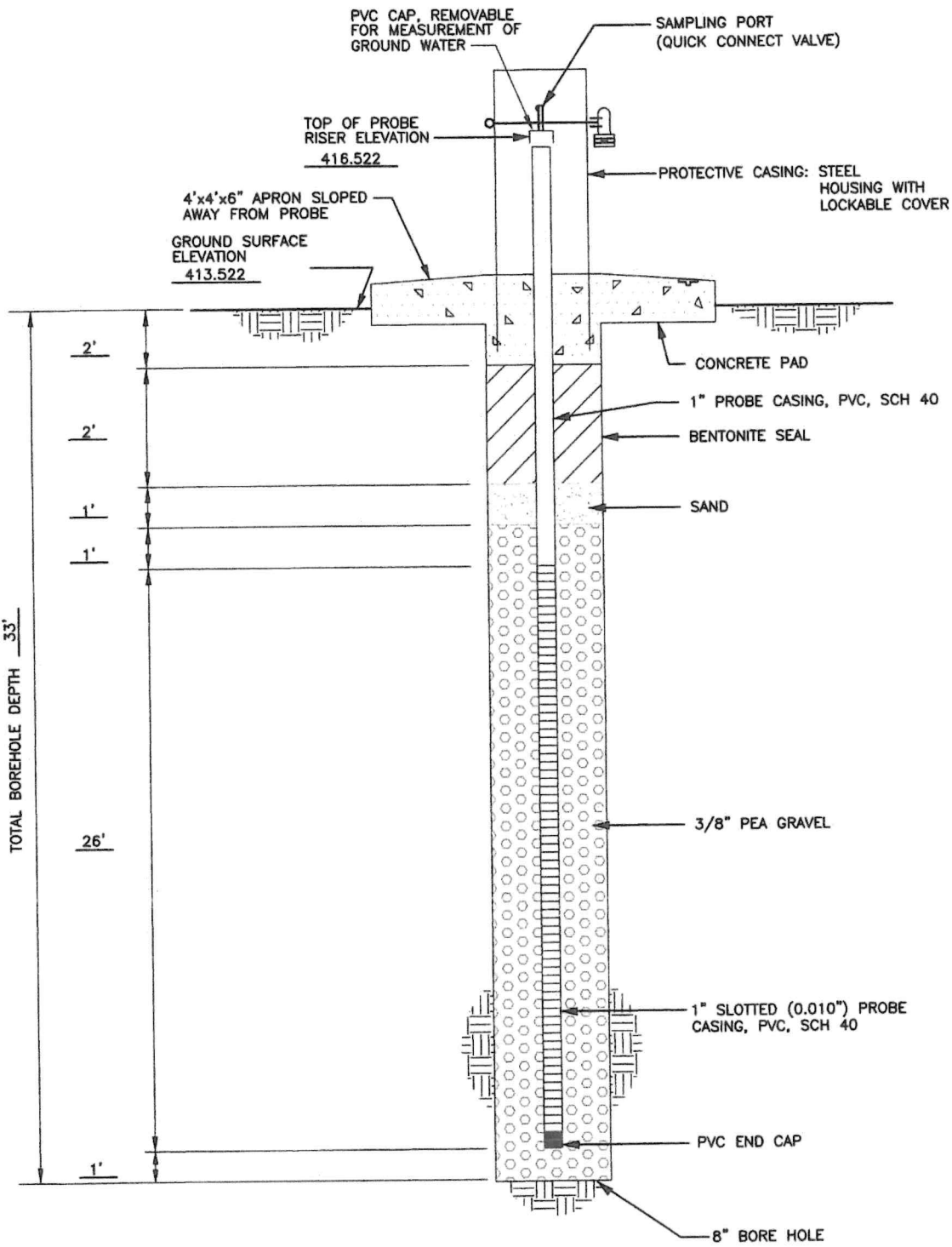
Drilling Contractor:	H/ET	Groundwater Observations	
Drilling Method:	Solid Flight Augers	Date	Depth
Sampling Method:			
Geologist/Engineer:	S. Stamoulis		
Project No.:	101.01.120		


Remarks: Installed gas probe upon completion of borehole.



The stratification lines represent approximate strata boundaries. In situ, the transition may be gradual.
LOGS ARE NOT INTENDED TO BE USED SEPARATELY FROM THE ORIGINAL REPORT.

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INSTALLATION REPORT GAS MONITORING PROBE	
WASTE MANAGEMENT OF TEXAS, INC. SKYLINE LANDFILL	
 BIGGS & MATHEWS ENVIRONMENTAL CONSULTING ENGINEERS MANSFIELD • WICHITA FALLS 817-563-1144	
DSN. JHP	DATE : 01/06
DWN. SRC	SCALE : GRAPHIC
CHK. JHP	DWG : Skyline ProbeDetail.dwg
FIGURE GP-70	

REVISIONS						
REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY

LOG OF GAS MONITORING PROBE NO. GP-71

Project Description: **Skyline Landfill**

1201 North Central Avenue, Ferris, Texas

Biggs and Mathews Environmental, Inc.
1700 Robert Rd. Ste 100
Mansfield, TX 76063
Phone: 817-563-1144

Depth, feet	Samples	Symbol / USCS	Location: E 2255284.189 N 323815.651	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
			Top of Casing El.: 429.47 ft. msl Surface El.: 426.69 ft. msl Completion Depth: 46.0 ft. Date Boring Started: 7/23/15 Date Boring Completed: 7/23/15									
MATERIAL DESCRIPTION												
5			CLAY, brown to dark brown, stiff.									
10			-light brown and tan, stiff to very stiff									
15												
20												
25												
30												
35												
40												
45				380.69								
50												

BME LOG SKYLINE GPJ B&M DATA TEMPLATE.GDT 2/19/16

Drilling Contractor: **H/ET**
 Drilling Method: **Solid Flight Augers**
 Sampling Method:
 Geologist/Engineer: **S. Stamoulis**
 Project No.: **101.01.120**

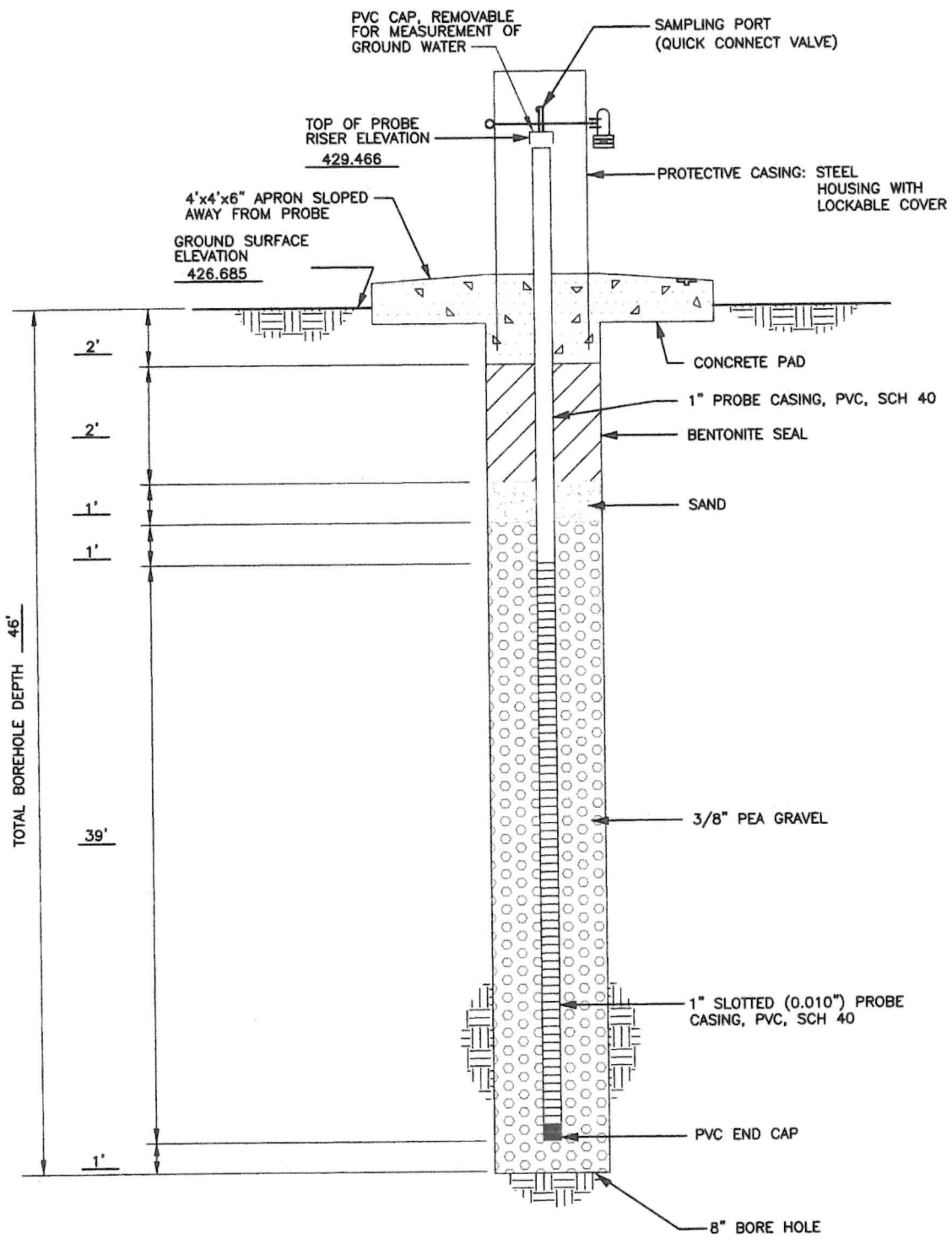
Groundwater Observations	
Date	Depth

Remarks: Installed gas probe upon completion of borehole.



The stratification lines represent approximate strata boundaries. In situ, the transition may be gradual.
 LOGS ARE NOT INTENDED TO BE USED SEPARATELY FROM THE ORIGINAL REPORT.

F:\Proj\101\01\120\Attachment G\Probe Logs\Skyline ProbeDetail.dwg Layer: -71 User: dholderness



**INSTALLATION REPORT
GAS MONITORING PROBE**

**WASTE MANAGEMENT OF TEXAS, INC.
SKYLINE LANDFILL**



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

REVISIONS						
REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY

DSN. JHP	DATE : 01/06	FIGURE GP-71
DWN. SRC	SCALE : GRAPHIC	
CHK. JHP	DWG : Skyline ProbeDetail.dwg	

LOG OF GAS MONITORING PROBE NO. GP-72R2

Project Description: **Skyline Landfill**

1201 North Central Avenue, Ferris, Texas

Biggs and Mathews Environmental
1700 Robert Road, Ste 100
Mansfield, Texas 76063-5892
Phone: 817-563-1144

Depth, feet	Samples	Symbol / USCS	Location: E 225568.02 N 322938.65	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
			Surface El.: 456.23 ft. msl Completion Depth: 71.0 ft. Date Boring Started: 3/24/2025 Date Boring Completed: 3/24/2025									
			MATERIAL DESCRIPTION									
			Clay, dark brown, weathered									
5			Clay, tan to light brown, weathered									
10			- with calcareous nodule									
15												
20												
25												
30			- ferrous stains									
35												
40												
45			Clay, dark gray, ferrous stains									
50												

BME LOG SKYLINE.GPJ B&M DATA TEMPLATE.GDT 5/7/25

Contractor: **H/ET**
 Method: **Hollow Stem Auger**
 Sampling Method: **Cuttings**
 Geologist/Engineer: **S. Stamoulis**
 Project No.: **101.01.925**

Groundwater Observations	
Date	Depth

Remarks:



LOG OF GAS MONITORING PROBE NO. GP-72R2

Project Description: **Skyline Landfill**

1201 North Central Avenue, Ferris, Texas

Biggs and Mathews Environmental
 1700 Robert Road, Ste 100
 Mansfield, Texas 76063-5892
 Phone: 817-563-1144

Depth, feet	Samples	Symbol / USCS	Location: E 225568.02 N 322938.65	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
			Surface El.: 456.23 ft. msl Completion Depth: 71.0 ft. Date Boring Started: 3/24/2025 Date Boring Completed: 3/24/2025 MATERIAL DESCRIPTION									
55			Clay, dark gray, ferrous stains (<i>continued</i>) - ferrous stains									
60												
65												
70				385.23								
75												
80												
85												
90												
95												
100												

BME LOG SKYLINE.GPJ B&M DATA TEMPLATE.GDT 5/7/25

Contractor: **H/ET**
 Method: **Hollow Stem Auger**
 Sampling Method: **Cuttings**
 Geologist/Engineer: **S. Stamoulis**
 Project No.: **101.01.925**

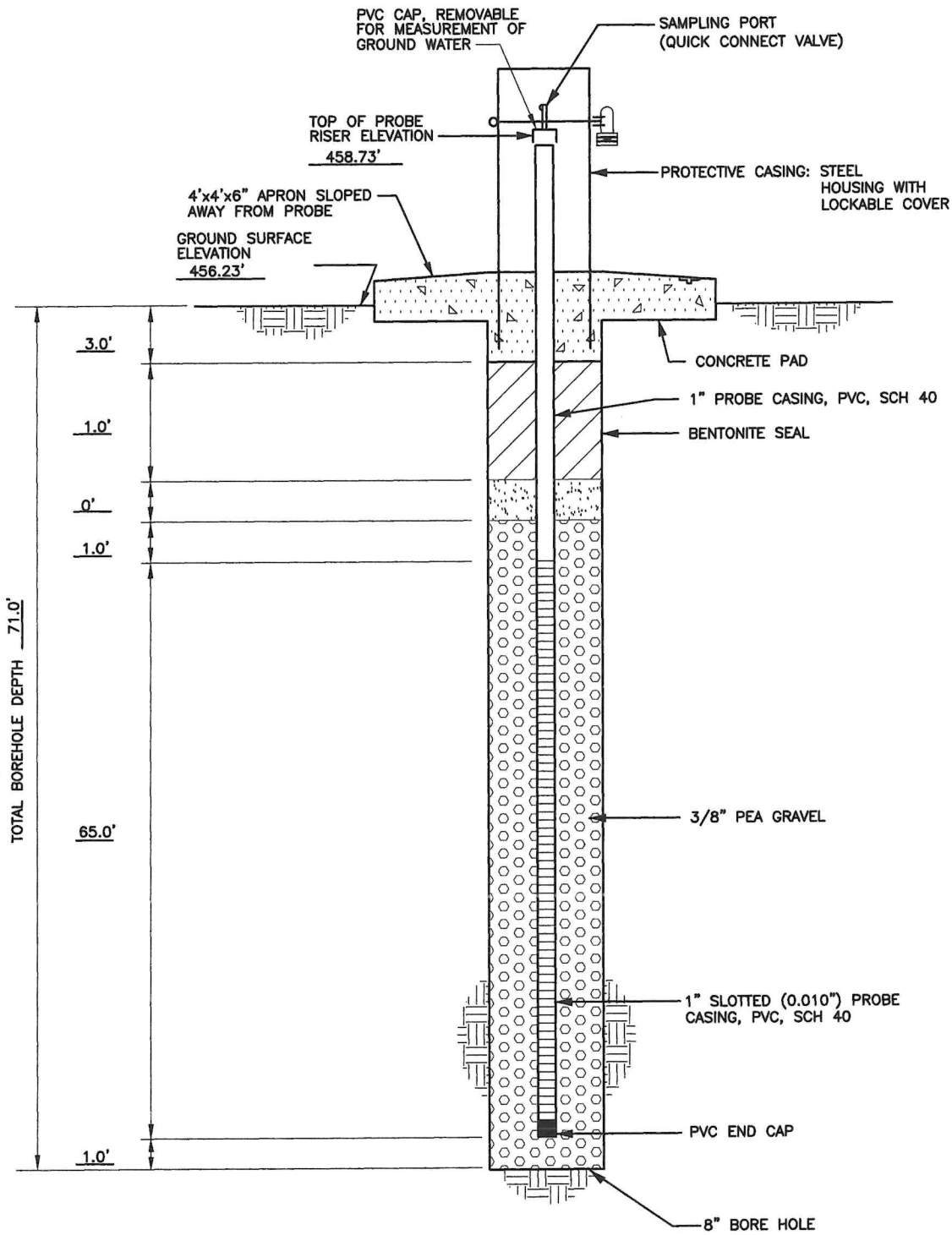
Groundwater Observations	
Date	Depth

Remarks:



LOG OF GAS MONITORING PROBE NO. GP-72R2

D:\Projects\Waste Management\Skyline\LF\2025 Probe Installation Report\0 ProbeDetails.dwg Layout: GP-72R2 User: NBazil



**INSTALLATION REPORT
GAS MONITORING PROBE**

**WASTE MANAGEMENT OF TEXAS, INC.
SKYLINE LANDFILL**



HYDROGEOLOGIC/ENVIRONMENTAL
TESTING
GROUNDWATER SPECIALISTS
ALVIN, TEXAS
409-927-4500

DSN.	DATE : 03-25-25	FIGURE
DWN.	SCALE : GRAPHIC	GP-72R2
CHK.	DWG : 03-25 ProbeDetails.dwg	

LOG OF GAS MONITORING PROBE NO. GP-73

Project Description: **Skyline Landfill**

1201 North Central Avenue, Ferris, Texas

Biggs and Mathews Environmental, Inc.
1700 Robert Rd. Ste 100
Mansfield, TX 76063
Phone: 817-563-1144

Depth, feet	Samples	Symbol / USCS	Location: E 2256013.962 N 321983.421	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
Top of Casing El.: 463.53 ft. msl Surface El.: 460.88 ft. msl Completion Depth: 69.0 ft. Date Boring Started: 6/25/15 Date Boring Completed: 6/25/15												
MATERIAL DESCRIPTION												
5			CLAY, dark brown and black, with rootlets, stiff to hard									
10			- brown and tan, stiff to very stiff									
15												
20												
25												
30				430.88								
35			SHALE (unweathered), dark gray, hard									
40												
45												
50												

BME LOG SKYLINE.GPJ B&M DATA TEMPLATE.GDT 2/19/16

Drilling Contractor: **H/ET**
 Drilling Method: **Solid Flight Augers**
 Sampling Method:
 Geologist/Engineer: **S. Stamoulis**
 Project No.: **101.01.120**

Groundwater Observations	
Date	Depth

Remarks: Installed gas probe upon completion of borehole.



Continued Next Page

LOG OF GAS MONITORING PROBE NO. GP-73

Biggs and Mathews Environmental, Inc.
 1700 Robert Rd. Ste 100
 Mansfield, TX 76063
 Phone: 817-563-1144

Project Description: **Skyline Landfill**
1201 North Central Avenue, Ferris, Texas

Depth, feet	Samples	Symbol / USCS	Location: E 2256013.962 N 321983.421 Top of Casing El.: 463.53 ft. msl Surface El.: 460.88 ft. msl Completion Depth: 69.0 ft. Date Boring Started: 6/25/15 Date Boring Completed: 6/25/15	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
			MATERIAL DESCRIPTION									
55		[Hatched Pattern]	SHALE (unweathered), dark gray, hard (continued)									
60		[Hatched Pattern]		391.88								
65		[Hatched Pattern]										
70		[Hatched Pattern]										
75		[Hatched Pattern]										
80		[Hatched Pattern]										
85		[Hatched Pattern]										
90		[Hatched Pattern]										
95		[Hatched Pattern]										
100		[Hatched Pattern]										

BME LOG SKYLINE.GPJ B&M DATA TEMPLATE.GDT 2/19/16

Drilling Contractor: **H/ET**
 Drilling Method: **Solid Flight Augers**
 Sampling Method:
 Geologist/Engineer: **S. Stamoulis**
 Project No.: **101.01.120**

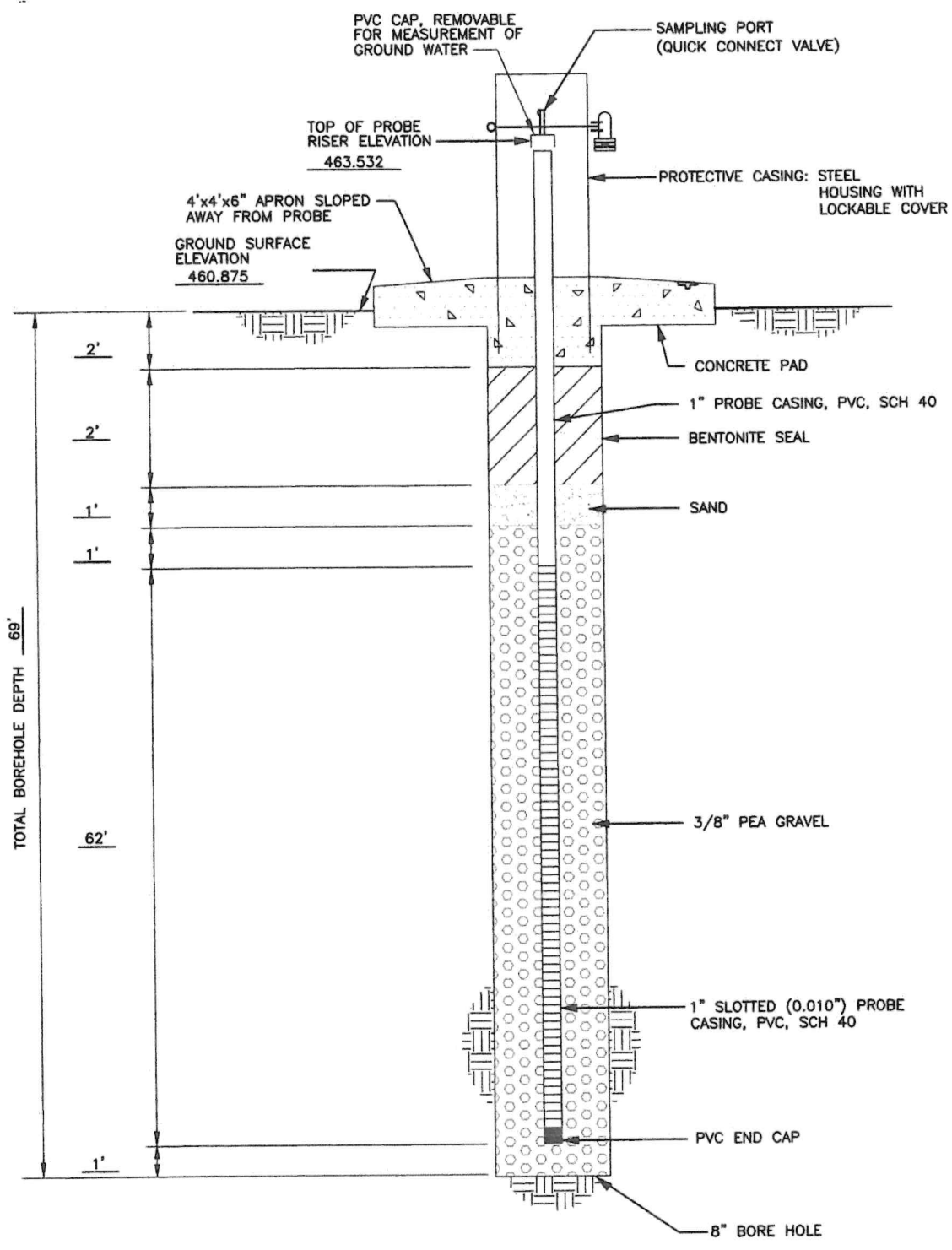
Groundwater Observations	
Date	Depth

Remarks: Installed gas probe upon completion of borehole.



The stratification lines represent approximate strata boundaries. In situ, the transition may be gradual.
 LOGS ARE NOT INTENDED TO BE USED SEPARATELY FROM THE ORIGINAL REPORT.

F:\Proj\10\0\120\Attachment G\Probe Logs\Skyline ProbeDetail.dwg Layout: 3 User: aholderness



**INSTALLATION REPORT
GAS MONITORING PROBE**

**WASTE MANAGEMENT OF TEXAS, INC.
SKYLINE LANDFILL**



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

REVISIONS				DSN. JHP	DATE : 01/06	FIGURE
REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY

DWN. SRC	SCALE : GRAPHIC	GP-73
CHK. JHP	DWG : Skyline ProbeDetail.dwg	

LOG OF GAS MONITORING PROBE NO. GP-74

Project Description: **Skyline Landfill**

1201 North Central Avenue, Ferris, Texas

Biggs and Mathews Environmental, Inc.
1700 Robert Rd. Ste 100
Mansfield, TX 76063
Phone: 817-563-1144

Depth, feet	Samples	Symbol / USCS	Location: E 2256901.154 N 321756.804 Top of Casing El.: 449.56 ft. msl Surface El.: 447.06 ft. msl Completion Depth: 39.0 ft. Date Boring Started: 6/25/15 Date Boring Completed: 6/25/15	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
MATERIAL DESCRIPTION												
5		[Hatched Pattern]	CLAY, brown and black, with rootlets, very stiff - brown and tan, stiff to very stiff									
10		[Hatched Pattern]										
15		[Hatched Pattern]										
20		[Hatched Pattern]		430.06								
25		[Hatched Pattern]	SHALE (unweathered), dark gray, hard									
30		[Hatched Pattern]										
35		[Hatched Pattern]										
40		[Hatched Pattern]		408.06								
45		[Hatched Pattern]										
50		[Hatched Pattern]										

BME LOG SKYLINE.GPJ B&M DATA TEMPLATE.GDT 2/19/16

Drilling Contractor: **H/ET**
 Drilling Method: **Solid Flight Augers**
 Sampling Method:
 Geologist/Engineer: **S. Stamoulis**
 Project No.: **101.01.120**

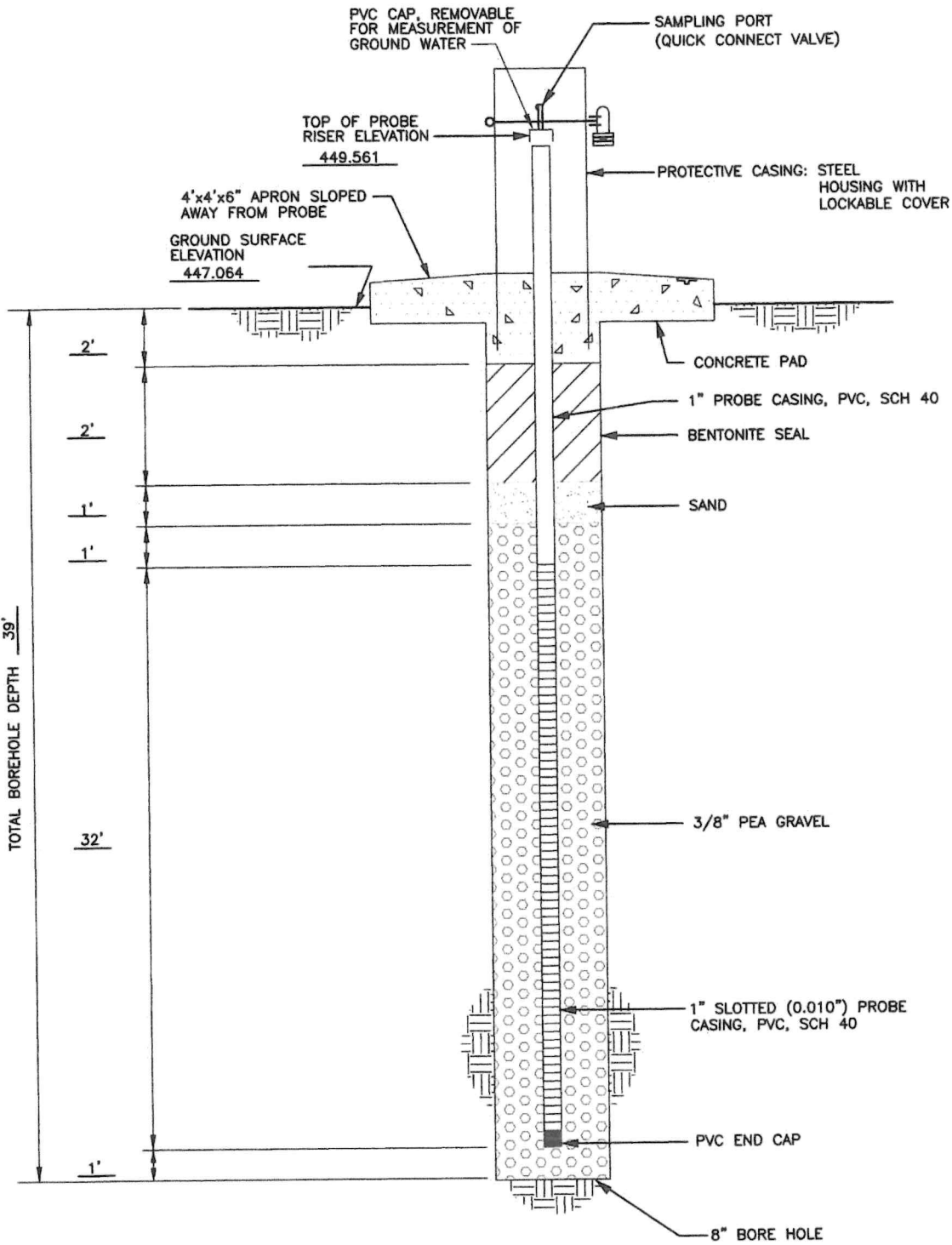
Groundwater Observations	
Date	Depth

Remarks: Installed gas probe upon completion of borehole.



The stratification lines represent approximate strata boundaries. In situ, the transition may be gradual.
 LOGS ARE NOT INTENDED TO BE USED SEPARATELY FROM THE ORIGINAL REPORT.

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**INSTALLATION REPORT
GAS MONITORING PROBE**
WASTE MANAGEMENT OF TEXAS, INC.
SKYLINE LANDFILL



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

REVISIONS						
REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY

DSN. JHP	DATE : 01/06
DWN. SRC	SCALE : GRAPHIC
CHK. JHP	DWG : Skyline ProbeDetail.dwg

FIGURE
GP-74

LOG OF GAS MONITORING PROBE NO. GP-75

Project Description: **Skyline Landfill**

1201 North Central Avenue, Ferris, Texas

Biggs and Mathews Environmental, Inc.
1700 Robert Rd. Ste 100
Mansfield, TX 76063
Phone: 817-563-1144

Depth, feet	Samples	Symbol / USCS	Location: E 2257060.172 N 321086.672	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
			Top of Casing El.: 442.36 ft. msl Surface El.: 439.92 ft. msl Completion Depth: 31.0 ft. Date Boring Started: 6/25/15 Date Boring Completed: 6/25/15									
			MATERIAL DESCRIPTION									
5			CLAY, brown and black, with rootlets, stiff									
10			- tan and light brown, stiff to very stiff									
15												
20				421.92								
25			SHALE (unweathered), dark gray, hard									
30												
35												
40												
45												
50				408.92								

BME LOG SKYLINE.GPJ B&M DATA TEMPLATE.GDT 2/19/16

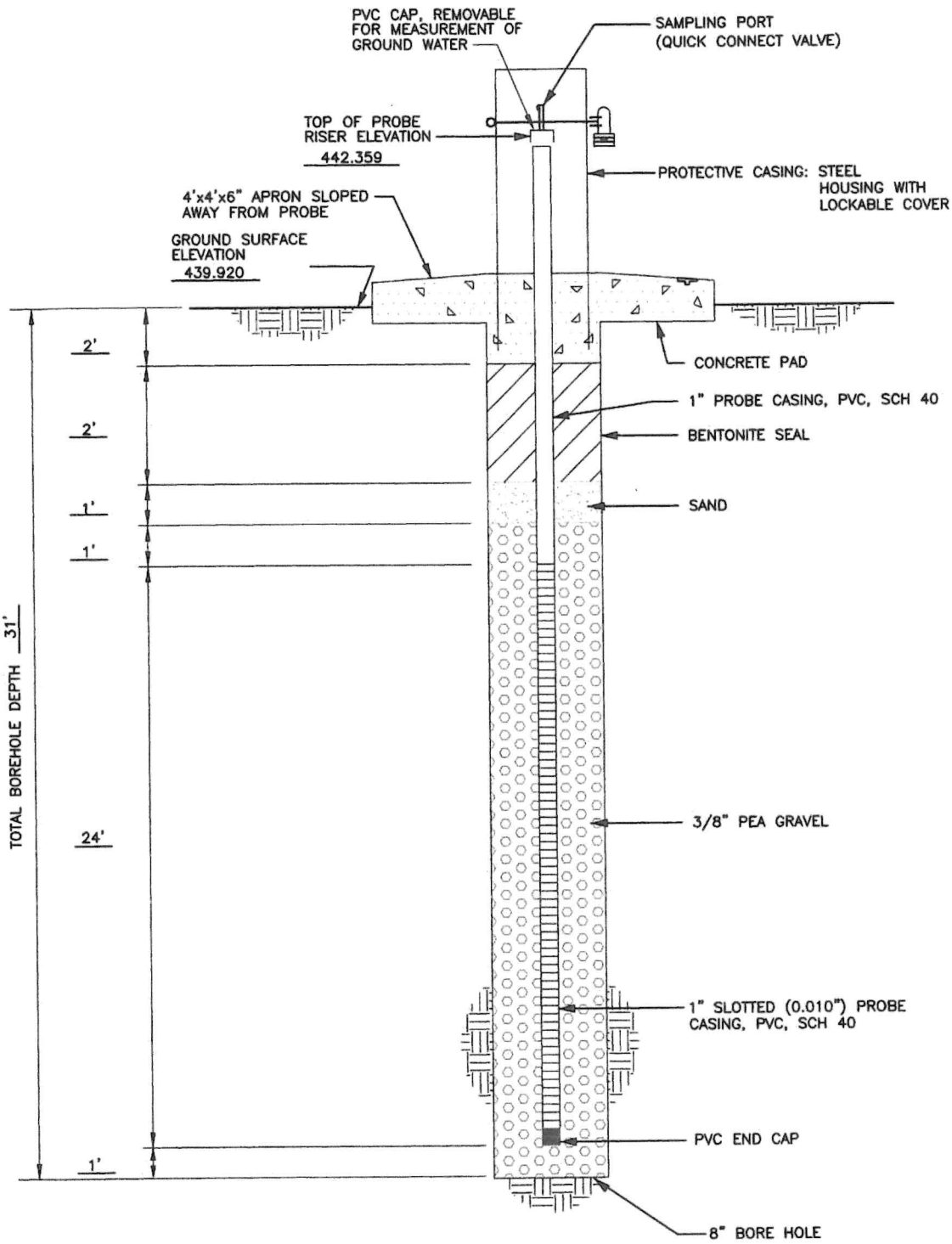
Drilling Contractor: **H/ET**
 Drilling Method: **Solid Flight Augers**
 Sampling Method:
 Geologist/Engineer: **S. Stamoulis**
 Project No.: **101.01.120**


Groundwater Observations	
Date	Depth

Remarks: Installed gas probe upon completion of borehole.



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INSTALLATION REPORT GAS MONITORING PROBE		
WASTE MANAGEMENT OF TEXAS, INC. SKYLINE LANDFILL		
		BIGGS & MATHEWS ENVIRONMENTAL CONSULTING ENGINEERS MANSFIELD • WICHITA FALLS 817-563-1144
DSN. JHP	DATE : 01/06	FIGURE
DWN. SRC	SCALE : GRAPHIC	GP-75
CHK. JHP	DWG : Skyline ProbeDetail.dwg	

REVISIONS						
REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY

LOG OF GAS MONITORING PROBE NO. GP-76R

Project Description: **Skyline Landfill**

1201 North Central Avenue, Ferris, Texas

Biggs and Mathews Environmental
 1700 Robert Road, Ste 100
 Mansfield, Texas 76063-5892
 Phone: 817-563-1144

Depth, feet	Samples	Symbol / USCS	Location: E 2257084.3 N 320485.1	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
			Top of Casing El.: 448.82 ft. msl Surface El.: 445.81 ft. msl Completion Depth: 36.0 ft. Date Boring Started: 9/2/2021 Date Boring Completed: 9/3/2021									
			MATERIAL DESCRIPTION									
5			Clay, brown and light brown, stiff									
10												
15				430.81								
20			Shale, (unweathered) dark gray, hard									
25												
30												
35				409.81								
40												
45												
50												

BME LOG SKYLINE.GPJ B&M DATA TEMPLATE.GDT 1/19/22

Contractor: **H/ET**
 Method: **Hollow Stem Auger**
 Sampling Method: **Cuttings**
 Geologist/Engineer: **S. Stamoulis**
 Project No.: **101.01.120**

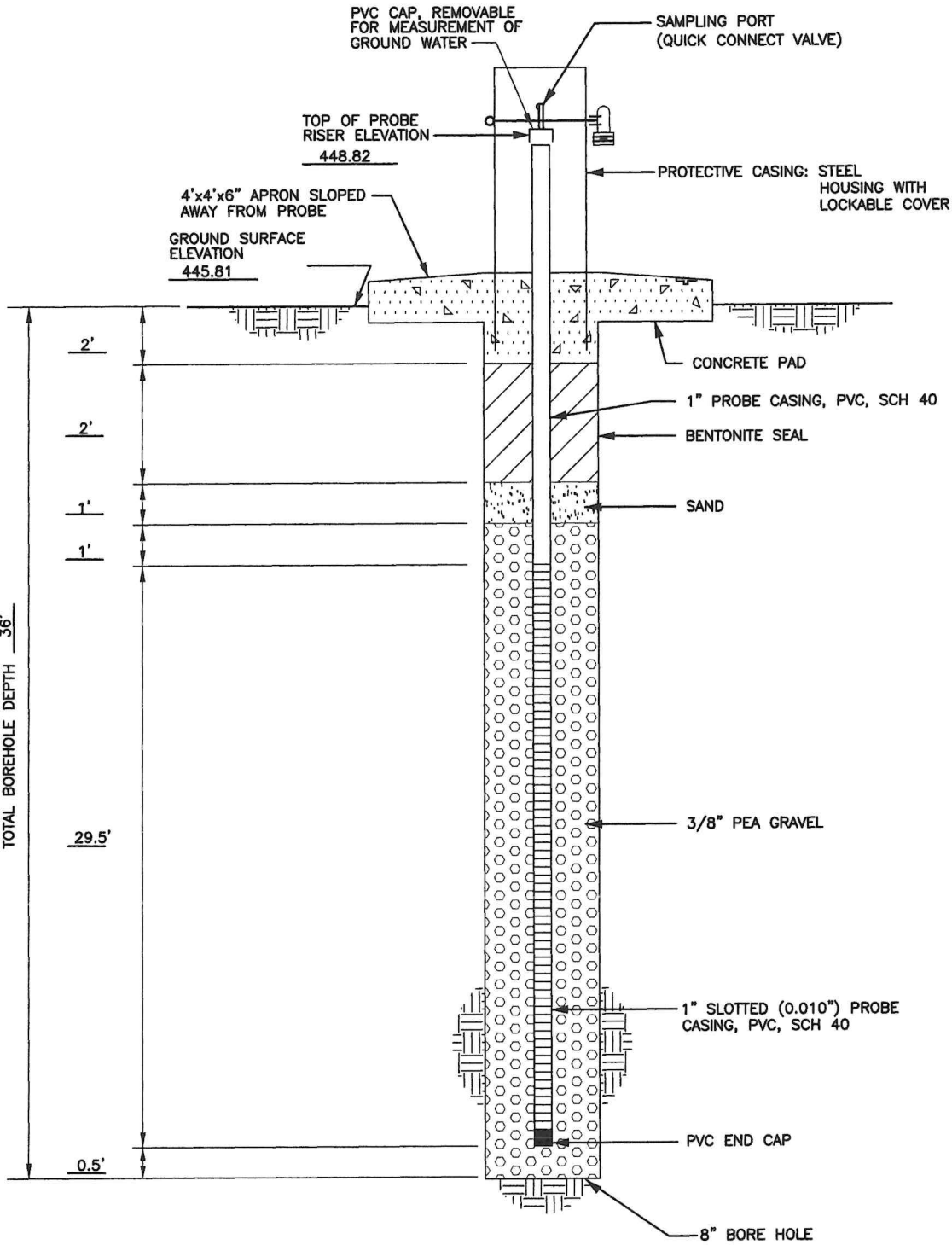
Groundwater Observations	
Date	Depth

Remarks: Dry upon completion



The stratification lines represent approximate strata boundaries. In situ, the transition may be gradual.
LOGS ARE NOT INTENDED TO BE USED SEPARATELY FROM THE ORIGINAL REPORT.

O:\Waste Management\Skylines\LFG\2021 Probe Installation Report\Skylines Probe.dwg Layout: GP-76R User: HParker



**INSTALLATION REPORT
GAS MONITORING PROBE**

**WASTE MANAGEMENT OF TEXAS, INC.
SKYLINE LANDFILL**



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

REVISIONS						
REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY

DSN. JHP	DATE : 01/2022	FIGURE GP-76R
DWN. SRC	SCALE : GRAPHIC	
CHK. JHP	DWG : Skylines ProbeDetail.dwg	

LOG OF GAS MONITORING PROBE NO. GP-77

Project Description: **Skyline Landfill**

1201 North Central Avenue, Ferris, Texas

Biggs and Mathews Environmental, Inc.
1700 Robert Rd. Ste 100
Mansfield, TX 76063
Phone: 817-563-1144

Depth, feet	Samples	Symbol / USCS	Location: E 2257125.766 N 319893.418 Top of Casing El.: 451.70 ft. msl Surface El.: 449.29 ft. msl Completion Depth: 40.0 ft. Date Boring Started: 7/21/15 Date Boring Completed: 7/21/15	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
MATERIAL DESCRIPTION												
5		[Hatched Pattern]	CLAY, brown and dark brown, with rootlets, stiff.									
10		[Hatched Pattern]										
15		[Hatched Pattern]		433.29								
20		[Hatched Pattern]	SHALE (unweathered), dark gray, hard.									
25		[Hatched Pattern]										
30		[Hatched Pattern]										
35		[Hatched Pattern]										
40		[Hatched Pattern]		409.29								
45		[Hatched Pattern]										
50		[Hatched Pattern]										

BME LOG SKYLINE.GPJ B&M DATA TEMPLATE.GDT 2/19/16

Drilling Contractor: **H/ET**
 Drilling Method: **Solid Flight Augers**
 Sampling Method:
 Geologist/Engineer: **S. Stamoulis**
 Project No.: **101.01.120**

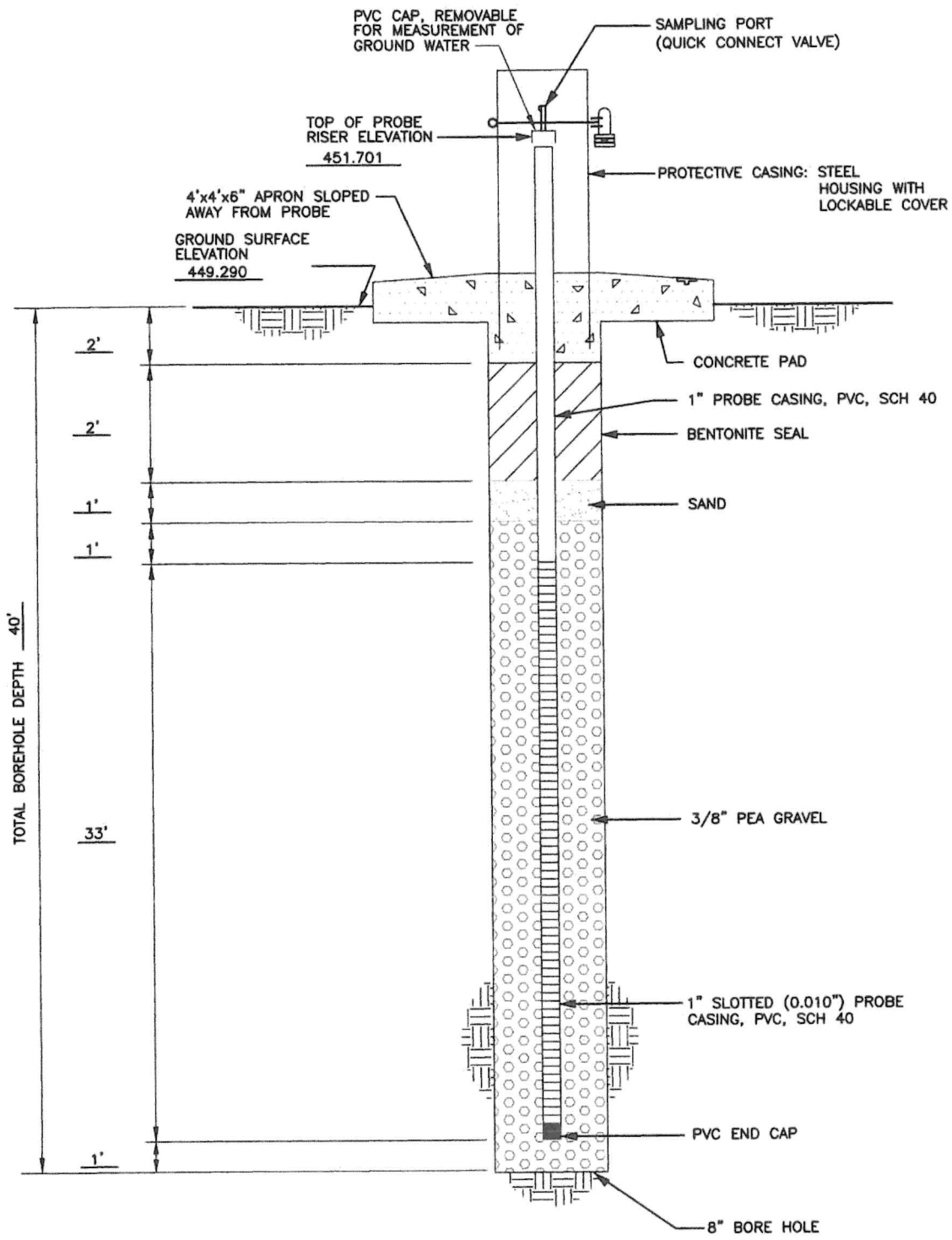
Groundwater Observations	
Date	Depth

Remarks: Installed gas probe upon completion of borehole.




The stratification lines represent approximate strata boundaries. In situ, the transition may be gradual.
 LOGS ARE NOT INTENDED TO BE USED SEPARATELY FROM THE ORIGINAL REPORT.

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**INSTALLATION REPORT
GAS MONITORING PROBE**

**WASTE MANAGEMENT OF TEXAS, INC.
SKYLINE LANDFILL**



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

REVISIONS						
REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY

DSN. JHP	DATE : 01/06	FIGURE GP-77
DWN. SRC	SCALE : GRAPHIC	
CHK. JHP	DWG : Skyline ProbeDetail.dwg	

LOG OF GAS MONITORING PROBE NO. GP-78

Project Description: Skyline Landfill

1201 North Central Avenue, Ferris, Texas

Biggs and Mathews Environmental, Inc.
1700 Robert Rd. Ste 100
Mansfield, TX 76063
Phone: 817-563-1144

Depth, feet	Samples	Symbol / USCS	Location: E 2256163.501 N 319471.751	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
			Top of Casing El.: 494.51 ft. msl Surface El.: 492.36 ft. msl Completion Depth: 86.0 ft. Date Boring Started: 7/23/15 Date Boring Completed: 7/23/15									
			MATERIAL DESCRIPTION									
5			CLAY, dark brown and black, with rootlets, stiff. -brown to tan, stiff to very stiff									
10												
15												
20												
25			-brown and tan									
30												
35												
40												
45												
50			SHALE (unweathered), dark gray, hard.	443.36								
Drilling Contractor: H/ET Drilling Method: Solid Flight Augers Sampling Method: Geologist/Engineer: S. Stamoulis Project No.: 101.01.120			Groundwater Observations Date: _____ Depth: _____ _____ _____		Remarks: Installed gas probe upon completion of borehole.							

BME LOG SKYLINE.GPJ B&M DATA TEMPLATE.GDT 2/19/16



LOG OF GAS MONITORING PROBE NO. GP-78

Project Description: **Skyline Landfill**

1201 North Central Avenue, Ferris, Texas

Biggs and Mathews Environmental, Inc.
 1700 Robert Rd. Ste 100
 Mansfield, TX 76063
 Phone: 817-563-1144

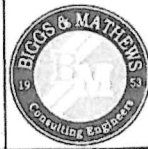
Depth, feet	Samples	Symbol / USCS	Location: E 2256163.501 N 319471.751	Hand Penetrometer, tsf	Penetration Blows/Foot	Moisture Content, %	Unit Dry Weight, lb/cu ft.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
			Top of Casing El.: 494.51 ft. msl Surface El.: 492.36 ft. msl Completion Depth: 86.0 ft. Date Boring Started: 7/23/15 Date Boring Completed: 7/23/15									
			MATERIAL DESCRIPTION									
55			SHALE (unweathered), dark gray, hard. <i>(continued)</i>									
60												
65												
70												
75												
80												
85					406.36							
90												
95												
100												

BME LOG SKYLINE.GPJ B&M DATA TEMPLATE.GDT 2/19/16

Drilling Contractor: **H/ET**
 Drilling Method: **Solid Flight Augers**
 Sampling Method:
 Geologist/Engineer: **S. Stamoulis**
 Project No.: **101.01.120**

Groundwater Observations	
Date	Depth

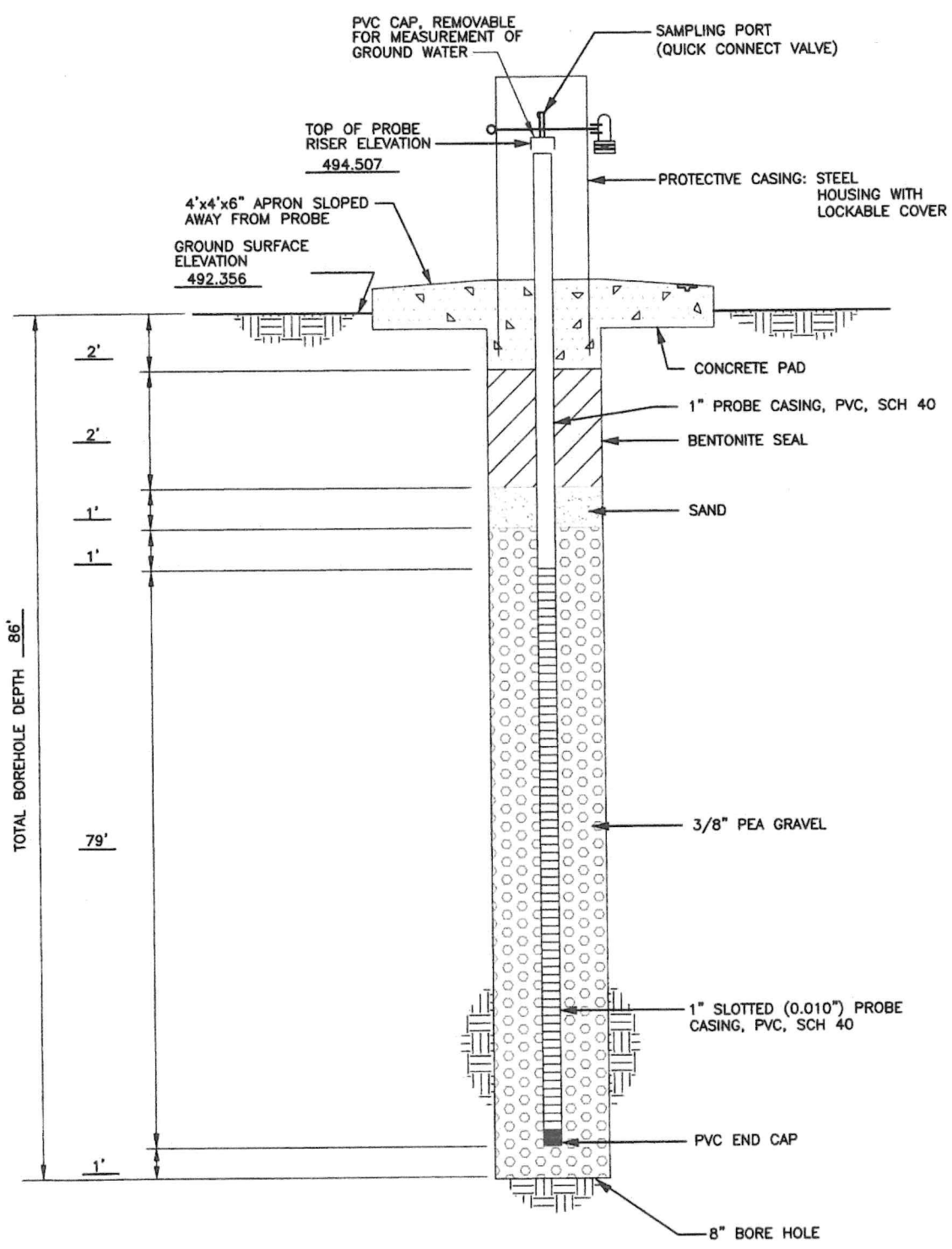
Remarks: Installed gas probe upon completion of borehole.



LOG OF GAS MONITORING PROBE NO. GP-78

The stratification lines represent approximate strata boundaries. In situ, the transition may be gradual.
 LOGS ARE NOT INTENDED TO BE USED SEPARATELY FROM THE ORIGINAL REPORT.

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INSTALLATION REPORT GAS MONITORING PROBE																													
WASTE MANAGEMENT OF TEXAS, INC. SKYLINE LANDFILL																													
	BIGGS & MATHEWS ENVIRONMENTAL CONSULTING ENGINEERS MANSFIELD • WICHITA FALLS 817-563-1144																												
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="7">REVISIONS</th> </tr> <tr> <th>REV</th> <th>DATE</th> <th>DESCRIPTION</th> <th>DWN BY</th> <th>DES BY</th> <th>CHK BY</th> <th>APP BY</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	REVISIONS							REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY								<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>DSN. JHP</td> <td>DATE : 01/06</td> <td rowspan="3" style="text-align: right; vertical-align: middle;">FIGURE GP-78</td> </tr> <tr> <td>DWN. SRC</td> <td>SCALE : GRAPHIC</td> </tr> <tr> <td>CHK. JHP</td> <td>DWG : Skyline ProbeDetail.dwg</td> </tr> </table>	DSN. JHP	DATE : 01/06	FIGURE GP-78	DWN. SRC	SCALE : GRAPHIC	CHK. JHP	DWG : Skyline ProbeDetail.dwg
REVISIONS																													
REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY																							
DSN. JHP	DATE : 01/06	FIGURE GP-78																											
DWN. SRC	SCALE : GRAPHIC																												
CHK. JHP	DWG : Skyline ProbeDetail.dwg																												

LOG OF GAS MONITORING PROBE NO. GP-79

Project Description: **Skyline Landfill**

1201 North Central Avenue, Ferris, Texas

Biggs and Mathews Environmental, Inc.
 1700 Robert Rd. Ste 100
 Mansfield, TX 76063
 Phone: 817-563-1144

Depth, feet	Samples	Symbol / USCS	Location: E 2256099.207 N 320012.354	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
			Top of Casing El.: 491.68 ft. msl Surface El.: 489.09 ft. msl Completion Depth: 86.0 ft. Date Boring Started: 7/23/15 Date Boring Completed: 7/23/15									
			MATERIAL DESCRIPTION									
5			CLAY, dark brown, with rootlets, stiff.									
10			-dark brown and tan, stiff to very stiff									
15												
20												
25												
30												
35			-dark brown									
40												
45												
50												

BME LOG SKYLINE.GPJ B&M DATA TEMPLATE.GDT 2/19/16

Drilling Contractor: **H/ET**
 Drilling Method: **Solid Flight Augers**
 Sampling Method:
 Geologist/Engineer: **S. Stamoulis**
 Project No.: **101.01.120**

Groundwater Observations	
Date	Depth

Remarks: Installed gas probe upon completion of borehole.



LOG OF GAS MONITORING PROBE NO. GP-79

Biggs and Mathews Environmental, Inc.
1700 Robert Rd. Ste 100
Mansfield, TX 76063
Phone: 817-563-1144

Project Description: **Skyline Landfill**
1201 North Central Avenue, Ferris, Texas

Depth, feet	Samples	Symbol / USCS	Location: E 2256099.207 N 320012.354 Top of Casing El.: 491.68 ft. msl Surface El.: 489.09 ft. msl Completion Depth: 86.0 ft. Date Boring Started: 7/23/15 Date Boring Completed: 7/23/15	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
MATERIAL DESCRIPTION												
		CLAY	CLAY, dark brown, with rootlets, stiff. <i>(continued)</i>									
55		SHALE	SHALE (unweathered), dark gray, hard.		435.09							
60		SHALE										
65		SHALE										
70		SHALE										
75		SHALE										
80		SHALE										
85		SHALE			403.09							
90		SHALE										
95		SHALE										
100		SHALE										

BME LOG SKYLINE.GPJ B&M DATA TEMPLATE.GDT 2/19/16

Drilling Contractor: **H/ET**
Drilling Method: **Solid Flight Augers**
Sampling Method:
Geologist/Engineer: **S. Stamoulis**
Project No.: **101.01.120**

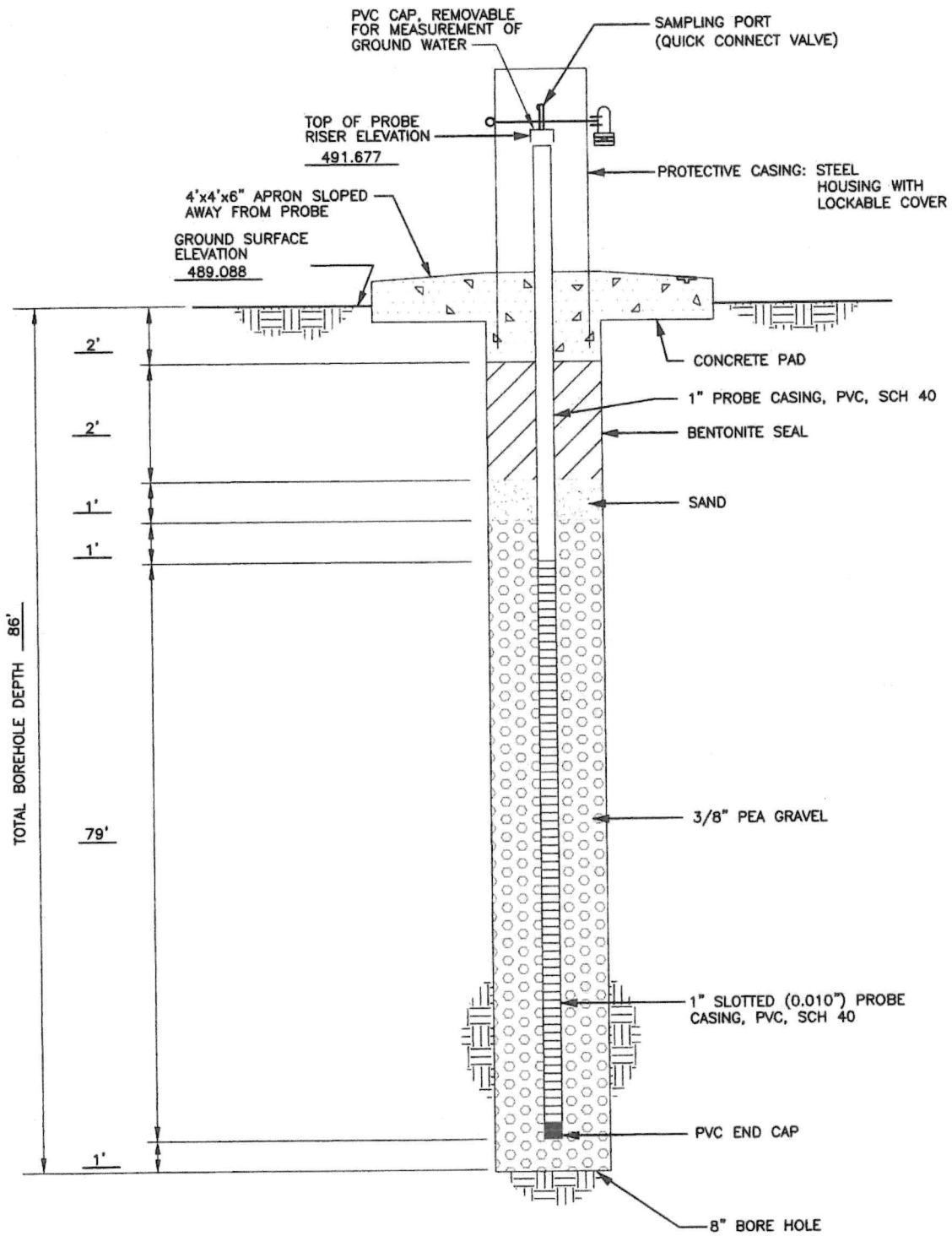
Groundwater Observations	
Date	Depth

Remarks: Installed gas probe upon completion of borehole.




The stratification lines represent approximate strata boundaries. In situ, the transition may be gradual.
LOGS ARE NOT INTENDED TO BE USED SEPARATELY FROM THE ORIGINAL REPORT.

F:\Proj\101\01\120\Attachment G\Probe Logs\Skyline ProbeDetail.dwg Layout 79 User: aholderness



**INSTALLATION REPORT
GAS MONITORING PROBE**

**WASTE MANAGEMENT OF TEXAS, INC.
SKYLINE LANDFILL**



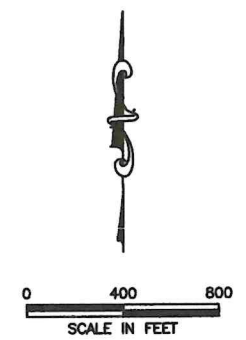
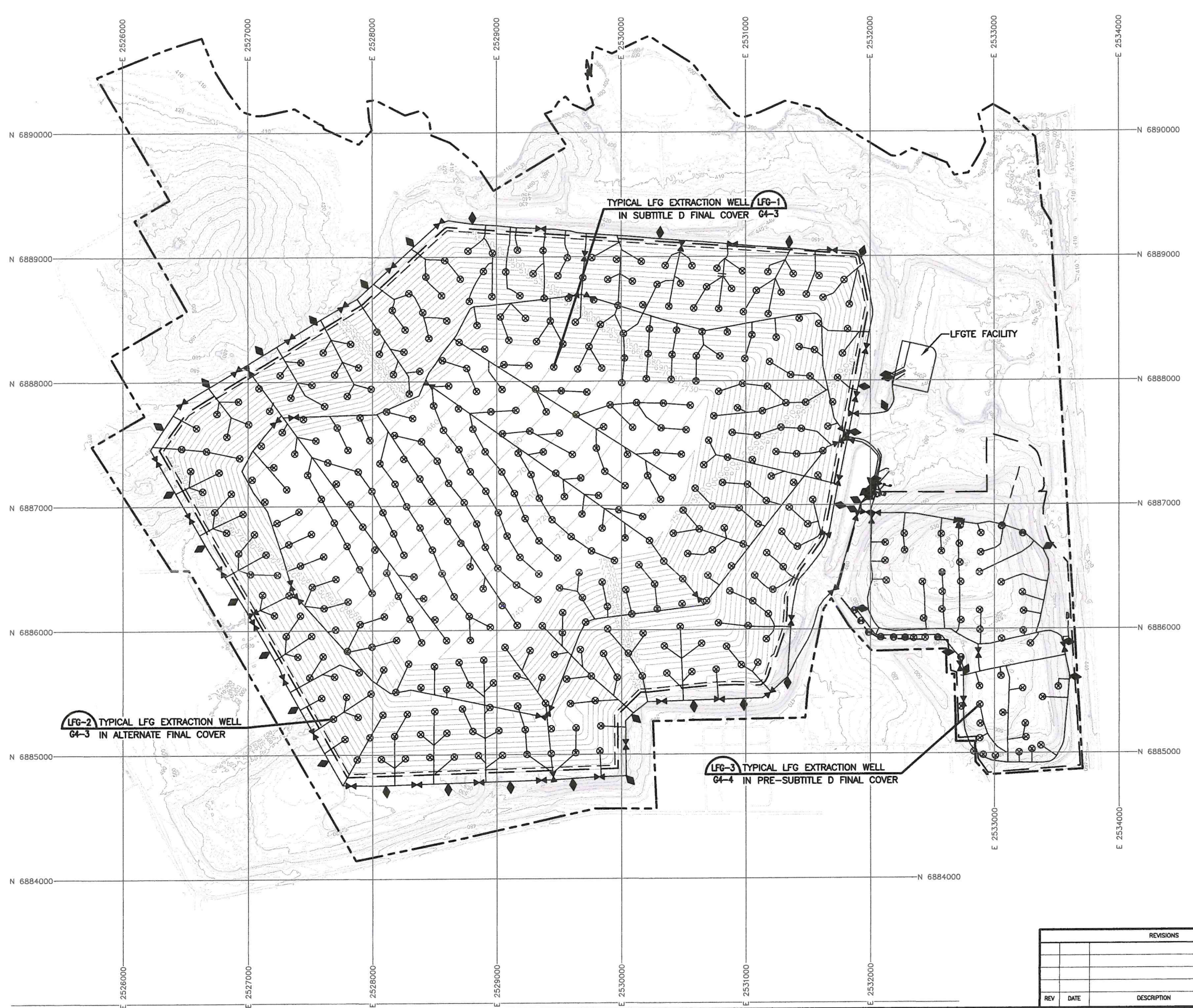
BIGGS & MATHEWS
ENVIRONMENTAL
CONSULTING ENGINEERS
MANSFIELD • WICHITA FALLS
817-563-1144

REVISIONS						
REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY

DSN. JHP	DATE : 01/06	FIGURE GP-79
DWN. SRC	SCALE : GRAPHIC	
CHK. JHP	DWG : Skyline ProbeDetail.dwg	

**APPENDIX G4
LANDFILL GAS COLLECTION AND CONTROL SYSTEM PLAN**

D:\Projects\Waste Management\Skylines\Solid Waste\Part III\Attachment G\G4.1-GCCS.dwg Layout: G4.1-Final GCCS User: AMontgomery



- LEGEND:**
- PERMIT BOUNDARY
 - LANDFILL FOOTPRINT
 - N 10144000 STATE PLANE GRID
 - - - - - EXISTING CONTOUR
 - - - - - FINAL COVER CONTOUR
 - ⊗ LFG EXTRACTION WELL
 - LFG COLLECTION PIPING
 - HORIZONTAL LFG COLLECTOR
 - ✕ LFG ISOLATION VALVE
 - ◆ CONDENSATE SUMP

- NOTE(S):**
1. EXISTING CONTOURS COMPILED BY HYDREX DRONE DIVISION, FROM AERIAL SURVEY FLOWN MARCH 5, 2025.
 2. THE LOCATION AND NUMBER OF PROPOSED FUTURE EXTRACTION WELLS AND GCCS COMPONENTS ARE APPROXIMATE. EXACT NUMBER AND LOCATIONS WILL BE DETERMINED BASED ON SITE CONDITIONS AT THE TIME OF INSTALLATION.



Austin L. Montgomery
3/31/2026

FINAL GCCS SYSTEM
WASTE MANAGEMENT OF TEXAS, INC.
SKYLINE LANDFILL

BME **BIGGS & MATHEWS ENVIRONMENTAL**
1700 ROBERT ROAD, STE. 100
MANSFIELD, TEXAS 76063
817-563-1144

REVISIONS			
REV	DATE	DESCRIPTION	DWN BY

TBPELS FIRM NO. F-256 AND NO. 10194895
TBPQ FIRM NO. 50222
DRAWING **G4.1**

D:\Projects\Waste Management\Skyline\Solid Waste\Part III\Attachment C\G4.2-Existing GCCS.dwg Layout: G4.2-Existing GCCS User: AMontgomery



NOTE(S):
 1. EXISTING CONTOURS COMPILED BY HYDREX DRONE DIVISION, FROM AERIAL SURVEY FLOWN MARCH 5, 2025.



Austin L. Montgomery
 3/31/2026

EXISTING GCCS SYSTEM

WASTE MANAGEMENT OF TEXAS, INC.
SKYLINE LANDFILL

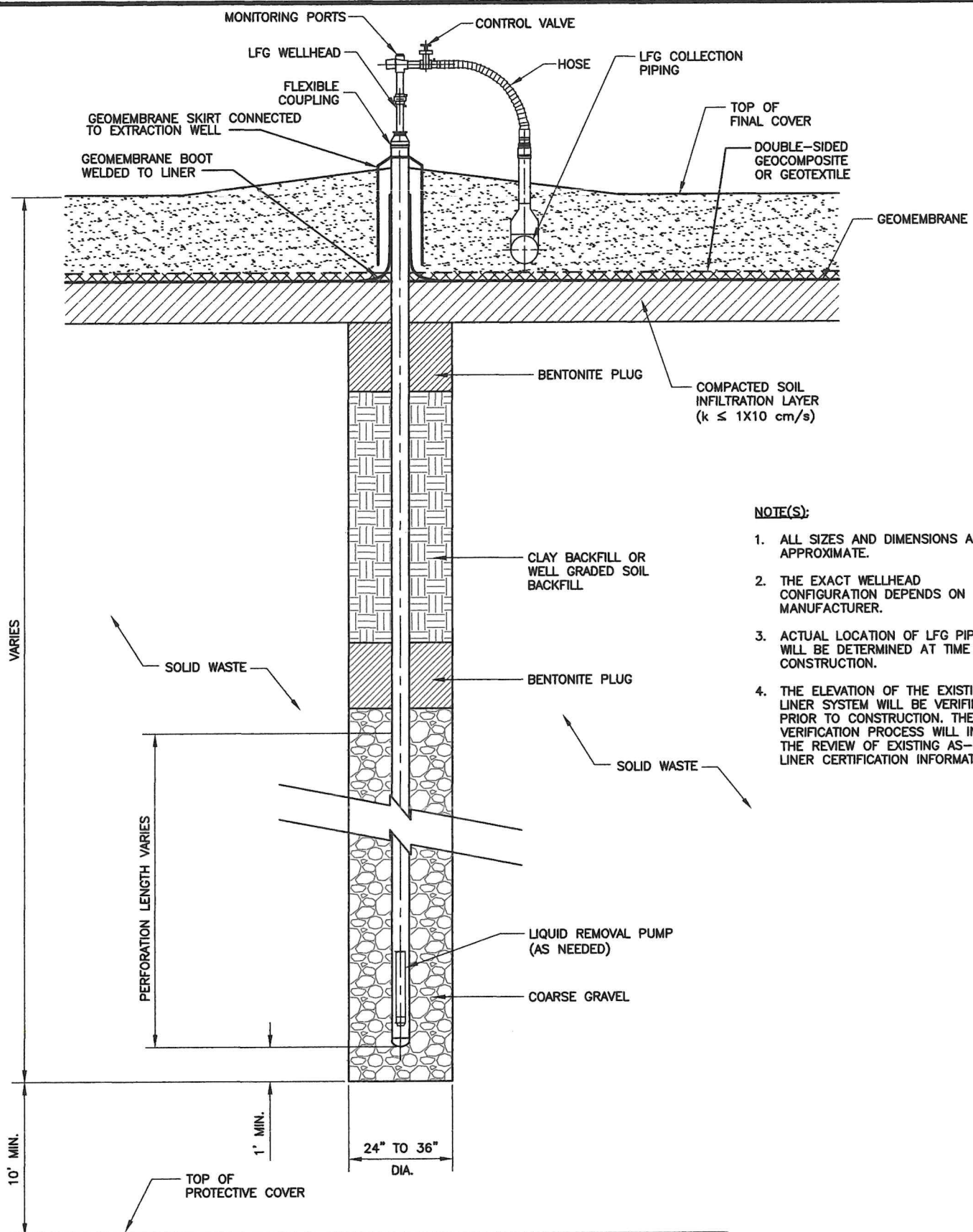
BIGGS & MATHEWS ENVIRONMENTAL
 1700 ROBERT ROAD, STE. 100
 MANSFIELD, TEXAS 76063
 817-563-1144

DRAWING
G4.2

REVISIONS			
REV	DATE	DESCRIPTION	DWN BY

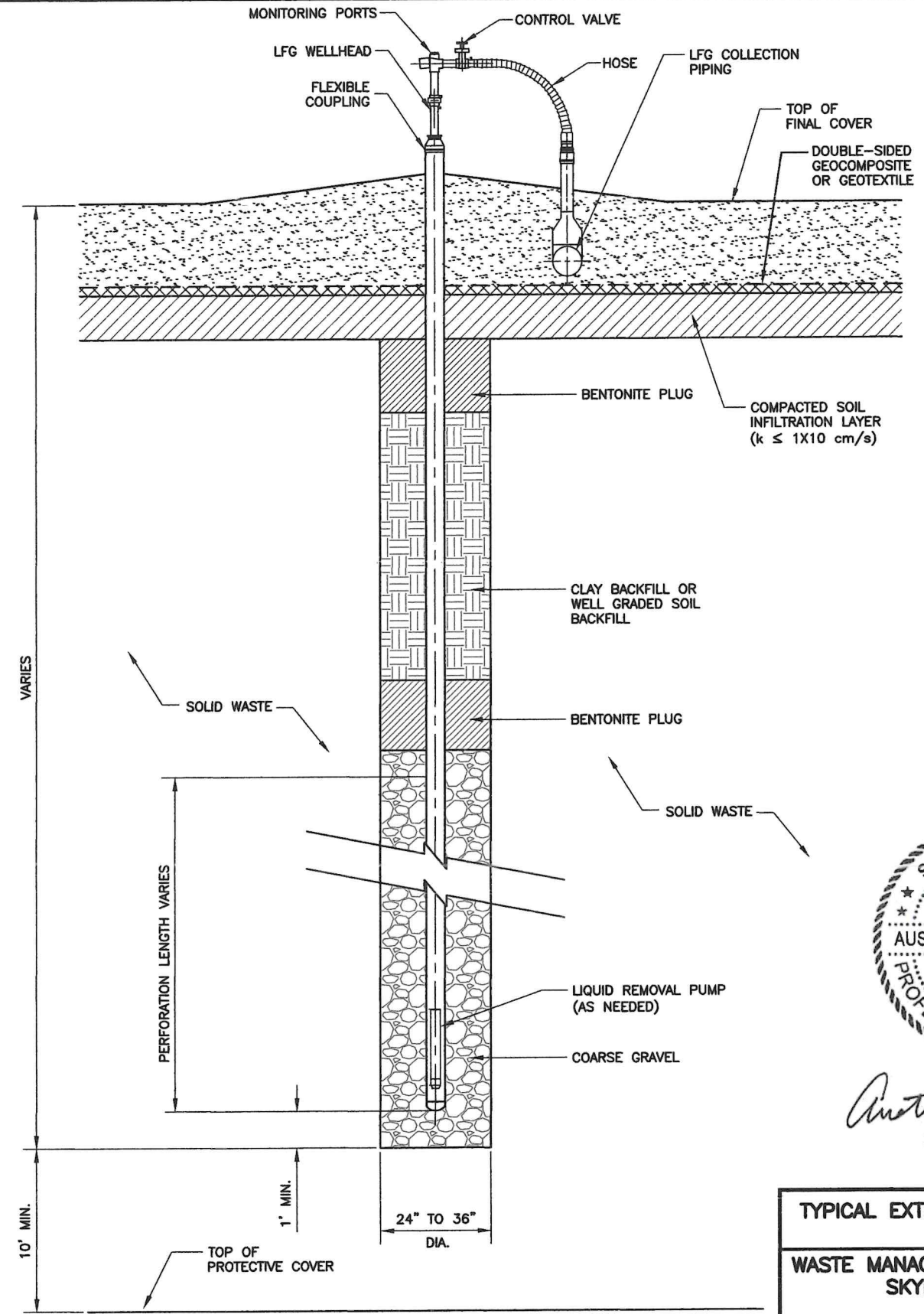
TBPES FIRM NO. F-256 AND NO. 10194895
 TBPB FIRM NO. 50222

D:\Projects\Waste Management\Skylines\Solid Waste\Part III\Attachment G4-3-ExtWellDI.dwg Layout: G4-3-LFG Ext Well User: AMontgomery



TYPICAL LFG EXTRACTION WELL LFG-1
IN SUBTITLE D FINAL COVER
 NTS G4-3

- NOTE(S):**
1. ALL SIZES AND DIMENSIONS ARE APPROXIMATE.
 2. THE EXACT WELLHEAD CONFIGURATION DEPENDS ON MANUFACTURER.
 3. ACTUAL LOCATION OF LFG PIPING WILL BE DETERMINED AT TIME OF CONSTRUCTION.
 4. 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.



TYPICAL LFG EXTRACTION WELL LFG-2
IN ALTERNATE FINAL COVER
 NTS G4-3



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 3/31/2026

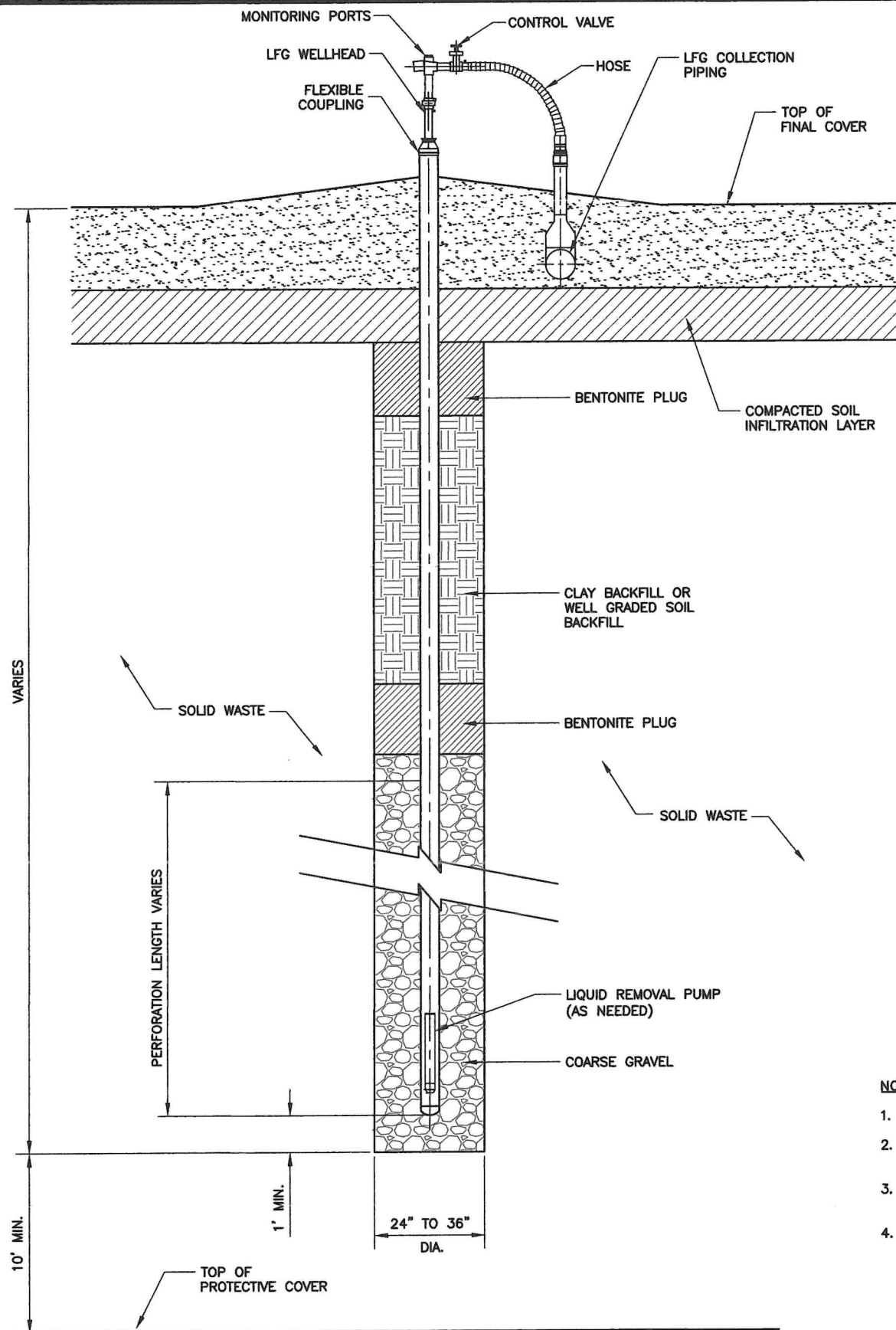
TYPICAL EXTRACTION WELL DETAILS
WASTE MANAGEMENT OF TEXAS, INC.
SKYLINE LANDFILL

BME **BIGGS & MATHEWS ENVIRONMENTAL**
 1700 ROBERT ROAD, STE. 100
 MANSFIELD, TEXAS 76063
 817-563-1144

REVISIONS			
REV	DATE	DESCRIPTION	OWN BY

TBPESL FIRM NO. F-256 AND NO. 10194895
 TBPBG FIRM NO. 50222
 DRAWING **G4.3**

D:\Projects\Waste Management\Skylines\Solid Waste\Part III\Attachment G\G4-3-ExtWellDtl.dwg Layout: G4.4-LFG Ext Well User: AMontgomery



TYPICAL LFG EXTRACTION WELL (LFG-3)
IN PRE-SUBTITLE D FINAL COVER G4-4
NTS

NOTE(S):

1. ALL SIZES AND DIMENSIONS ARE APPROXIMATE.
2. THE EXACT WELLHEAD CONFIGURATION DEPENDS ON MANUFACTURER.
3. ACTUAL LOCATION OF LFG PIPING WILL BE DETERMINED AT TIME OF CONSTRUCTION.
4. 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.



Austin L. Montgomery
3/31/2026

TYPICAL EXTRACTION WELL DETAILS

WASTE MANAGEMENT OF TEXAS, INC.
SKYLINE LANDFILL



BIGGS & MATHEWS ENVIRONMENTAL
1700 ROBERT ROAD, STE. 100
MANSFIELD, TEXAS 76063
817-563-1144

REVISIONS			
REV	DATE	DESCRIPTION	DWN BY

TBPELS FIRM NO. F-256 AND NO. 10194895

TBPG FIRM NO. 50222

DRAWING

G4.4

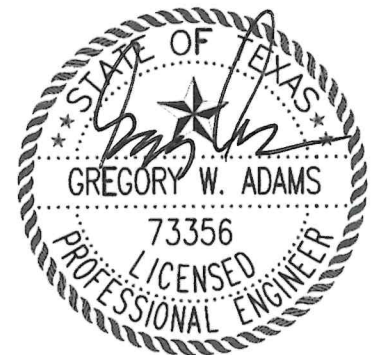
**WASTE MANAGEMENT SKYLINE LANDFILL
DALLAS AND ELLIS COUNTIES, TEXAS
PERMIT AMENDMENT APPLICATION NO. MSW 42E**

**PART III – FACILITY INVESTIGATION AND DESIGN
ATTACHMENT H
CLOSURE PLAN**

Prepared for



March 2026



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

3/31/2026

Prepared by



BIGGS & MATHEWS ENVIRONMENTAL

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

TEXAS BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
FIRM REGISTRATION No. F-256 AND No. 10194895

TEXAS BOARD OF PROFESSIONAL GEOSCIENTISTS
FIRM REGISTRATION No. 50222



Texas Commission on Environmental Quality

Closure Plan for Municipal Solid Waste Type I Landfill Units and Final Facility Closure

This form is for use by applicants or site operators of Municipal Solid Waste (MSW) Type I landfills to detail the plan for closure of a landfill unit, closure of associated storage or processing units, and final closure of the facility to meet the requirements in 30 TAC Chapter 330, §330.63(h) and 30 TAC Chapter 330 Subchapter K for a MSW Type I facility.

If you need assistance in completing this form, please contact the MSW Permits Section in the Waste Permits Division at (512) 239-2335.

I. General Information

Facility Name: Waste Management Skyline Landfill

MSW Permit No.: 42E

Site Operator/Permittee Name: Waste Management of Texas, Inc.

II. Landfill and Other Waste Management Units and Operations Requiring Closure at the Facility

A. Facility Units

Table 1. Description of Landfill Units.

Name or Descriptor of Unit	Operating Status of Unit	Type of Liner System Under Unit	Above Grade Class 1 Disposal Cells in this Unit	Below Grade Class 1 Disposal Cells in this Unit	Other Class 1 Disposal Cells in this Unit (describe)	Size of Unit's Waste Footprint (acres)	Maximum Inventory of Waste Ever in Unit (indicate cubic yards or tons)	Other Necessary Information that Pertains to the Unit
LF Unit 1	inactive	Pre Subtitle D	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	68.3	6,400,000	
LF Unit 1	active	Subtitle D	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.2	100,000	
LF Unit 2	active	Subtitle D	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	416.2	119,575,000	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Totals						488.7	126,075,000	

Closure Plan for Type I Landfill Unit and Facility

Facility Name: Waste Management Skyline Landfill

Revision No.: 0

Permit No: 42E

Date: 3/31/2026

Table 2. Description of Waste Storage or Processing Units or Operations Associated with this Permit.

Type of Storage or Processing Unit or Operation (individual units may be closed at any time prior to or during the final facility closure as described in this plan)	Operational Status of Unit	Size of the Area Used for the Storage or Processing Unit or Operation (Acres)	Maximum Inventory of Waste Ever in Storage or Processing Unit or Operation (indicate cubic yards or tons)	Other Information (enter other necessary information that pertains to the unit)
Large item storage, reusable materials, liquid stabilization	active	0.3	5 <input checked="" type="checkbox"/> cubic yards <input type="checkbox"/> tons	all are located within the waste footprint
Citizen Convenience area	active	0.2	60 <input checked="" type="checkbox"/> cubic yards <input type="checkbox"/> tons	
Mud Grate Facility	active	0.1	5 <input checked="" type="checkbox"/> cubic yards <input type="checkbox"/> tons	
			<input type="checkbox"/> cubic yards <input type="checkbox"/> tons	
Totals		0.6	70	

B. Waste Inventory Summary

Table 3. Maximum Inventory of Wastes Ever On Site.

Item	Quantity (indicate cubic yards or tons)
Maximum inventory of waste in landfill units (total from Table 1)	126,075,000 <input checked="" type="checkbox"/> cubic yards or <input type="checkbox"/> tons
Maximum inventory of waste in storage or processing units or operations (total from Table 2)	70 <input checked="" type="checkbox"/> cubic yards or <input type="checkbox"/> tons
Total Maximum Inventory of Wastes ever on site over the active life of the MSW facility (sum of totals from Tables 1 and 2)	126,075,070 <input checked="" type="checkbox"/> cubic yards or <input type="checkbox"/> tons

Closure Plan for Type I Landfill Unit and Facility

Facility Name: Waste Management Skyline Landfill

Revision No.: 0

Permit No: 42E

Date: 3/31/2026

C. Drawings Showing Details of the Waste Management Units at Closure

Table 4. Location of the Drawings showing Details of the Waste Management Units at Closure (outlines, dimensions, maximum elevations of waste and final cover of landfill units, and waste storage or processing units or operations at closure of the facility).

Drawing Location in the SDP	Drawing Figure Number	Drawing Title	Waste Management Units Details Shown
Attachment D1	D1.6	Landfill Completion Plan	permit boundary, landfill units, monitoring systems, final grades, drainage features
Attachment D3	D3.8 D3.9 D3.10	Final Cover Plan Final Cover Details	final cover, details, maximum elevation of waste
Attachement B	B.2 B.3 and B.4	Waste Processing and Storage Facilities Schematic Plan	locations of storage and processing facilities details of storage and processing facilities

III. Description of the Final Cover System Design

A. Types and Descriptions of the Final Cover Systems

Table 5. Types and Descriptions of the Final Cover Systems Permitted or Proposed for Closure of the Landfill Units.

Landfill Unit Name or Descriptor	Type of Final Cover System	Final Cover System Components Description	Other Information (Enter other information as applicable)
LF Unit 1	Presubtitle D	Southern half: 18-inch infiltration layer ($k < 10^{-6}$ cm/sec) 6-erosion layer Northern half: 30-inch infiltration layer with top 18 inches $k < 10^{-7}$ cm/sec	Existing

Closure Plan for Type I Landfill Unit and Facility

Facility Name: Waste Management Skyline Landfill

Revision No.: 0

Permit No: 42E

Date: 3/31/2026

Landfill Unit Name or Descriptor	Type of Final Cover System	Final Cover System Components Description	Other Information (Enter other information as applicable)
Landfill Units 1&2	Alternate	Top Deck: 12-inch infiltration layer ($k < 10^{-7}$ cm/sec), 40 mil LLDPE geomembrane, 250 mil double-sided geocomposite, 24-inch erosion layer	
Landfill Units 1&2	Alternate Option A	Sideslope: 12-inch infiltration layer ($k < 10^{-7}$ cm/sec), 250 mil double-sided geocomposite, 36-inch erosion layer	
Landfill Units 1&2	Alternate Option B	Sideslope: 18-inch infiltration layer ($k < 10^{-7}$ cm/sec), 200 mil double-sided geocomposite, 36-inch erosion layer	8.3 acres are existing

B. Design Details

Table 6. Design Details of the Final Cover Top and Side Slopes for the Landfill Units.

Landfill Unit Name or Descriptor	Maximum Final Elevation of Waste (feet above mean sea level [ft-msl])	Maximum Elevation of Top of Final Cover (ft-msl)	Minimum Grade of the Final Cover Top Slope (%)	Maximum Grade of the Final Cover Side Slope (%)	Other Information (enter other information as applicable, e.g. above-grade Class 1 Cell Dikes)
Landfill Unit 1	542.0	544.0	3	25	
Landfill Unit 2	756.5	761.0	2	25	

Closure Plan for Type I Landfill Unit and Facility

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C. Final Cover Drainage Features

Storm water drainage and erosion and sediment control features incorporated on the final cover of the landfill units to protect the integrity and effectiveness of the final cover system include *(please list and describe the drainage features to be installed on the final cover at or prior to closure for each landfill unit, or list the drainage features and provide cross references on the location(s) of the descriptive and details (drawing) information in other parts of the SDP):*

Swales and chutes as shown on Attachment D3 Drawings D3.8 and D3.10

Closure Plan for Type I Landfill Unit and Facility

Facility Name: Waste Management Skyline Landfill

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Date: 3/31/2026

D. Final Cover Vegetation or Other Ground Cover Material

The final cover will be seeded and/or sodded with native plants immediately following the application of the final cover in order to minimize erosion. Other materials, including **erosion control mats (ERM), mulch and geomembrane**, may be incorporated over the final cover soil surface to ensure sufficient coverage of the ground surface to minimize erosion. The estimated percent ground cover to minimize soil loss and maintain long-term erosional stability of the final cover top and side slopes is: **5%**. The minimum material specifications for other ground cover materials are summarized in the table below.

For a landfill with water balance final cover design, the percentage vegetation cover (excluding other ground cover types) will not be less than that assumed in the water balance final cover model.

Table 7. Minimum Specification for Ground Cover Materials Other Than Vegetation, if Applicable.

Other Ground Cover Material	Maximum Particle Size (inches)	Minimum Particle Size (inches)	Material Placement Method	Thickness of Layer (inches)	Percentage Coverage (%)	Other (specify)
ERM			unroll	0.5 inch	2	
Mulch			spread	6 inch	1	
Geomembrane			unroll	0.04	2	

E. Final Contour Map

Figure **D1.6**, a facility final contour map is attached. The map shows the final contours of the landfill units and the entire facility at closure.

Figures **D2.1** and **D2.2-D2.7** showing the cross-sections of the landfill units at closure are also provided.

The facility final contour and cross-section maps/drawings depict the following information:

- (1) Final constructed contours of the landfill at closure.
- (2) Top slopes and side slopes of the landfill units.
- (3) Surface drainage features.
- (4) 100-year floodplain, as applicable.
- (5) Constructed features providing protection of/from the 100-year floodplain.
- (6) Other (specify):

Closure Plan for Type I Landfill Unit and Facility

Facility Name: Waste Management Skyline Landfill

Revision No.: 0

Permit No: 42E

Date: 3/31/2026

IV. Description of the Final Cover System Installation Procedure

A. Mode of Installation

Table 8. Mode of Final Cover Installation on the Landfill Units.

Landfill Unit Name or Descriptor	Largest Area of Unit Ever Requiring Final Cover (Acres)	Check this Column if Final Cover will be Placed in Installments as Permitted Elevation is Reached	Check this Column if Final Cover will be Placed when Entire Unit Area Reaches Permitted Elevation	Final Cover Installation Status
LF Unit 1	68.3	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Complete
LF Unit 1	4.2	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Pending
LF Unit 2	324.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8.3 acres complete
		<input type="checkbox"/>	<input type="checkbox"/>	

B. Installation Drawings for Final Cover and Drainage Features

The following attached plan and cross-section drawings show the final cover design details, the largest area requiring final cover, details of the sequence of installation of the final cover system, and all drainage features.

Table 9. List of Attached Installation Drawings for Final Cover and Drainage Features.

Drawing No.	Drawing Title	Description of Information Contained in Drawing
D3.8	Final Cover Plan	Final cover plan
D3.9	Final Cover Details	Final cover sections
D3.10	Drainage Details	Drainage details
J.1	Largest Area Requiring Final Cover	Largest area requiring final cover
		Other:

Closure Plan for Type I Landfill Unit and Facility

Facility Name: Waste Management Skyline Landfill

Revision No.: 0

Permit No: 42E

Date: 3/31/2026

C. Final Cover Quality Control Plan

A final cover quality control plan (FCQCP), Attachment **DS**, is attached. The FCQCP describes the final cover system design, construction, and evaluation protocol and processes, including the personnel, materials, methods, sampling and testing standards, procedures, and practices to be used in procuring, handling, installing, and evaluating all elements of the final cover system. It establishes the material requirements; personnel qualifications and roles; installation requirements; quality control and quality assurance monitoring, testing, documentation, and reporting programs to be used during construction of each component of the final cover system to assure and to verify that the final cover system is constructed as designed and in accordance with applicable rules and technical standards.

D. Documentation and Reporting of Final Cover System Construction and Testing

The professional of record will document all aspects and stages of the final cover installation, including materials used, equipment and construction methods, and the type and rate of sampling and quality control testing performed. Following completion of construction of the final cover, the site operator/permittee will submit to the TCEQ executive director, a Final Cover System Evaluation Report (FCSER) for each landfill unit.

V. Closure Activities and Completion Schedules for Each Landfill Unit and for the Final Facility Closure

A. Closure of a Landfill Unit

The following activities will be conducted to satisfy the closure criteria for a landfill unit:

(1) Closure Notification to the TCEQ Executive Director:

The site operator will inform the executive director of the TCEQ, in writing, of the intent to close the unit no later than 45 days prior to the initiation of closure activities and place this notice of intent in the operating record.

(2) Stoppage of Waste Acceptance and Commencement of Other Closure Activities for the Unit:

The site operator will stop accepting waste upon receiving the known final receipt of waste. The site operator will ensure that the permitted top elevations of the in-place waste, as depicted in/derived from the unit's final contour map approved by the TCEQ executive director, are not exceeded at any section or part of the landfill unit. The site operator will begin closure activities for the unit no later than:

- Thirty days after the date on which the unit receives the known final receipt of wastes; or

Closure Plan for Type I Landfill Unit and Facility

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Date: 3/31/2026

- One year after the most recent receipt of wastes if the unit has remaining capacity and there is a reasonable likelihood that the unit will receive additional wastes.

(3) Request for Extension Beyond the 1-Year Deadline for Commencing Closure Activities for a Unit:

The site operator may submit a written request to the executive director of the TCEQ for review and approval for an extension beyond the one-year deadline for the initiation of closure. The request will include the following:

- (a) All applicable documentation necessary to demonstrate that the unit has the capacity to receive additional waste; and
- (b) All documentation necessary to demonstrate that the site operator has taken and will continue to take all steps necessary to prevent threats to human health and the environment from the MSW landfill unit.

(4) Construction of Final Cover:

The site operator will construct the permitted final cover over the waste mass utilizing methods, procedures, and specifications described in the FCQCP. The final constructed contours, elevations, and slopes of the installed final cover will match the permitted final cover contours, elevations, and slopes shown in closure drawings contained in this closure plan.

(5) Construction of Drainage Features:

The site operator will construct the drainage structures shown in drawings referenced or contained in this closure plan or in the facility surface water drainage report.

(6) Completion of Outstanding or Replacement of Damaged Groundwater or Landfill Gas Monitoring Components:

The site operator will complete installation of any outstanding or replacement of any damaged groundwater or landfill gas monitoring system components and landfill gas control systems as needed to maintain current and effective groundwater or landfill gas monitoring and control systems.

(7) Submittal of Final Cover System Evaluation Report (FCSER) to the TCEQ Executive Director:

Following completion of construction of the final cover for the subject landfill unit, the site operator will submit to the TCEQ executive director for review and acceptance, a FCSEER for the unit.

Closure Plan for Type I Landfill Unit and Facility

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Permit No: 42E

Date: 3/31/2026

(8) Completion of Closure Activities for the Landfill Unit:

The site operator will complete closure activities for the unit within 180 days following the start of closure activities, unless the executive director of the TCEQ grants an extension as described in Item V.A.8(a) below.

(a) Request for Extension of the Completion of Closure Activities for the Landfill Unit:

The site operator may submit a written request for an extension for the completion of closure activities to the TCEQ for review and approval. The extension request will include:

- All applicable documentation necessary to demonstrate that closure will, of necessity, take longer than 180 days; and
- All applicable documentation necessary to document that all steps have been taken and will continue to be taken to prevent threats to human health and the environment from the unclosed MSW landfill unit.

(9) Submittal of Engineer’s Certification of Closure to the TCEQ Executive Director and Request of Closure Inspection to TCEQ Regional Office:

Following completion of all closure activities for the landfill unit, the site operator will submit:

(a) Closure Inspection

A written request to the local TCEQ regional office for a closure inspection of the unit.

(b) Closure Certification

A certification, signed by an independent licensed professional engineer, to the executive director of the TCEQ for review and approval verifying that closure has been completed in accordance with this closure plan. The site operator will submit the certification via registered mail, and the submittal will contain all applicable documentation necessary for certification of closure of the unit, including:

- A final cover system evaluation report (FCSER) documenting the installation of the final cover. The FCSER may be submitted as a separate document for review and approval following the completion of the final cover installation. In that case, the certification of closure will be submitted subsequently;
- A final contour map as described under Section III.E that includes the relevant unit; and
- Copy of the letter to the TCEQ regional office requesting a closure inspection of the relevant unit.

Closure Plan for Type I Landfill Unit and Facility

Facility Name: Waste Management Skyline Landfill

Revision No.: 0

Permit No: 42E

Date: 3/31/2026

(10) TCEQ’s Acknowledgement of Termination of Operation and Closure of a Unit:

Upon receipt, the TCEQ executive director will review the closure documents for completeness and accuracy; and following receipt of the closure inspection report from the agency’s regional office verifying proper closure of the MSW landfill unit according to this closure plan, the executive director will, in writing, acknowledge the termination of operation and closure of the unit and deem it properly closed. Thereafter, the site operator will comply with the post-closure care requirements described in the post-closure care plan for the unit.

(11) Deed Recordation for Disposed Regulated Asbestos Containing Materials (RACM):

Upon closure of the unit that accepted RACM, the site operator will place a specific notation that the unit accepted RACM in the deed records for the facility with a diagram identifying the RACM disposal areas. Concurrently, the site operator will submit to the TCEQ executive director, a notice of the deed recordation and a copy of the diagram identifying the asbestos disposal areas.

(12) Placement of all Closure Documentation in the Site Operating Record:

Once approved, the closure certification and all other documentation of closure will be placed in the site operating record.

(13) Closure Schedule for the Landfill Unit:

A closure schedule, Figure H.1, is attached. The schedule shows all the closure activities listed within Section V.A and the timelines for commencing and completing each activity. Also, the schedule shows that closure activities for the landfill unit will be completed within 180 days following the initiation of closure activities as required, unless an extension is granted by the TCEQ executive director.

(14) Other: (enter as applicable).

Closure Plan for Type I Landfill Unit and Facility

Facility Name: Waste Management Skyline Landfill

Revision No.: 0

Permit No: 42E

Date: 3/31/2026

B. Closure of the Waste Storage or Processing Units or Operations

Closure of the waste storage or processing units or operations authorized under this permit will include removal of all waste, waste residues, and any recovered materials. The facility units and operations will either be dismantled and removed off-site or decontaminated. The site operator will dispose at the landfill or evacuate all materials (including feedstock, in process, and processed) to an authorized facility and disinfect all leachate handling units, tipping areas, processing areas, and post-processing areas. If there is evidence of a release from a unit or operation, the site operator will conduct an investigation, as approved by the TCEQ executive director, into the nature and extent of the release and an assessment of measures necessary to correct an impact to groundwater.

C. Final Closure of the Facility

In addition to the closure activities listed in Section V.A above for closing a landfill unit, the site operator will conduct the following activities for the closure of the entire facility:

(1) Publish Final Closure Notice and Place the closure Plan in a Public Place:

No later than 90 days prior to the initiation of the final facility closure, the site operator will:

(a) Publication of Notice:

The site operator will publish notice in the newspaper(s) of largest circulation in the vicinity of the facility to inform the public of the final closure of the facility. This notice will include:

- The name of the facility;
- The address, and physical location of the facility;
- The facility's permit number; and
- The last date of intended receipt of waste.

(b) Place Copies of the Closure Plan in a Public Place:

The site operator will also make available an adequate number of copies of the approved final closure and post-closure plans for public access and review at the Ferris Public Library, 301 E 10th St. Ferris, TX 75125 (state public place within the area, including address, where the plan will be available for public access and review).

(2) Submit Written Notice of "Intent to Close the Facility" to the TCEQ Executive Director:

The site operator will provide written notification to the TCEQ executive director of the intent to close the facility. This notice will be provided to the executive director no later than 90 days prior to the initiation of the final facility closure, and thereafter be placed in the site operating record.

Closure Plan for Type I Landfill Unit and Facility

Facility Name: Waste Management Skyline Landfill

Revision No.: 0

Permit No: 42E

Date: 3/31/2026

(3) Post Signs and Install Barriers:

Upon notifying the executive director of the intent to close the facility and no later than 90 days prior to the initiation of final facility closure, the site operator will:

(a) Post Final Closure Signs:

The site operator will post a minimum of one sign at the main entrance and all other frequently used points of access for the facility notifying all persons who may utilize the facility of the date of closing for the entire facility and the prohibition against further receipt of waste materials after the stated date.

(b) Install Barriers:

Also, the site/operator will install suitable barriers at all gates or access points to adequately prevent the unauthorized dumping of solid waste at the closed facility.

(4) Filling of "Affidavit to the Public" and Performance of the Final Deed Recording:

Upon closure of all the landfill units or upon final closure of the facility, the site operator will:

(a) File Affidavit

File with the county deed records an "Affidavit to the Public" in a form provided by the TCEQ executive director that includes an updated metes and bounds description of the extent of the disposal areas at the facility and the restrictions to future use of the land in accordance with applicable provisions under 30 TAC Chapter 330, Subchapter T.

(b) Record a Notation on the Deed

Record a certified notation on the deed to the facility property, or on some other instrument that is normally examined during title search, that will in perpetuity notify any potential purchaser of the property that the land has been used as a landfill facility and use of the land is restricted according to the provisions under 30 TAC Chapter 330, Subchapter T.

(c) Place Documents in the Operating Record

Place a copy of the "Affidavit to the Public" and a copy of the modified deed in the site operating record.

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(5) Submittal of a Copy of the "Affidavit to the Public" and the "Modified Deed" to the TCEQ Executive Director:

Within ten days after completion of final closure activities of the facility, the site operator will submit the following to the TCEQ executive director by registered mail:

- (a) A certified copy of the "Affidavit to the Public";
- (b) A certified copy of the modified deed to the facility property; and
- (c) A certification, signed by an independent licensed professional engineer, verifying that final facility closure has been completed in accordance with the approved closure plan. The submittal will contain all applicable documentation necessary for certification of final facility closure, including:
 - Final Cover System Evaluation Report (FCSER) documenting the installation of the final cover. The FCSEER may be submitted earlier as a separate document for review and approval following the completion of the final cover installation. In that case, the certification of closure will be submitted subsequently;
 - A final contour map as described under Item III.G above;
 - Copy of a letter to the TCEQ regional office requesting a final closure inspection of the facility; and
 - Copies of documents verifying newspaper publication of the notice of the final facility closure.

(6) Other

Additional items relating to the schedule for final facility closure, and additional closure activities specific to the final closure of this facility include:

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(7) TCEQ's Acceptance of Termination of Operation and Closure of a Landfill Facility:

Following the TCEQ executive director's receipt and completion of the review of the professional engineer's certification of the completion of facility closure and the final closure documents, and receipt of the inspection report from the agency's regional office verifying proper closure of the facility according to this closure plan, the executive director will, in writing, accept the termination of operation and closure of the facility and deem it properly closed. Thereafter, the site operator will comply with the post closure care requirements described in the post closure plan for the facility.

(8) Final Closure Schedule for the Facility:

The attached Figure H.1, Final Closure Schedule, provides the closure schedule for the final facility closure. It incorporates the schedule for closure of a unit as discussed in Section V.A and also shows the commencement and completion timelines for the final closure activities listed within this Section.

VI. Summary of Attachments

A. Drawings and Maps

The following Drawings and Maps are attached as part of this plan.

- Figure D1.6, Final Contour Map.
- Figures D2.1-D2.7, Cross-Section Drawings of the Landfill Units at Closure.
- Figures D3.8-D3.10, Final Cover and Drainage Features Installation Drawings.
- Other Drawings/Maps: Figures
H.1 Closure Schedule Chart

B. Documents

- Attachment D8, Final Cover Quality Control Plan (FCQCP).
- Attachment H.1, Landfill Unit Closure Schedule Chart.
- Attachment H.1, Final Closure Schedule Chart.
- Other: Attachment

C. Additional Items Attached (enter as applicable)

None.

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VII. Professional Engineer's Statement, Seal, and Signature

Name: Gregory Adams

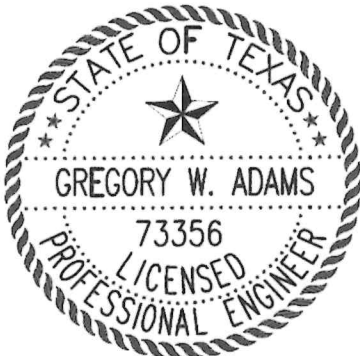
Title: Principal Engineer

Date:

Company Name: Biggs & Mathews Environmental, Inc.

Firm Registration Number: F-256

Professional Engineer's Seal



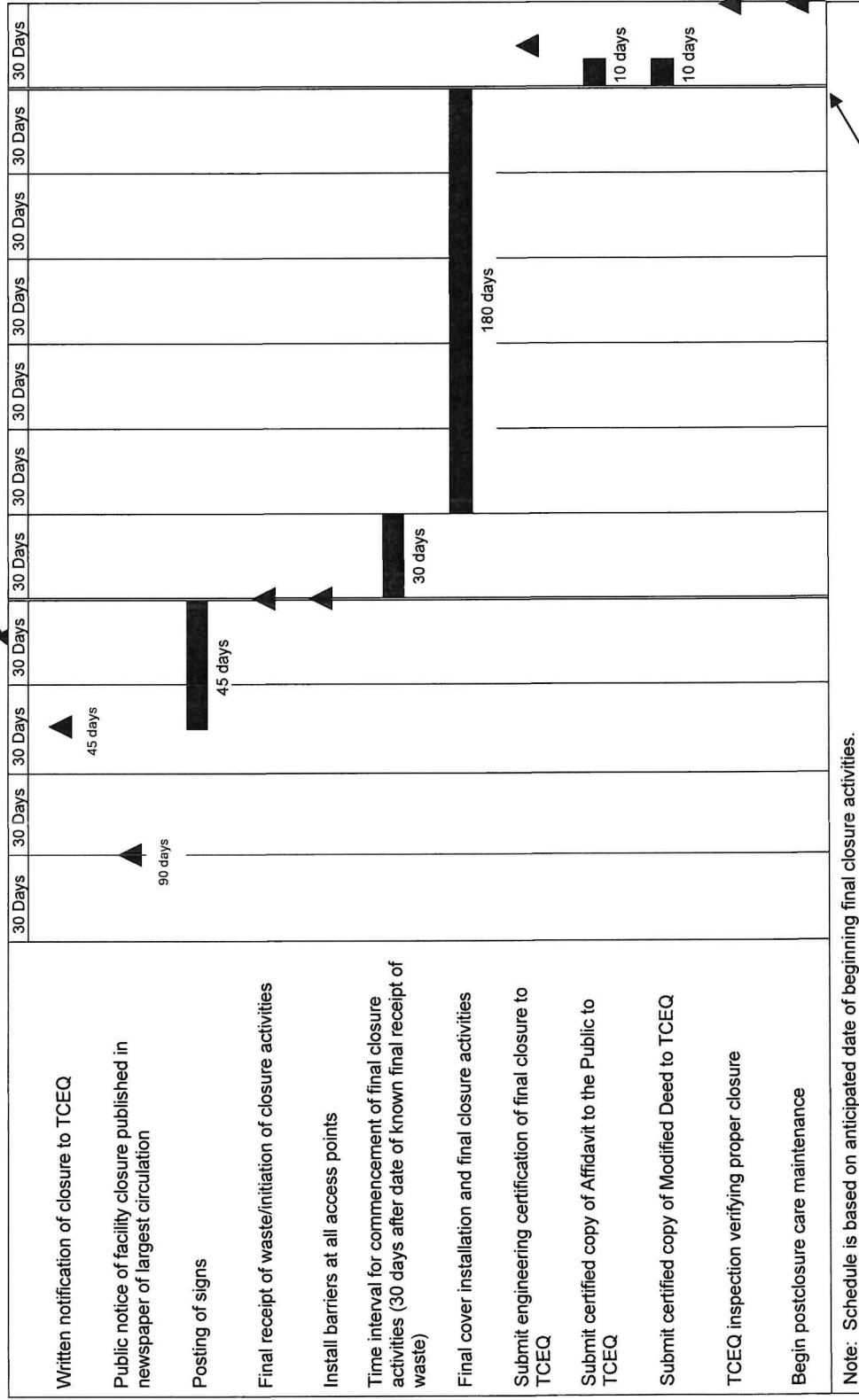
Biggs & Mathews Environmental, Inc.
Firm Registration No. F-256

Gregory Adams 3/31/2026
Signature

ATTACHMENT H.1

Attachment H1.1 Closure Schedule

Initiation of final closure activities and date of final receipt of waste.



Note: Schedule is based on anticipated date of beginning final closure activities.

Completion of final closure activities.

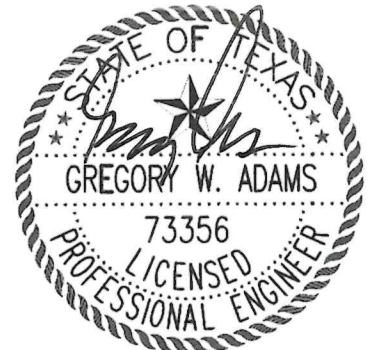
**WASTE MANAGEMENT SKYLINE LANDFILL
DALLAS AND ELLIS COUNTIES, TEXAS
PERMIT AMENDMENT APPLICATION NO. MSW 42E**

**PART III – FACILITY INVESTIGATION AND DESIGN
ATTACHMENT I
POSTCLOSURE PLAN**

Prepared for



March 2026



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

3/31/2026

Prepared by



BIGGS & MATHEWS ENVIRONMENTAL

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

TEXAS BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
FIRM REGISTRATION NO. F-256 AND NO. 10194895

TEXAS BOARD OF PROFESSIONAL GEOSCIENTISTS
FIRM REGISTRATION NO. 50222



Texas Commission on Environmental Quality

Post-Closure Care Plan for Municipal Solid Waste Type I Landfill Units and Facilities

This form is for use by applicants or site operators of Municipal Solid Waste (MSW) Type I landfills to provide landfill unit or final facility post-closure care closure plans to meet the requirements in 30 TAC Chapter 330, §330.63(h) and as set out under 30 TAC Chapter 330 Subchapter K for a MSW Type I facility.

If you need assistance in completing this form, please contact the MSW Permits Section in the Waste Permits Division at (512) 239-2335.

I. General Information

Facility Name: Waste Management Skyline Landfill

MSW Permit No.: 42E

Site Operator/Permittee Name: Waste Management of Texas, Inc.

II. Party Responsible for Overseeing and Conducting Post Closure Care Activities

Name (Person or Office Responsible): James Smith

Position or Title: Area Director, Disposal Operations

Mailing Address: 1201 N Central St

City: Ferris

State: TX

Zip Code: 75125

Telephone Number: 972-842-5710

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III. Post-Closure Care Status of Landfill Units at the Facility

Check the applicable box for the post-closure care status of the units at the facility and complete the applicable tables as indicated:

- A. No landfill unit is in post-closure care in this facility at the time this application is submitted (skip Table 1 and complete Table 2 below if you check this item)
- B. This facility includes landfill units currently in post-closure care and landfill units that are not yet in post-closure care (complete Tables 1 and 2 below if you check this item).
- C. This facility contains only landfill units currently in post-closure care (complete Table 1 below if you check this item; do not complete Table 2).

Table 1: Landfill Units Currently in Post-Closure Care

Landfill Unit Name	Drawing Number Showing the Landfill Unit	Date TCEQ Acknowledged Closure of Unit	Date Post-Closure Care Commenced	Projected Date of End of Post-Closure Care

Table 2: Landfill Units Not yet in Post-Closure Care

Category of Landfill Unit (Regarding Status of Waste Receipt)	Landfill Unit Names or Descriptors	Site Development Plan Drawing Titles and Numbers Showing the Units
Stopped Receiving Waste Prior to October 9, 1993	I	
Received Waste on or after October 9, 1993	LF Unit 1 and LF Unit 2 Cells 1-18	D1.2 Facility Plan

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Category of Landfill Unit (Regarding Status of Waste Receipt)	Landfill Unit Names or Descriptors	Site Development Plan Drawing Titles and Numbers Showing the Units
Proposed to be Constructed	LF Unit 2 Cells 19-24	D1.2 Facility Plan
Other (enter as applicable)		

IV. Post-Closure Care Maintenance Requirements and Activities to be Conducted

A. Categories of Landfill Units and Applicable Post-Closure Care Maintenance Requirements and Activities

Check the appropriate boxes to indicate the categories of landfill units at the facility and complete the applicable section of the post-closure care maintenance requirements and activities below.

This facility includes landfill units that:

- Stopped receiving waste prior to October 9, 1993
If you check this item, complete the post-closure care maintenance requirements and activities specified in Subsection IV.B below. Skip Subsection IV.B if this item does not apply to your facility.
- Received waste on or after October 9, 1993
If you check this item, complete the post-closure care maintenance requirements and activities specified in Subsection IV.C below. Skip Subsection IV.C if this item does not apply to your facility.
- Are proposed to be constructed
If you check this item, complete the post-closure care maintenance requirements and activities specified in Subsection IV.C below. Skip Subsection IV.B, unless your facility also contains units that stopped receiving waste prior to October 9, 1993.

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B. Post-Closure Care Maintenance Requirements and Activities for the Landfill Units that Stopped Receiving Waste Prior to October 9, 1993

The site operator will commence and conduct post-closure care maintenance of the units that stopped receiving waste prior to October 9, 1993 for a minimum of the first **five years** following commencement of post-closure care as specified below and in accordance with applicable rules under 30 TAC §330.463(a). Post-closure care maintenance will start on the date the professional engineer’s certification of the completion of closure is accepted in writing by the TCEQ executive director and the site operator will carry out the following activities and operations during the period.

1. Maintenance of Right of Entry and Rights of Way

The site operator will retain the right of entry to and maintain all rights-of-way of the closed units in order to conduct periodic inspections of the units throughout the post-closure care period. TCEQ staff will have access to the site to conduct inspection or investigation that may be necessary during the period.

2. Inspection Activities and Correction of Problems

The site operator will conduct inspection of the closed landfill units at the frequencies indicated in Table 3 below, utilizing the inspection protocol maintained in the site operating record, and will correct all identified problems as needed.

Table 3: Inspection Activities Schedule

Post-Closure Care Inspection Item	Frequency of Inspection	Types of Deficiency Conditions to be looked for during Inspection
Final Cover Condition		
Vegetation		
Leachate Management Systems		

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Post-Closure Care Inspection Item	Frequency of Inspection	Types of Deficiency Conditions to be looked for during Inspection
Landfill Gas Monitoring and Control Systems		
Groundwater Monitoring Systems		
Drainage Structures		
Ponding of Water		
Other:		

3. Continuation of Monitoring Programs during Post-Closure Care Period

The site operator will continue the monitoring programs listed in Table 4 during the post-closure care period. The monitoring programs will be conducted as specified in the applicable section of the facility’s Site Development Plan and applicable rules.

Table 4: Monitoring and Reporting Schedule

Monitoring Program	Frequency of Monitoring	Frequency of Reporting of Results
Groundwater monitoring		
Landfill gas monitoring		
Other:		

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4. Detection of a Release, Nature and Extent Investigation, and Corrective Action to Address Release from the MSW Unit

Upon detection of any evidence of a release from the landfill or other associated waste management units at the facility, the site operator will:

- Notify the executive director of the TCEQ of the condition detected;
- Investigate, if so directed by the executive director of the TCEQ, whether a release from the landfill or other associated waste management units at the facility has occurred;
- Investigate the nature and extent of the release, if a release is confirmed;
- Assess measures necessary to correct any impact to groundwater;
- Submit a corrective action plan via a permit modification for TCEQ executive director's review and approval; and
- Conduct corrective action as approved by the TCEQ executive director.

5. Extension of Post-Closure Care Period

If any of the problems listed in Table 3 occurs, or corrective action as indicated in Subsection IV.B.4 above continues, after the end of the five-year post-closure care period or persists for longer than the first five years of post-closure care, the site operator will be responsible for their correction and will continue to conduct post-closure care maintenance until the TCEQ executive director determines that all problems have been adequately resolved.

6. Reduction of Post-Closure Care Period

The site operator may request in writing for the TCEQ executive director to reduce the post-closure care period for the units if all wastes and waste residues have been removed during closure and any new or on-going corrective action to address confirmed releases from the landfill have been completed as acknowledged in writing by the executive director.

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C. Post-Closure Care Requirements and Activities for Municipal Solid Waste Landfill Units that Receive Waste on or after October 9, 1993 and for New Units

The site operator will commence and conduct post-closure care maintenance of the units that receive waste on or after October 9, 1993 and new units constructed under this permit as follows and in accordance with applicable rules under 30 TAC §330.463.

1. Commencement of Post-Closure Care

Post-closure care maintenance will start on the date the professional engineer’s certification of the completion of closure is accepted in writing by the TCEQ executive director and the site operator will carry out the following activities and operations during the period.

2. Period of Post-Closure Care

The site operator will conduct post-closure care for the landfill units for a period of **30 years**, unless this time period is increased or reduced by the executive director as discussed in Subsection IV.C.11.

3. Maintenance of Right of Entry and Rights of Way

The site operator will retain the right of entry to the closed units and the facility and will maintain all rights-of-way of the closed units in order to conduct periodic inspection and maintenance of the closed units until the end of the post-closure care period.

4. Inspection Activities

The site operator will conduct periodic inspection of the closed units to identify and document deficiency conditions and conduct maintenance and corrective action to maintain compliance. Sections IV.C. 8.(a)-(c) provide information on the inspection items and deficiency conditions that the site operator will look for during inspection of the major components of the landfill and the site during the post-closure care period. Other inspection and maintenance provisions that apply during the post-closure care period as specified in the facility’s site operating plan, site development plan, or applicable rules will remain in effect.

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5. Documentation of Inspection

The site operator will document and maintain records of the post-closure care inspections in the site operating record. The records will include:

- The date of inspection;
- Components and items inspected;
- Problems detected or observed; and
- The name of the personnel who conducted the inspection.

6. Corrective Actions

Based on the results of the inspection activities, the site operator will conduct needed restoration and remediation actions on the closed unit no later than the next scheduled inspection event. Also, the site operator will conduct maintenance action on regular periodic schedule in order to:

- Maintain the integrity and effectiveness of all final cover, facility vegetation, and drainage control systems;
- Correct any effects of settlement, subsidence, ponded water, erosion, or other events or failures detrimental to the integrity of the closed unit; and
- Prevent any surface run-on and run-off from eroding or otherwise damaging the final cover system during the post-closure care period.

7. Documentation of Corrective Actions

The site operator will document and maintain, in the facility's site operating record, records of the restoration, remediation, and maintenance activities performed, including the date of completion of the activities.

8. Inspection Activities Schedules

(a) Final Cover Inspection

Inspection Frequency: Annual

Other Inspection Occasions/Events:

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Table 5: Final Cover Inspection Items

Inspection Item	Types of Deficiency Conditions to be looked for during Inspection
Vegetation and other Ground Cover Materials	Lack of vegetation or ground cover
Settlement	Depressions and ponded water
Subsidence	Large depressions and slope failures
Ponded Water	Depressions and poor drainage
Erosion	Gulleys and rills
Other (enter other events or failures detrimental to the integrity and effectiveness of the final cover):	
Other (enter other events or failures detrimental to the integrity and effectiveness of the final cover):	

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(b) Drainage Control System Inspection

Inspection Frequency: Annual

Other Inspection Occasions/Events:

Table 6: Drainage Control System Inspection Items

Inspection Item	Types of Deficiency Conditions to be looked for during Inspection
Vegetation within Drainage Control Structures	Lack of vegetation
Component Failures	Damage to chutes splash pads
Wash Outs	Severe erosion
Sediment Build Up	Sedimentation, erosion, ponding and poor drainage
Other (enter other events or failures detrimental to the integrity and effectiveness of drainage structures):	

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(c) Access and Rights-of-Way

Inspection Frequency: Annual

Other Inspection Occasions/Events:

Table 7: Access and Rights of Way Inspection Items

Inspection Item	Types of Deficiency Conditions to be looked for During Inspection
Gates, Gate Locks and Barriers	Damaged or missing gates, locks and barriers
Fence and other Access Control Barriers	Damaged or missing fences and barriers
Vegetation Control in Areas of the Facility other than the Final Cover	Lack of vegetation and erosion
Other (enter other access control and rights-of-way inspection items):	

9. Continuation of Operation and Maintenance of the Leachate Collection and Removal Systems (LCRS)

The site operator will continue the operation and maintenance of the LCRS and disposal of leachate during the post-closure care period in accordance with the facility’s leachate management plan found in Attachment/Appendix/Section D6 of the Site Development Plan and consistent with applicable provisions under 30 TAC Sections 330.331 and 330.333.

(a) Performance Monitoring and Inspection of the LCRS

During the post-closure care period, the site operator will monitor the performance of the LCRS on a annual basis to assure continuous compliance with the design criteria and inspect the LCRS components on a annual basis, at a minimum, to determine the need for repair or maintenance. Inspection and monitoring will follow the procedure described in the facility’s leachate management plan found in

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Attachment/Appendix/Section D6 of the Site Development Plan or in the written inspection protocol maintained in the facility's site operating record. Results of the monitoring and inspection activities will be documented in the site operating record. The items and components of the leachate collection and removal system to be inspected will include but are not limited to the items in Table 8 below.

Table 8: Leachate Collection and Removal System Inspection

Inspection Item/Component	Types of Deficiency Conditions to be looked for during Inspection
Leachate Collection System	Verify system is operational

(b) LCR Maintenance and Repairs

During the post-closure care period, the site operator will perform routine and needed maintenance or repairs of the LCRS items and components based on the monitoring and inspection results. Maintenance and repair will be completed prior to the next scheduled monitoring event and documented within the site operating record.

(c) Discontinuation of Leachate Management

The site operator may submit data and information from the closed units to the TCEQ executive director to demonstrate that leachate no longer poses a threat to human health and the environment. Upon the executive director's approval of the demonstration, the site operator will be allowed to stop managing leachate at the closed unit.

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10. Continuation of Monitoring Systems Operation and Maintenance:

The site operator will continue to conduct monitoring systems operation and maintenance activities to ensure the integrity of the containment system and to promptly detect and control releases to the environment during the post-closure care period as follows.

(a) Groundwater Monitoring System

The site operator will continue groundwater monitoring activities (including sampling, analysis, reporting, etc.) in accordance with the approved site-specific Groundwater Sampling and Analysis Plan (GWSAP) found in Attachment F, Appendix F2 of the Site Development Plan, the Groundwater Monitoring System Design found in Attachment F, Appendix F1 of the Site Development Plan and consistent with the provisions under 30 TAC Chapter 330 Subchapter J. Groundwater monitoring will be conducted semiannually or as otherwise approved by the TCEQ executive director during the post-closure care period.

i. Inspection of the Groundwater Monitoring System

During each groundwater monitoring event, the site operator will perform inspection of all the groundwater monitoring wells that are part of the groundwater monitoring system and other items discussed in the GWSAP or the Groundwater Monitoring System Design. The items and components of the groundwater monitoring system to be inspected are included in Table 9:

Table 9: Groundwater Monitoring Systems Inspection

Inspection Item/Component	Types of Deficiency Conditions to be looked for during Inspection
Groundwater Monitoring System	Damaged or unlocked monitor wells

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Inspection Item/Component	Types of Deficiency Conditions to be looked for during Inspection

ii. Maintenance and Repair of the Groundwater Monitoring System

The site operator will perform needed maintenance and/or repairs of the groundwater monitoring system items and components based on the inspection results. Maintenance and/or repairs will be performed no later than the next scheduled monitoring event.

iii. Documentation of Inspection, Maintenance, and Repairs

The site operator will document and discuss the results of the groundwater monitoring system inspection, maintenance, and repair activities in the groundwater monitoring report submitted to the TCEQ executive director, and maintain the documents in the site operating record.

(b) Landfill Gas Management System

During the post-closure care, the site operator will continue landfill gas monitoring operations and activities, documentation, and reporting in accordance with the facility’s landfill gas management plan and consistent with the requirements under 30 TAC Chapter 330, Subchapter I.

i. LFG Monitoring and Monitoring System Inspection

All structures and perimeter gas monitoring probes will be sampled quarterly or more frequently as approved by the TCEQ executive director. The site operator will conduct routine inspections of the landfill gas management system components as provided in the landfill gas management plan during the

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post-closure care period. The items and components to be inspected are included in Table 10.

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Table 10: Landfill Gas Management System Inspection

Inspection Item/Component	Types of Deficiency Conditions to be looked for during Inspection
Landfill Gas Management Monitoring System	Damaged or unlocked gas probes

ii. LFG Management System Maintenance

The site operator will perform routine and needed maintenance of the landfill gas management system including calibration of the monitoring equipment. Needed maintenance and/or repair work will be performed based on the inspection and monitoring results no later than the next scheduled monitoring event.

(c) Continuation of Earth Electrical Resistivity Survey

The site operator will, if applicable, continue earth electrical resistivity surveys as applicable at the frequency stated in the approved site development plan or as otherwise approved by the TCEQ executive director.

11. Detection of a Release, Nature and Extent Investigation, and Corrective Action to Address Release from the MSW Unit

If there is evidence of a release from the landfill or other associated waste management units at the facility, the site operator will:

- Notify the executive director of the TCEQ of the condition detected;
- Investigate, if so directed by the executive director of the TCEQ, whether a release from the landfill or other associated waste management units at the facility has occurred;

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- Investigate the nature and extent of the release, if a release is confirmed;
- Assess measures necessary to correct any impact to groundwater;
- Submit a corrective action plan via a permit modification for TCEQ executive director's review and approval; and
- Conduct corrective action as approved by the TCEQ executive director.

12. Revision of the Length of Post-Closure Care Period

(a) The Post-Closure Care Period May Be Decreased

The length of the post-closure care period may be decreased by the TCEQ executive director if the site operator submits a documented certification signed by a licensed professional engineer and including all applicable supporting documentation that demonstrates that the reduced period is sufficient to protect human health and the environment, and the executive director approves the decrease in writing after review.

(b) The Post-Closure Care Period May be Increased

The length of the post-closure care period may be increased by the TCEQ executive director if it is determined that the longer period is necessary to protect human health and the environment.

V. Recordkeeping

The site operator will place a copy of this post-closure plan in the facility's site operating record by the initial receipt of waste at the units proposed at the time of this application. Also, the site operator will document and maintain records of all inspection, monitoring, maintenance, repair, or remediation activities, and detail the results of any inspection and schedules of any other actions to be taken to maintain compliance, in the site operating record.

VI. Planned Use of the Land during and after the Post-Closure Care Period

Post-closure use of the property will not disturb the final cover, liners, or other containment or monitoring systems unless such disturbance is necessary for the proposed

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use or to protect human health and the environment and is authorized by the TCEQ executive director consistent with provisions under 30 TAC Chapter 330 Subchapter T.

Description of the Planned Use of the Land during or after the Post-Closure Care Period *(describe the planned use of the land during or after the post-closure care period; if not known at this time, enter "NOT KNOWN")*:

NOT KNOWN

VII. Post-Closure Care and Corrective Action Cost Estimates

A detailed written cost estimate in current dollars for conducting post closure care is provided in *(enter location of the post-closure care cost estimate in the application/permit document)*:

Attachment J

The cost estimate for corrective action will be provided as needed, via a permit modification, during the life and/or post-closure care period of the unit or facility.

VIII. Certification of Completion of Post-Closure Care

Upon completion of the post-closure care maintenance period for each municipal solid waste landfill unit, the site operator will submit to the TCEQ executive director for review and approval a certification, signed by an independent licensed professional engineer, verifying that post-closure care has been completed in accordance with the approved post-closure plan. The submittal to the executive director shall include all applicable documentation necessary for the certification of completion of post-closure care. These will include information relating to the condition and status of:

- The final cover integrity and stability, including the condition of the soil, vegetation, drainage structures, etc.
- Groundwater quality at the site, as determined from on-going groundwater detection or assessment monitoring or corrective measures data during the period.
- Landfill gas (methane) migration, as determined from on-going landfill gas monitoring and remediation data during the period.
- Leachate generation rate and quantity as determined from on-going leachate management data over the period.

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- The surface water management system.
- Access control structures.

The engineer's certification of post-closure will show that, based on a summary of monitoring and inspection results, the final cover system continues to maintain its integrity, stability, and function; groundwater remains uncontaminated and monitoring is no longer required; landfill gas is not migrating beyond the facility boundary or accumulating in structures at action levels and monitoring is no longer required; leachate generation rate and quantity will not result in greater than 12 inches of head above the liner, no breakouts have occurred, and all slopes remain as approved and leachate management is no longer required; the surface water management system continues to function as designed; and the access control structures remain intact.

Documentation supporting the professional engineer's certification will be furnished to the TCEQ executive director upon request and will be maintained in the site operating record until the executive director acknowledges termination of post-closure in writing.

IX. Voluntary Revocation Request

Upon completion of the post-closure care period for the final unit at the facility, the site operator will submit to the executive director a request for voluntary revocation of the facility permit.

X. Attachments

The following figures and documents are attached as part of this post-closure care plan:

None.

Post-Closure Care Plan for Type I Landfill Units and Facility

Facility Name: Waste Management Skyline Landfill

Revision No.:

0

Permit No: 42E

Date:

3/31/2026

XI. Engineer's Seal and Signature

Name: Gregory Adams Title: Principal Engineer

Date:

Company Name: Biggs & Mathews Environmental, Inc. Firm Registration Number: F-256

Professional Engineer's Seal



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

Signature

Gregory Adams 3/31/2026

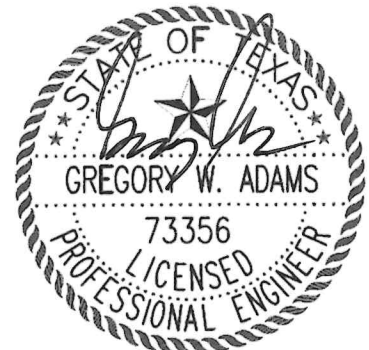
**WASTE MANAGEMENT SKYLINE LANDFILL
DALLAS AND ELLIS COUNTIES, TEXAS
PERMIT AMENDMENT APPLICATION NO. MSW 42E**

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

Prepared for



March 2026



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

3/31/2026

Prepared by



BIGGS & MATHEWS ENVIRONMENTAL

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

TEXAS BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
FIRM REGISTRATION NO. F-256 AND NO. 10194895

TEXAS BOARD OF PROFESSIONAL GEOSCIENTISTS
FIRM REGISTRATION NO. 50222

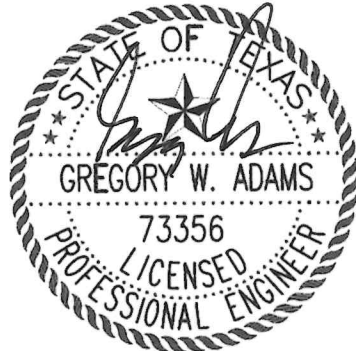
CONTENTS

CLOSURE COST ESTIMATE FORM (TCEQ - 20721)

POST-CLOSURE CARE COST ESTIMATE FORM (TCEQ – 20723)

DRAWING

EVIDENCE OF FINANCIAL ASSURANCE



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

3/31/2026



Texas Commission on Environmental Quality
Closure Cost Estimate Form for Municipal Solid
Waste Type I Landfills

This form is for use by applicants or site operators to provide cost estimates for closure of MSW Type I landfills to meet the requirements in 30 Texas Administrative Code (TAC) Chapter 330, Section 330.63(j) and 30 TAC Chapter 330 Subchapter L. The costs to be provided herein are cost estimates for 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. If you need assistance in completing this form, please contact the MSW Permits Section in the Waste Permits Division at (512) 239-2335.

Facility Name: Skyline Landfill

MSW Permit No.: 42E

Site Operator/Permittee Name and Mailing Address: 1201 North Central Ave. Ferris, TX, 75125

Total Closure Cost Estimate (2026 Dollar Amount): \$24,663,874

I. Professional Engineer's Statement, Seal, and Signature

I am a licensed professional engineer in the State of Texas. To the best of my knowledge, this Closure Cost Estimate has been completed in substantial conformance with the facility Closure Plan and, in my professional opinion, is in compliance with Title 30 of the Texas Administrative Code, Chapter 330.

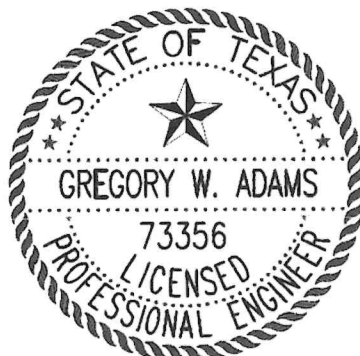
Name: Gregory Adams

Title: Principal Engineer

Date: 3/31/2026

Company Name: Biggs & Mathews Environmental, Inc. Firm Registration Number: F-256

Professional Engineer's Seal



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

Professional Engineer's Signature

3/31/2026

Closure Cost Estimate for MSW Type I Landfill

Facility Name: Skyline Landfill

Revision No.: 0

Permit No: 42E

Date: 3/31/2026

II. Annual Review of Permit Conditions, Cost Estimates, Inflation Factor, and Financial Assurance

The permittee/site operator acknowledges that he/she will:

- (1) Review the facility's permit conditions on an annual basis and verify that the current active and inactive waste fill areas of the landfill match the areas on which closure cost estimates are based.
- (2) Request in writing via a permit modification application for an increase in the closure cost estimate and the amount of financial assurance provided if changes to the closure plan or the landfill conditions increase the maximum cost of closure at any time during the remaining active life of the landfill.
- (3) Request in writing via a permit modification application for a reduction in the cost estimate and the amount of financial assurance provided if the cost estimate exceeds the maximum cost of closure at any time during the remaining active life of the landfill. The permit modification application will include a description of the situation and a detailed justification for the reduction of the closure cost estimate and the amount of financial assurance.
- (4) Establish financial assurance for closure of the unit in an amount no less than the current closure cost estimate in accordance with 30 TAC Chapter 37, Subchapter R.
- (5) Adjust the current cost estimate for inflation within 60 days prior to the anniversary date of the first establishment of the financial assurance mechanism.
- (6) Provide annual inflation adjustments to the closure costs and financial assurance during the active life of the facility, until the facility is officially placed under the post closure care period and all requirements of the final closure plan have been approved in writing by the TCEQ executive director. The adjustment will be made using an inflation factor derived from the most recent annual Implicit Price Deflator for Gross National Product published by the United States Department of Commerce in its Survey of Current Business, as specified in paragraphs (1) and (2) of 30 TAC §37.131. The inflation factor is the result of dividing the latest published annual Deflator by the Deflator for the previous year.
- (7) Provide continuous financial assurance coverage for closure until the facility is officially placed under the post-closure care period.

Closure Cost Estimate for MSW Type I Landfill

Facility Name: Skyline Landfill

Revision No.: 0

Permit No: 42E

Date: 3/31/2026

III. Description of the Closure Cost Estimates Worksheet

The following descriptions of the items on the closure cost estimates worksheet provide guidance for identifying the minimum work or cost elements and estimating the unit or lump sum cost of each item as applicable. Enter additional detail for each item in the field following the item as necessary and as site-specific condition warrants. The cost items are grouped under closure costs for engineering, construction, and storage and processing units. Include attachments to detail any additional work and associated costs necessary to close the site that is not already included as a line item on the worksheet. Reference the attachments and list the work or cost items in the fields under "Additional Engineering Cost Items Not Listed on the Worksheet," "Additional Construction Cost Items Not Listed on the Worksheet," or "Additional Storage and Processing Units Items Not Listed on the Worksheet" as applicable. Provide the total cost of the additional work or cost items in each cost category on the worksheet line that precedes the cost subtotal for each cost group.

1. Engineering Costs

The engineering tasks have been subdivided into seven items and are described below. Other related costs may be added as site-specific issues warrant.

1.1. Topographic Survey

A topographic survey will be required to verify the existing elevation and slopes of the landfill to ensure conformance with the final cover system, drainage system, and final grading designs.

1.2. Boundary Survey

The metes and bounds description is required for filing of the affidavit of closure and deed recording of any area of the site which has received waste. Other activities to be included here are publication of the public notice of closing activities.

1.3. Site Evaluation

The evaluation includes a site inspection to identify waste disposal areas, analyze drainage and erosion protection needs, and to determine other site operational features that are not in compliance with the permit. The site evaluation also includes verifying the need for new or relocation of existing groundwater monitoring wells and landfill gas monitoring probes, analysis of groundwater samples, and review of site operating record. The third party consultant who performed the site evaluation will prepare and submit an engineering report to the executive director to document the status of the site. The report will identify all areas of work and the associated implementation costs necessary to safely close the landfill operations with recommendations on how to fulfill these needs.

1.4. Development of Plans

The final closure, plan the final cover system design and specifications, grading and drainage plans, specification for revegetation, design of any other

Closure Cost Estimate for MSW Type I Landfill

Facility Name: Skyline Landfill

Revision No.: 0

Permit No: 42E

Date: 3/31/2026

improvements to bring the site into compliance with the permit, the closure schedule, and coordination with the TCEQ and provision of closure notice to the public.

1.5. Contract Administration (bidding and award)

The third-party consultant will advertise the project, receive the bids, evaluate the bids, award the closure construction contract and administer the contract during construction.

Enter additional contract administration work or cost element details as site-specific conditions warrant:

1.6. Closure Inspection and Testing

The professional of record will observe closure construction, perform cover thickness and permeability verification, and prepare an evaluation report upon completion of closure.

1.7. TPDES and other Permits

The third-party consultant will prepare plans, specifications, and other documents necessary for compliance with applicable federal and state laws and requirements, including the Clean Water Act, for the proper closure of the site.

1.8. Additional Engineering Cost Items Not Listed on the Worksheet

Also, reference these Attachments in the "Units" column on this line of the worksheet. Provide the total cost of all additional engineering cost items in the "Cost" column.

1.9. Engineering Costs Subtotal

1.9.1. Enter the sum of engineering costs in Items 1.1 through 1.8.

2. Construction Costs

Closure construction costs include those for construction of the final cover system, site grading, and drainage improvements. Other costs may be added as site-specific issues warrant.

2.1. Mobilization

2.1.1. Mobilization of Personnel and Equipment

The cost of mobilizing personnel and construction heavy equipment must be included as part of the construction costs.

2.2. Final Cover System

The owner or operator must install a final cover system that is designed to minimize infiltration and erosion. The final cover system is subdivided into the sideslope cover and cap cover with their associated components to facilitate cost calculations. If an alternative final cover is proposed, the closure cost estimate will still be based on a design that utilizes the conventional composite cover system.

Closure Cost Estimate for MSW Type I Landfill

Facility Name: Skyline Landfill

Revision No.: 0

Permit No: 42E

Date: 3/31/2026

2.2.1. Side Slope Cover

Enter information for Items 2.2.1a through 2.2.1h.

2.2.2. Top Slope Cover

Enter information for Items 2.2.2a through 2.2.2h.

2.2.3. Cells for Class 1 Nonhazardous Industrial Waste

2.3. Site Grading

Site grading includes the final grading of the site, including the landfill cap and sideslopes.

2.4. Site Fencing and Security

Site fencing and security must be included for the area which has received waste and have no existing approved fencing.

Enter additional site fencing and security work or cost element details as site-specific conditions warrant:

2.5. Landfill Gas Monitoring and Control Systems

Enter information for Items 2.5.1 through 2.5.6.

Final installation of the landfill gas monitoring and control systems must include the installation costs of pipes and appurtenances. In the event of a forced closure, the systems may not have been completed, thus, the estimated costs to complete the landfill gas monitoring and control system must be provided.

2.6. Groundwater Monitoring System

2.6.1. Monitor Well Installation

Upon closure of the site, it may be necessary to relocate the compliance boundary. This requires the installation of new monitor wells.

2.6.2. Piezometer and Monitor Well Plugging and Abandonment

Piezometer or monitor well abandonment is the cost of abandoning (plugging) piezometers or monitor wells that are no longer needed. Determine the number of piezometers or monitor wells to be abandoned and include the total cost.

2.7. Leachate Management

2.7.1. Completion of Existing Leachate Collection System

In the event of a forced closure, there may be circumstances where the leachate collection system has not been completed. In this event, the leachate collection system must be closed with a permanent outfalls and permanent cleanouts installed.

Closure Cost Estimate for MSW Type I Landfill

Facility Name: Skyline Landfill

Revision No.: 0

Permit No: 42E

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2.8. Stormwater Management

2.8.1. Stormwater Drainage Management System

To reduce the potential long-term impacts of the landfill on surface water quality, drainage features must be incorporated into the final cover design to direct runoff, minimize erosion, control sediments, and avoid ponding of stormwater. The drainage system construction costs must be included.

2.9. Additional Construction Cost Items Not Listed on Worksheet

Also, reference these Attachments in the "Units" column on this line of the worksheet. Provide the total cost of all additional construction cost items in the "Cost" column.

2.10. Construction Costs Subtotal

2.10.1. Enter the sum of construction costs in Items 2.1 through 2.9.

3. Storage and Processing Unit Closure Costs

For landfills that incorporate storage and/or processing operations that are not separately authorized, all waste and processed and unprocessed materials associated with storage and/or processing units must be removed during the closure process.

3.1. Waste Disposal

The cost of disposal of waste at an authorized facility

3.2. Material Removal and Disinfection

The cost of removal, including transportation, of any remaining processed and unprocessed materials to an authorized off-site location.

3.3. Demolition and Disposal

The cost of dismantling and/or disinfection of storage and/or processing units and disposal, as applicable.

3.4. Additional Storage and Processing Unit Closure Cost Items Not Listed in Worksheet

List the Attachments detailing any additional storage and processing unit closure cost items necessary to close the site that is not already included as a line item on the worksheet. Also, reference these Attachments in the "Units" column on this line of the worksheet. Provide the total cost of all additional storage and processing unit closure cost items in the "Cost" column.

Closure Cost Estimate for MSW Type I Landfill

Facility Name: Skyline Landfill

Revision No.: 0

Permit No: 42E

Date: 3/31/2026

3.5. Storage and Processing Unit Closure Costs Subtotal

4. Sum of Cost Subtotals

4.1. Enter the sum of engineering, construction, and storage and processing unit closure cost subtotals from lines 1.9.1, 2.10.1, and 3.5.1.

5. Contingency

5.1. Add an amount equal to at least 10 percent of the sum of cost subtotals to cover unanticipated events during implementation of closure activities.

6. Contract Performance Bond

6.1. Add an amount equal to at least 2 percent of the sum of cost subtotals for purchase of a surety bond to guarantee satisfactory completion of the closure activities.

7. Third Party Administration and Project Management Costs

7.1. Add an amount equal to at least 2.5 percent of the sum of cost subtotals to cover the cost for a third party hired by TCEQ to administer the closure activities.

8. Total Closure Cost

8.1. Enter the sum of the amounts on lines 4.1, 5.1, 6.1, and 7.1.

Closure Cost Estimate for MSW Type I Landfill

Facility Name: Skyline Landfill

Revision No.: 0

Permit No: 42E

Date: 3/31/2026

IV. Closure Cost Estimates Worksheet

A. Landfill Data

Total Permitted Waste Disposal Area: 488.7 acres

Largest Area Requiring Final Cover in the year to follow: 319.9 acres

Total Filled Area with Constructed Final Cover: 76.6 acres

Total Area Certified Closed: 76.6 acres

Number of Monitor Wells to be Installed for Closure: 0

Number of Gas Probes to be Installed for Closure: 0

Total Acreage Needing LFG Collection and Control System: 0 acres

The unit or lump sum cost for each item is based on the work items and cost elements described in Section III of this Closure Cost Estimate document:

Yes No Partially

(if "No" or "Partially" is checked, please include attachments describing the additional work items and detailing the unit, quantities, and costs for the additional items)

B. Facility Drawings and Financial Assurance Documentation

- Facility drawings
 - Attach facility drawings showing the closure areas to which the closure cost estimates apply.
- Financial assurance documentation
 - For an existing facility, attach a copy of the documentation required to demonstrate financial assurance as specified in 30 TAC Chapter 37, Subchapter R.
 - For a new facility, a copy of the required documentation shall be submitted 60 days prior to the initial receipt of waste.

C. Attachments

- Additional Engineering, Construction, and Storage and Processing Units Cost Items Details

Closure Cost Estimate for MSW Type I Landfill

Facility Name: Skyline Landfill

Revision No.: 0

Permit No: 42E

Date: 3/31/2026

D. Closure Cost Estimates Worksheet

If any item listed in this worksheet is not applicable to the subject facility, enter "NA" (Not Applicable) in the affected field.

Table 1. Closure Cost Estimates Worksheet.

Item No.	Item Description	Units ¹	Quantity	Unit Cost	Cost	Source of Unit Cost Estimate ²
1. Engineering Costs						
1.1	Topographic Survey	LS	1	30,000	30,000	2 & 3
1.2	Boundary Survey	LS	1	15,000	15,000	2 & 3
1.3	Site Evaluation	LS	1	40,000	40,000	2 & 3
1.4	Development of Plans	LS	1	80,000	80,000	2 & 3
1.5	Contract Administration (bidding and award)	LS	1	5,000	5,000	2 & 3
1.6	Closure Inspection and Testing	AC	319.9	7,000	2,239,300	2 & 3
1.7	TPDES and other Permits	LS	0	NA	0	N/A
1.8	Additional Engineering Cost Items (describe in attachments)	identify attachments	0	NA	0	NA
1.9 Engineering Costs Subtotal						
1.9.1	Engineering Costs Subtotal	NA	NA	NA	2,409,300	NA
2. Construction Costs						
2.1 Mobilization						
2.1.1	Mobilization of Personnel and Equipment	Lump Sum	NA	NA	200,000	2 & 3
2.2 Final Cover System						
<i>2.2.1 Side Slope Cover</i>						
2.2.1a	Infiltration Layer – Compacted Clay	Cubic Yards	416,885	5.00	2,084,425	2 & 3
2.2.1b	Infiltration Layer – Geosynthetic Clay Liner	Square Feet				
2.2.1c	Flexible Membrane Cover – HDPE	Square Feet				
2.2.1d	Flexible Membrane Cover – LLDPE	Square Feet				

Closure Cost Estimate for MSW Type I Landfill

Facility Name: Skyline Landfill

Revision No.: 0

Permit No: 42E

Date: 3/31/2026

Item No.	Item Description	Units ¹	Quantity	Unit Cost	Cost	Source of Unit Cost Estimate ²
2.2.1e	Drainage Layer – Aggregate	Cubic Yards				
2.2.1f	Drainage Layer – Drainage Geocomposite Material	Square Feet	11,225,904	.50	5,627,952	2 & 3
2.2.1g	Erosion Layer	Cubic Yards	1,250,656	4.00	5,002,624	2 & 3
2.2.1h	Vegetation	Acres	258.4	3,000	775,200	2 & 3
2.2.2 Top Slope Cover						
2.2.2a	Infiltration Layer – Compacted Clay	Cubic Yards	99,220	5.00	496,100	2 & 3
2.2.2b	Infiltration Layer – Geosynthetic Clay Liner	Square Feet				
2.2.2c	Flexible Membrane Cover – HDPE	Square Feet				
2.2.2d	Flexible Membrane Cover – LLDPE	Square Feet	2,678,940	.50	1,339,470	2 & 3
2.2.2e	Drainage Layer – Aggregate	Cubic Yards				
2.2.2f	Drainage Layer – Drainage Geocomposite Material	Square Feet	2,678,940	.50	1,339,470	2 & 3
2.2.2g	Erosion Layer	Cubic Yards	198,440	4.00	793,760	2 & 3
2.2.2h	Vegetation	Acres	61.5	2500	153,750	2 & 3
2.2.3 Cells for Class 1 Nonhazardous Industrial Waste						
2.2.3a	Dike Construction	specify				
2.3 Site Grading						
2.3.1	Site Grading	Acres	488.7	1,000	488,700	2 & 3
2.4 Site Fencing and Security						
2.4.1	Site Fencing and Security					
2.5 Landfill Gas Monitoring and Control System						
2.5.1	Gas Control Wells		0			
2.5.2	Gas Header Piping		0			
2.5.3	Gas Lateral Piping		0			
2.5.4	Flare Station		0			

Closure Cost Estimate for MSW Type I Landfill

Facility Name: Skyline Landfill

Revision No.: 0

Permit No: 42E

Date: 3/31/2026

Item No.	Item Description	Units ¹	Quantity	Unit Cost	Cost	Source of Unit Cost Estimate ²
2.5.5	Condensate Sumps		0			
2.5.6	Completion of LFG Monitoring System		0			
2.6 Groundwater Monitoring System						
2.6.1	Groundwater Monitoring Well Installation		0			
2.6.2	Piezometer and Monitor Well Plugging and Abandonment	Each	0			
2.7 Leachate Management						
2.7.1	Completion of Leachate Management System		0			
2.8 Stormwater Management						
2.8.1	Stormwater Drainage Management System	AC	319	2,500	799,750	2 & 3
2.9 Other Cost Items						
2.9.1	Additional Construction Cost Items (describe in attachments)	identify attachments	NA	NA		NA
2.10 Construction Costs Subtotal						
2.10.1	Construction Costs Subtotal	NA	NA	NA	19,101,201	NA
3. Storage and Processing Unit Closure Costs						
3.1	Waste Disposal	<input type="checkbox"/> Tons <input checked="" type="checkbox"/> Cubic Yards	70	50	3,500	
3.2	Material Removal and Disinfection	LS	1	10,000	10,000	2 & 3
3.3	Demolition and Disposal Units	LS	1	10,000	16,500	2 & 3
3.4	Additional Storage and Processing Unit Closure Cost Items (describe in attachments)	identify attachments	NA	NA		NA
3.5 Storage and Processing Unit Closure Costs Subtotal						
3.5.1	Storage and Processing Unit Closure Costs Subtotal	NA	NA	NA	30,000	NA

Closure Cost Estimate for MSW Type I Landfill

Facility Name: Skyline Landfill

Revision No.: 0

Permit No: 42E

Date: 3/31/2026

Item No.	Item Description	Units ¹	Quantity	Unit Cost	Cost	Source of Unit Cost Estimate ²
4. Sum of Engineering, Construction, and Storage and Processing Unit Closure Costs						
4.1	Sum of Engineering, Construction, and Storage and Processing Unit Closure Cost Subtotals	NA	NA	NA	21,540,501	NA
5. Contingency						
5.1	Contingency (10% of Sum of Engineering, Construction, and Storage and Processing Unit Closure Cost Subtotals)	NA	NA	NA	2,154,050	NA
6. Contract Performance Bond						
6.1	Contract Performance Bond (2% of Sum of Engineering, Construction, and Storage and Processing Unit Closure Cost Subtotals)	NA	NA	NA	430,810	NA
7. Third Party Administration and Project Management Costs						
7.1	Third Party Administration and Project Management Costs (2.5% of Sum of Engineering, Construction, and Storage and Processing Unit Closure Cost Subtotals)	NA	NA	NA	538,513	NA
8. Total Closure Costs						
8.1	Total Closure Costs (sum of amounts in Sections 4, 5, 6, and 7)	NA	NA	NA	24,663,874	NA

¹ For items marked "specify," the responsible professional engineer will enter appropriate unit of measurement

² Sources of Unit Costs for Cost Estimates table may include:

- (1) Published Cost Estimator Manuals (e.g., RS Means);
- (2) Third Party Quotes (e.g., Environmental Field Services Contractors);
- (3) Verifiable Data based on Actual Operations; or
- (4) Other sources of cost acceptable to the executive director of the TCEQ.



Texas Commission on Environmental Quality Post-Closure Care Cost Estimate Form for Municipal Solid Waste Type I Landfills

This form is for use by applicants or site operators to provide post-closure care cost estimates for post-closure care of MSW Type I landfills to meet the requirements in 30 Texas Administrative Code (TAC) Chapter 330, Section 330.63(j) and 30 TAC Chapter 330 Subchapter L. The costs to be provided herein are cost estimates for hiring a third party to conduct post-closure care of the largest waste fill area that has been certified closed in writing by the TCEQ executive director.

If you need assistance in completing this form, please contact the MSW Permits Section in the Waste Permits Division at (512) 239-2335.

I. General Information

Facility Name: Skyline Landfill

MSW Permit No.: 42E

Date: 3/31/2026

Revision Number: N/A

Site Operator/Permittee Name and Mailing Address: 1201 North Central St. Ferris, TX 75125

Total Post-Closure Care Cost Estimate (2025 Dollar Amount): 25,346,250

II. Professional Engineer's Statement, Seal, and Signature

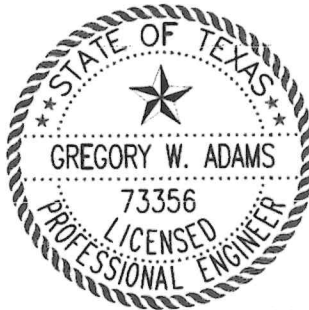
I am a licensed professional engineer in the State of Texas. To the best of my knowledge, this Post- Closure Care Cost Estimate has been completed in substantial conformance with the facility Post-Closure Care Plan and, in my professional opinion, is in compliance with Title 30 of the Texas Administrative Code, Chapter 330.

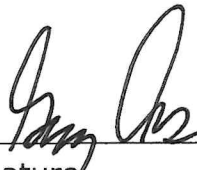
Name: Gregory Adams Title: Principal Engineer

Date: 3/31/2026

Company Name: Biggs & Mathews Environmental, Inc. Firm Registration Number: F-256

Professional Engineer's Seal



 3/31/2026
Signature

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

Post-Closure Care Cost Estimate for MSW Type I Landfills

Facility Name: Skyline Landfill

Permit No: 42E

Revision No.: 0

Date: 3/31/2026

III. Annual Review of Permit Conditions, Cost Estimates, Adjustments for Inflation, and Financial Assurance

The site operator/permittee acknowledges that he/she will:

1. Revise and increase the post-closure care cost estimate and the amount of financial assurance provided whenever changes in the post-closure care plan or the landfill conditions increase the maximum cost of post-closure care at any time during the remaining active life of the landfill and until the facility is officially released from the post-closure care period in writing by the executive director.
2. Request a reduction in the post-closure care cost estimate and the amount of financial assurance as a permit modification whenever the post-closure care cost estimate exceeds the maximum cost of post-closure care remaining over the post-closure period. The permit modification will include a detailed justification for the reduction of the post-closure care cost estimate and the amount of financial assurance.
3. Establish financial assurance for post-closure care of the unit in an amount no less than the current post-closure care cost estimate in accordance with 30 TAC Chapter 37
4. Adjust the current post-closure care cost estimate for inflation within 60 days prior to the anniversary date of the first establishment of the financial assurance mechanism.
5. Provide annual inflation adjustments to the post-closure care costs and financial assurance during the active life of the facility and during the post closure care period. The adjustment will be made using an inflation factor derived from the most recent annual Implicit Price Deflator for Gross National Product published by the United States Department of Commerce in its Survey of Current Business, as specified in 30 TAC Chapter 37. The inflation factor is the result of dividing the latest published annual Deflator by the Deflator for the previous year.
6. Provide continuous financial assurance coverage for post-closure care until the facility is officially released in writing by the executive director from the post-closure care period in accordance with all requirements of the post-closure care plan.

Post-Closure Care Cost Estimate for MSW Type I Landfills

Facility Name: Skyline Landfill

Revision No.: 0

Permit No: 42E

Date: 3/31/2026

IV. Description of Worksheet Items of the Post-Closure Care Cost Estimates

The following descriptions of the worksheet items provide guidance for identifying the minimum work or cost elements for estimating the unit or lump sum cost of each item as applicable. Enter additional detail for each item in the field following the item as necessary and as site-specific conditions warrant. The cost items are grouped under post-closure care costs for engineering, construction, and leachate management. Include attachments to detail any additional work and associated costs necessary for the post-closure care of the unit or facility that is not already included as a line item on the worksheet. Reference the attachments and list the work or cost items in the fields under "Additional Engineering Cost Items Not Listed on the Worksheet," "Additional Construction Cost Items Not Listed on the Worksheet," or "Additional Leachate Management Costs Not Listed on the Worksheet" as applicable. Provide the total cost of additional work or cost items in each cost category on the worksheet line that precedes the cost subtotal for each cost group.

1. Engineering Costs

1.1. Site Inspection and Recordkeeping

Regularly scheduled and event-driven site inspection must be performed to identify areas experiencing settlement, subsidence, erosion, or other drainage related problems, and note the conditions of the environmental control and monitoring systems, including leachate collection, groundwater monitoring, and landfill gas monitoring systems. *Enter additional site inspection and recordkeeping work or cost element detail as site-specific conditions warrant.*

1.2. Correctional Plans and Specifications

The cost for an engineering consultant to prepare corrective measure construction plans and specifications to correct problems identified during site inspections. *Enter additional work or cost element details for correctional plans and specifications as site-specific conditions warrant.*

1.3. Site Monitoring

The cost of performing semiannual groundwater (including costs for sampling and analyzing parameters, and assessment and reporting) and quarterly landfill gas monitoring (including costs for sampling and reporting) and the monitoring of other site-specific systems at the landfill during the post-closure period. *Enter additional site monitoring work or cost element details as site-specific conditions warrant.*

Post-Closure Care Cost Estimate for MSW Type I Landfills

Facility Name: Skyline Landfill

Revision No.: 0

Permit No: 42E

Date: 3/31/2026

1.4. Additional Engineering Cost Items Not Listed on the Worksheet

List the Attachments detailing additional post-closure care engineering cost items not already included as a line item on the worksheet. (Also, reference these Attachments in the "Units" column of this line of the worksheet. Provide the total cost of all additional engineering cost items in the "Cost" column).

Post-Closure Care Cost Estimate for MSW Type I Landfills

Facility Name: Skyline Landfill

Revision No.: 0

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Date: 3/31/2026

2. Construction Costs

2.1. Cap and Sideslopes Repairs and Revegetation

The cost of repair of the cap and cap drainage control structures due to erosion or structural integrity failures and maintaining final cover vegetation to minimize erosion. *Enter additional cap and sideslopes repair and revegetation work or cost element details as site-specific conditions warrant.*

2.2. Mowing and Vegetation Control

The cost of controlling vegetation growth on the final cover and other areas of the landfill. *Enter additional mowing and vegetation control work or cost element details as site-specific conditions warrant.*

2.3. Groundwater Monitoring System Maintenance

The cost of repairs/replacement and routine maintenance. *Enter additional groundwater monitoring system maintenance work or cost element details as site-specific conditions warrant.*

2.4. LFG Monitoring Probes Maintenance

The cost of repairs/replacement and routine maintenance. Enter additional LFG monitoring probes maintenance work or cost element details as site-specific conditions warrant.

2.5. LFG Collection System Maintenance

The cost of repairs and routine maintenance. *Enter additional LFG collection system maintenance work or cost element details as site-specific conditions warrant.*

2.6. Perimeter Fence and Gates Maintenance

The cost of maintaining perimeter fence and gates to restrict unauthorized access to the closed landfill. *Enter additional perimeter fence and gates maintenance work or cost element details as site-specific conditions warrant.*

2.7. Access and Rights of Way Maintenance

The cost of maintaining the access roads and other rights of way to the closed landfill to conduct inspections, environmental sampling, routing

Post-Closure Care Cost Estimate for MSW Type I Landfills

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maintenance and other post-closure activities. *Enter additional access and rights of way maintenance work or cost element details as site-specific conditions warrant.*

2.8. Drainage System Cleanout and Repairs

The cost to include costs for maintaining and repairing ditches, conveyance structures, and ponds/basins. *Enter additional drainage system cleanout and repairs work or cost element details as site-specific conditions warrant.*

2.9. Additional Construction and Maintenance Cost Items Not Listed on the Worksheet

List the Attachments detailing any additional construction and maintenance cost items necessary for post-closure care that are not already covered on the worksheet. (Also, reference these Attachments in the "Units" column on this line of the worksheet. Provide the total cost of all additional construction and maintenance cost items in the "Cost" column.)

3. Leachate Management Costs

3.1. Leachate Collection and Removal System Operation and Maintenance

The cost of operation, routine maintenance and repairs. *Enter additional work or cost element details for leachate collection and removal system operation and maintenance as site-specific conditions warrant.*

3.2. Leachate Disposal

The cost of leachate disposal off-site. *Enter additional work or cost element details for leachate disposal as site-specific conditions warrant.*

3.3. Additional leachate management cost items not listed on the worksheet.

List the Attachments detailing any additional leachate management cost items necessary for post-closure care that are not already covered on the worksheet. (Also, reference these Attachments in the "Units" column on this line of the worksheet. Provide the total cost of all additional leachate management cost items in the "Cost" column.)

Post-Closure Care Cost Estimate for MSW Type I Landfills

Facility Name: Skyline Landfill

Revision No.: 0

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4. Sum of Cost Subtotals

Enter the sum of engineering, construction, and storage and leachate management post-closure care cost subtotals from lines 1.5.1, 2.10.1, and 3.5.1.

5. Contingency

The cost added to cover unanticipated events during implementation of post-closure activities. (Enter additional work or cost element information as necessary)

6. Third Party Administration and Project Management Costs

The cost for the third party hired by TCEQ to administer the post-closure activities. (Enter additional work or cost element information as necessary)

V. Post-Closure Care Cost Estimates Worksheet

Post-Closure Care Period – 30 years

Total Permitted Acreage: 858.7 acres

Total Permitted Waste Footprint: 488.7 acres

Number of Groundwater Monitoring Wells: 38

Number of GW Monitoring Events: 2/year

Number of Gas Probes: 47

Number of LFG Monitoring Events: 4/year

The unit or lump sum cost for each item is based on the work items and cost elements described in Section III of this Post-Closure Cost Estimate document:

Yes No Partially

If "No" or "Partially" is checked, please attach a written description of work items and cost elements which form the bases of unit or lump sum cost for the affected items.

(NOTE: If any item listed in this worksheet is not applicable to the subject facility, enter Not Applicable (N/A) in the affected fields)

Attachments

Additional Engineering, Construction, and Leachate Management Cost Items Details.

Post-Closure Care Cost Estimate for MSW Type I Landfills

Facility Name: Skyline Landfill

Permit No: 42E

Revision No.: 0

Date: 3/31/2026

Table 1: Post-Closure Care Cost Estimates

Item No.	Item Description	Units	Annual Qty.	Unit Cost	Annual Cost	Source of Unit Cost Estimate ⁱ
1.0 Engineering Costs						
1.1	Site Inspection and Recordkeeping ⁱⁱ	LS	1	40,000	40,000	2 & 3
1.2	Correctional Plans and Specifications	LS	1	40,000	40,000	2 & 3
1.3 Site Monitoring						
<i>1.3.1 Groundwater Monitoring System</i>						
1.3.1(a)	Sampling and Analysis of GW Monitoring Wells (Quantity = 2 x Number of wells)	Wells	76	950	72,200	2 & 3
1.3.1(b)	Piezometers/Well Abandonment	Each	0			
<i>1.3.2 LFG Monitoring System</i>						
1.3.2(a)	LFG Quarterly Monitoring (Quarterly)	Each	188	125	23,500	2 & 3
1.3.2(b)	LFG Probe Plugging and Abandonment	Each				
1.4 Additional Engineering Cost Items (Detail in Attachments)						
1.4.1	Additional Engineering Cost Items (describe in attachments)	Identify attachments	NA	NA		NA
1.5 Engineering Costs Subtotal						
1.5.1	Engineering Costs Subtotal	NA	NA	NA	175,700	NA
2.0 Construction and Maintenance Costs						
2.1	Cap and Sideslopes Repairs and Revegetation	Acres	488.7	80	39,096	2 & 3
2.2	Mowing and Vegetation Management	Acres	488.7	100	48,870	2 & 3

Post-Closure Care Cost Estimate for MSW Type I Landfills

Facility Name: Skyline Landfill

Revision No.: 0

Permit No: 42E

Date: 3/31/2026

Item No.	Item Description	Units	Annual Qty.	Unit Cost	Annual Cost	Source of Unit Cost Estimate ⁱ
2.3	Groundwater Monitoring System Maintenance	LS	1	500	500	2 & 3
2.4	LFG Monitoring Probes Maintenance	LS	1	500	500	2 & 3
2.5	LFG Collection System Maintenance	LS	1	25000	25,000	2 & 3
2.6	Perimeter Fence and Gates Maintenance	LS	1	1000	1000	2 & 3
2.7	Access Roads Maintenance	LS	1	1500	1500	2 & 3
2.8	Drainage System Cleanout/Repairs	LS	1	2000	2000	2 & 3
2.9 Additional Construction and Maintenance Cost Items (Details in Attachments)						
2.9.1	Additional Construction and Maintenance Cost Items (details in attachments)	Identify attachments	NA	NA		NA
2.10 Construction and Maintenance Costs Subtotal						
2.10.1	Construction and Maintenance Costs Subtotal	NA	NA	NA	118,466	NA
3.0 Leachate Management						
3.1	Leachate Management System Operation and Maintenance	LS	1	10000	10,000	2 & 3
3.2	Leachate Disposal	Gals	100,000	.30	30,000	2 & 3
3.3 Additional Leachate Management Cost Items (Details in Attachments)						
3.4	Additional Leachate Management Cost Items (details in attachments)	Identify attachments	NA	NA		
3.5 Leachate Management Costs Subtotal						
3.5.1	Leachate Management Costs Subtotal	NA	NA	NA	40,000	NA

Post-Closure Care Cost Estimate for MSW Type I Landfills

Facility Name: Skyline Landfill

Revision No.: 0

Permit No: 42E

Date: 3/31/2026

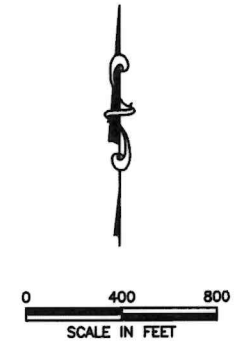
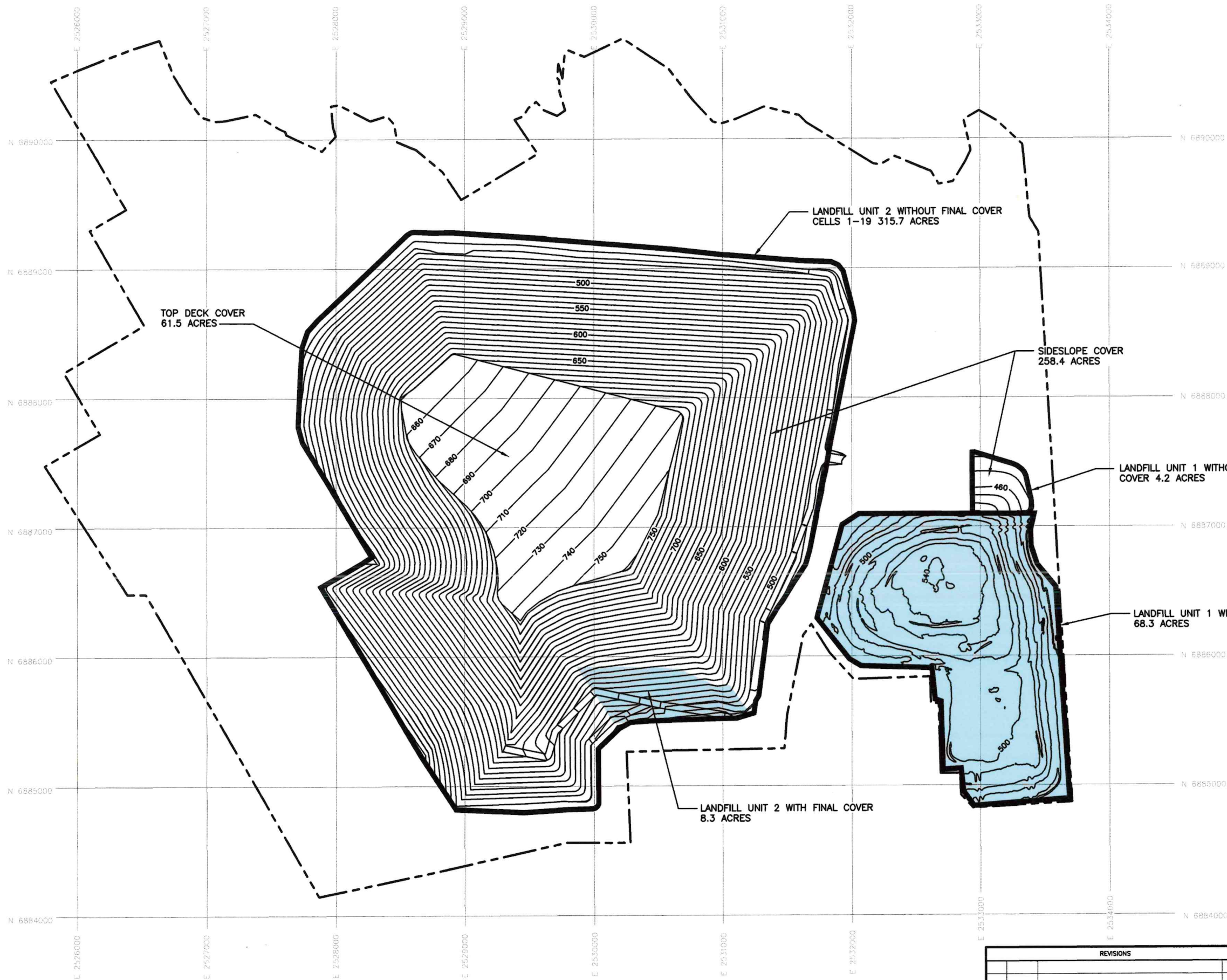
Item No.	Item Description	Units	Annual Qty.	Unit Cost	Annual Cost	Source of Unit Cost Estimate ⁱ
4.0 Sum of Engineering, Construction, and Leachate Management Costs						
4.1	Sum of Engineering, Construction, and Leachate Management Cost Subtotals	NA	NA	NA	334,166	NA
5.0 Contingency						
5.1	Contingency (10% of Sum of Engineering, Construction, and Leachate Management Cost Subtotals)	NA	NA	NA	33,416	NA
6.0 Third Party Administration and Project Management Costs						
6.1	Third Party Administration and Project Management Costs (2.5% of Sum of Engineering, Construction, and Leachate Management Cost Subtotals)	NA	NA	NA	8,354	NA
7. Total Post-Closure Cost						
7.1	Total Annual Post-Closure Cost (Sum of amounts in Sections 4, 5, and 6)	NA	NA	NA	375,936	NA
7.2	30 Year Post-Closure Costs (Total Annual Post-Closure Cost x 30)	NA	NA	NA	11,278,080	NA

ⁱ Sources of Unit Cost Estimates may include:

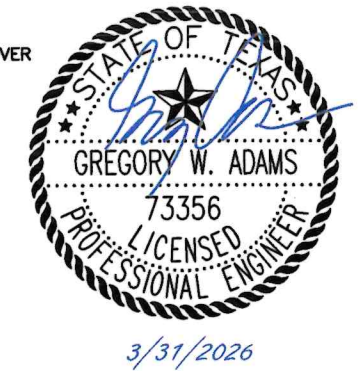
- (1) Published Cost Estimator Manuals (e.g., RS Means);
- (2) Third Party Quotes (e.g., Environmental Field Services Contractors); or
- (3) Verifiable Data based on Actual Operations

ⁱⁱ Example Description for Item No. 1.1 – “Includes costs for site inspection performed at least annually for identification of areas experiencing settlement or subsidence, erosion or other drainage-related problems, inspection of the leachate collection system, gas monitoring system and LFG monitoring system.”

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- LEGEND**
- PERMIT BOUNDARY
 - 460— FINAL COVER CONTOUR
 - N 6887000 STATE PLANE GRID (NAD83)
 - EXISTING FINAL COVER



LARGEST AREA REQUIRING FINAL COVER
WASTE MANAGEMENT OF TEXAS, INC.
SKYLINE LANDFILL



REVISIONS			
REV	DATE	DESCRIPTION	DWN BY

TBPELS FIRM NO. F-256 AND NO. 10194895
 TBPG FIRM NO. 50222
 DRAWING **J.1**

EVIDENCE OF FINANCIAL ASSURANCE



John Martinez
Texas Commission of Environmental Quality
Financial Assurance MC 184
12100 Park 35 Circle, Building A
Austin, Texas 78753

RE: WASTE MANAGEMENT OF TEXAS, INC
Bond No. 81548743- Facility: Skyline RDF; Permit No. MSW 425-C

Dear John Martinez:

Enclosed please find the rider increasing the bond amount to \$39,066,576.00 for WASTE MANAGEMENT OF TEXAS, INC. for the above referenced bond. This document has been executed for the August 1, 2025 to August 1, 2026 renewal term.

If you have any questions or need further assistance, please contact the Financial Assurance department at Waste Management's Corporate office; contact information is:

Diana Seng 713-265-1322
dseng@wm.com

Sincerely,

Andrea M. Penaloza

enclosures
2324511

RIDER

To be attached to and form a part of Bond No. 81548743

executed by WASTE MANAGEMENT OF TEXAS, INC. as Principal

and by FEDERAL INSURANCE COMPANY as Surety,

in favor of TEXAS COMMISSION ON ENVIRONMENTAL QUALITY,

and effective as of February 25, 2001,

In consideration of the mutual agreements herein contained the Principal and the Surety hereby consent to changing the bond amount

FROM: Closure: \$24,580,373.00 Post Closure: \$13,570,580.00 Total: \$38,150,953.00

TO: Closure: \$25,170,302.00 Post Closure: \$13,896,274.00 Total: \$39,066,576.00

Nothing herein contained shall vary, alter or extend any provision or condition of this bond except as herein expressly stated. This rider is effective on the 1st day of August, 2025.

Signed and sealed this 16th day of July, 2025.

WASTE MANAGEMENT OF TEXAS, INC.

Principal

BY: 

Misty Wright
Attorney-in-Fact

FEDERAL INSURANCE COMPANY

Surety

BY: 

Andrea M. Penaloza Attorney-in-Fact

POWER OF ATTORNEY

KNOWN ALL MEN BY THESE PRESENTS that Waste Management, Inc. and each of its direct and indirect majority owned subsidiaries (the "WM Entities"), have constituted and appointed and do hereby appoint Jenny Moore, Vanessa Dominguez, Melissa Fortier, Michael J. Herrod, Jennifer L. Jakaitis, Terri L. Morrison, Andrea M. Penaloza, Patricia A. Rambo, Lupe Tyler, Susan A. Welsh, Donna Williams, and Misty Wright of Aon Risk Services, Inc., each its true and lawful Attorney-in-fact to execute under such designation in its name, to affix the corporate seal approved by the WM Entities for such purpose, and to deliver for and on its behalf as surety thereon or otherwise, bonds of any of the following classes, to wit:

1. Surety bonds to the United States of America or any agency thereof, and lease and miscellaneous surety bonds required or permitted under the laws, ordinances or regulations of any State, City, Town, Village, Board or any other body or organization, public or private.
2. Bonds on behalf of WM Entities in connection with bids, proposals or contracts.

The foregoing powers granted by the WM Entities shall be subject to and conditional upon the written direction of a duly appointed officer of the applicable WM Entity (or any designee of any such officer) to execute and deliver any such bonds.

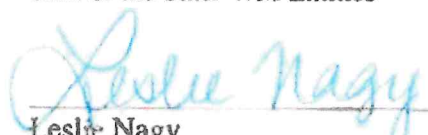
The signatures and attestations of such Attorneys-in-fact and the seal of the WM Entity may be affixed to any such bond, policy or to any certificate relating thereto by facsimile and any such bond, policy or certificate bearing such facsimile signatures or facsimile seal shall be valid and binding upon the applicable WM Entity when so affixed.

IN WITNESS WHEREOF, the WM Entities have caused these presents to be signed by the Vice President and Treasurer and its corporate seal to be hereto affixed. This power of attorney is in effect as of July 16, 2025.

Witness:



On behalf of Waste Management, Inc. and
each of the other WM Entities



Leslie Nagy
Vice President and Treasurer

Power of Attorney

Federal Insurance Company | Vigilant Insurance Company | Pacific Indemnity Company
Westchester Fire Insurance Company | ACE American Insurance Company

Know All by These Presents, that FEDERAL INSURANCE COMPANY, an Indiana corporation, VIGILANT INSURANCE COMPANY, a New York corporation, PACIFIC INDEMNITY COMPANY, a Delaware corporation, WESTCHESTER FIRE INSURANCE COMPANY and ACE AMERICAN INSURANCE COMPANY corporations of the Commonwealth of Pennsylvania, do each hereby constitute and appoint Vanessa Dominguez, Amanda George, Jennifer Moore, Terri L. Morrison, Andrea M. Penaloza, Gina A. Rodriguez, Lupe Tyler, Lisa A. Ward, Donna L. Williams and Misty Wright of Houston Texas

each as their true and lawful Attorney-in-Fact to execute under such designation in their names and to affix their corporate seals to and deliver for and on their behalf as surety thereon or otherwise, bonds and undertakings and other writings obligatory in the nature thereof (other than bail bonds) given or executed in the course of business, and any instruments amending or altering the same, and consents to the modification or alteration of any instrument referred to in said bonds or obligations.

In Witness Whereof, said FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, PACIFIC INDEMNITY COMPANY, WESTCHESTER FIRE INSURANCE COMPANY and ACE AMERICAN INSURANCE COMPANY have each executed and attested these presents and affixed their corporate seals on this 25th day of October, 2024.

[Signature of Rupert HD Swindells]
Rupert HD Swindells, Assistant Secretary

[Signature of Warren Eichhorn]
Warren Eichhorn, Vice President



STATE OF NEW JERSEY
County of Hunterdon ss.

On this 25th day of October, 2024 before me, a Notary Public of New Jersey, personally came Rupert HD Swindells and Warren Eichhorn, to me known to be Assistant Secretary and Vice President, respectively, of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, PACIFIC INDEMNITY COMPANY, WESTCHESTER FIRE INSURANCE COMPANY and ACE AMERICAN INSURANCE COMPANY, the companies which executed the foregoing Power of Attorney, and the said Rupert HD Swindells and Warren Eichhorn, being by me duly sworn, severally and each for himself did depose and say that they are Assistant Secretary and Vice President, respectively, of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, PACIFIC INDEMNITY COMPANY, WESTCHESTER FIRE INSURANCE COMPANY and ACE AMERICAN INSURANCE COMPANY and know the corporate seals thereof, that the seals affixed to the foregoing Power of Attorney are such corporate seals and were thereto affixed by authority of said Companies; and that their signatures as such officers were duly affixed and subscribed by like authority.

Notarial Seal



Albert Centurisi
NOTARY PUBLIC OF NEW JERSEY
No 50202369
Commission Expires August 22, 2027

[Signature of Albert Centurisi]
Notary Public

CERTIFICATION

Resolutions adopted by the Boards of Directors of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY on August 30, 2016; WESTCHESTER FIRE INSURANCE COMPANY on December 11, 2006; and ACE AMERICAN INSURANCE COMPANY on March 20, 2009:

"RESOLVED, that the following authorizations relate to the execution, for and on behalf of the Company, of bonds, undertakings, recognizances, contracts and other written commitments of the Company entered into in the ordinary course of business (each a "Written Commitment"):

- (1) Each of the Chairman, the President and the Vice Presidents of the Company is hereby authorized to execute any Written Commitment for and on behalf of the Company, under the seal of the Company or otherwise.
(2) Each duly appointed attorney-in-fact of the Company is hereby authorized to execute any Written Commitment for and on behalf of the Company, under the seal of the Company or otherwise, to the extent that such action is authorized by the grant of powers provided for in such person's written appointment as such attorney-in-fact.
(3) Each of the Chairman, the President and the Vice Presidents of the Company is hereby authorized, for and on behalf of the Company, to appoint in writing any person the attorney-in-fact of the Company with full power and authority to execute, for and on behalf of the Company, under the seal of the Company or otherwise, such Written Commitments of the Company as may be specified in such written appointment, which specification may be by general type or class of Written Commitments or by specification of one or more particular Written Commitments.
(4) Each of the Chairman, the President and the Vice Presidents of the Company is hereby authorized, for and on behalf of the Company, to delegate in writing to any other officer of the Company the authority to execute, for and on behalf of the Company, under the Company's seal or otherwise, such Written Commitments of the Company as are specified in such written delegation, which specification may be by general type or class of Written Commitments or by specification of one or more particular Written Commitments.
(5) The signature of any officer or other person executing any Written Commitment or appointment or delegation pursuant to this Resolution, and the seal of the Company, may be affixed by facsimile on such Written Commitment or written appointment or delegation.

FURTHER RESOLVED, that the foregoing Resolution shall not be deemed to be an exclusive statement of the powers and authority of officers, employees and other persons to act for and on behalf of the Company, and such Resolution shall not limit or otherwise affect the exercise of any such power or authority otherwise validly granted or vested."

I, Rupert HD Swindells, Assistant Secretary of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, PACIFIC INDEMNITY COMPANY, WESTCHESTER FIRE INSURANCE COMPANY and ACE AMERICAN INSURANCE COMPANY (the "Companies") do hereby certify that

- (i) the foregoing Resolutions adopted by the Board of Directors of the Companies are true, correct and in full force and effect,
(ii) the foregoing Power of Attorney is true, correct and in full force and effect.

Given under my hand and seals of said Companies at Whitehouse Station, NJ, this July 16, 2025



[Signature of Rupert HD Swindells]
Rupert HD Swindells, Assistant Secretary

IN THE EVENT YOU WISH TO VERIFY THE AUTHENTICITY OF THIS BOND OR NOTIFY US OF ANY OTHER MATTER, PLEASE CONTACT US AT:
Telephone (908) 903-3493 Fax (908) 903-3656 e-mail: surety@chubb.com

Schedule A
Standby Trust Agreement for Waste Management of Texas, Inc. dated March 1, 2001
U. S. Bank, Successor Trustee
Revised 7/11/2025

<u>Facility</u>	<u>Address</u>	<u>Permit No.</u>	<u>Closure</u>	<u>Post-Closure</u>	<u>Total Bond</u>
1 Austin Community Landfill Gas-to-Energy Facility	9900 Giles Road Austin, Texas 78754	MSW 48019	162,846	-	162,846
2 Bluebonnet Recycling and Disposal Facility	10050 Highway 90 Houston, Texas 77213	MSW 1279	-	3,053,486	3,053,486
3 Camelot Landfill (Farmers Branch) Gas-to-Energy Facility	580 Huffines Blvd. Lewisville, Texas 75056	MSW 48028	81,453	-	81,453
4 Coastal Plains Recycling and Disposal Facility	21000 East Highway 6 Alvin, Texas 77511	MSW 1721-A	13,746,720	6,516,252	20,262,972
5 Comal County Landfill Transfer Station	Kohlenberg Lane New Braunfels, Texas 78130	MSW 40200	193,714	-	193,714
6 Covel Gardens Recycling and Disposal Facility	8611 Covel Road San Antonio, Texas 78252	MSW 2093-B	18,028,491	9,964,854	27,993,345
7 DFW Recycling and Disposal Facility	1600 South Railroad Street Lewisville, Texas 75057	MSW 1025-B	7,024,985	12,999,739	20,024,724
8 Hillside Material Recovery & Transfer Facility	Route 7, Nelson Road Sherman, Texas 75091	MSW 40082	33,600	-	33,600
9 Hillside Recycling and Disposal Facility	Route 7, Nelson Road Sherman, Texas 75091	MSW 523	4,812,352	3,962,543	8,774,895
10 Kingsland Transfer Station	2.1 Miles from 2545 off Old Dump Road Kingsland, Texas 78639	MSW 40003	13,721	-	13,721
11 Lacy Lakeview Recycling and Disposal Facility	6777 Selby Lane Waco, Texas 76705	MSW 1646A	4,355,054	5,528,579	9,883,633
12 Mesquite Creek Landfill	Kohlenberg Lane New Braunfels, Texas 78130	MSW 66B	7,924,988	9,533,700	17,458,688
13 Mesquite Creek Landfill Gas-to-Energy Facility	1001 Kohlenberg Road New Braunfels, Texas 78130	MSW 48029	188,236	-	188,236
14 Paris Landfill	1800 South Church Paris, Texas 75460	MSW 1454-B	15,762,094	4,325,935	20,088,029
15 Pecan Prairie Recycling and Disposal Facility	County Road 1038 at Highway 69 North Celeste, Texas 75423	MSW 1503	1,486,429	1,146,461	2,632,890
16 Skyline Recycling and Disposal Facility	1201 North Central Avenue Ferris, Texas 75125	MSW 42-C	25,170,302	13,896,274	39,066,576
17 Temple Landfill	706 Landfill Road Temple, Texas 76501	MSW 692-A	10,986,031	4,105,550	15,091,581
18 Westside Recycling and Disposal Facility	3500 West Lincrest Drive Aledo, Texas 76008	MSW 1019A	-	3,314,702	3,314,702
19 Westside Transfer Station	12280 Camp Bowie W. Aledo, Texas 76008	MSW 40186	70,615	-	70,615
20 Williamson County Recycling and Disposal Facility	600 County Road 128 Hutto, Texas 78634	MSW 1405B	18,346,632	2,930,735	21,277,367

Schedule A
Standby Trust Agreement for Waste Management of Texas, Inc. dated March 1, 2001
U. S. Bank, Successor Trustee
Revised 7/11/2025

	<u>Facility</u>	<u>Address</u>	<u>Permit No.</u>	<u>Closure</u>	<u>Post-Closure</u>	<u>Total Bond</u>
21	WM Renewable Energy, LLC (Skyline Gas to Energy)	1201 N. Central Avenue Ferris, Texas 75125	MSW 48018	164,074	-	164,074
22	WM Curbside, LLC	1223 E. Industrial Drive New Braunsfels, Texas 78130	SWR 89069	104,200	-	104,200
23	WM Curbside, LLC	1223 E. Industrial Drive New Braunsfels, Texas 78130	EPA # TXR 000080103	2,136	-	2,136
24	WM Curbside, LLC	5025 Cash Road Dallas, Texas, 75247	SWR90760	100,000	-	100,000
25	Burnet County Transfer Station	2411 Farm to Market Road 963 Burnet, Texas 78611	40035	193,208	-	193,208
26	Skyline Renewable Natural Gas Facility Type IX Registration Permit	1201 North Central Street Ferris, Texas 75125	MSW-Rule No. 48048	425,352	-	425,352
27	DFW Renewable Natural Gas Facility Type IX Registration Permit	1600 South Railroad Street Lewisville, TX 75057	RN100542257		-	-
28	Temple Renewable Natural Gas Facility Type IX Registration Permit	706 Landfill Road Temple, TX 76501-8429	92582	357,500	-	357,500
29	Covel Gardens RNG Plant Type IX Registration Permit	8611 Covel Road San Antonio, TX 78252	MSW 48015	171,868	-	171,868
30	Security RNG Plant Type IX Registration Permit	19248 Highway 105 Cleveland, TX 77328-2422	MSW 48056	357,000	-	357,000
31	Security Landfill Gas to Energy Facility Type IX Registration Permit	19248 Highway 105 Cleveland, TX 77328-2422	48008	291,419	-	291,419
TOTAL				\$ 130,263,601.10	\$ 81,278,810.00	\$ 211,542,411.10

ORIGIN ID: HOUA (932) 202-6616
ANDREA PENAL OZA
AON CORPORATION
1300 POST OAK BLVD # 14
HOUSTON, TX 77056
UNITED STATES US

SHIP DATE: 17 JUL 25
ACTWGT: 0.06 LB
CAD: 292419370WMSX3300
DIMS: 11x6x1 IN
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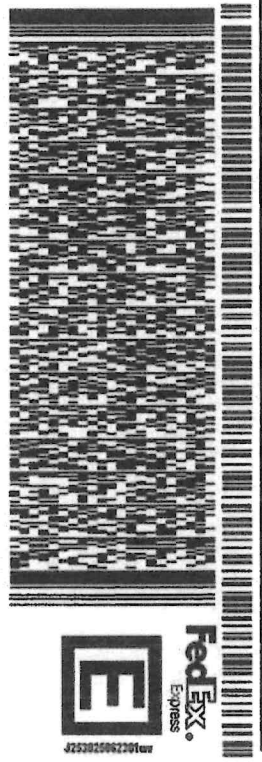
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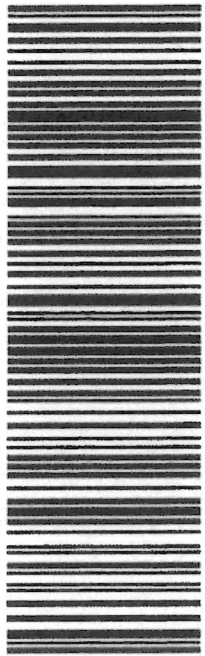
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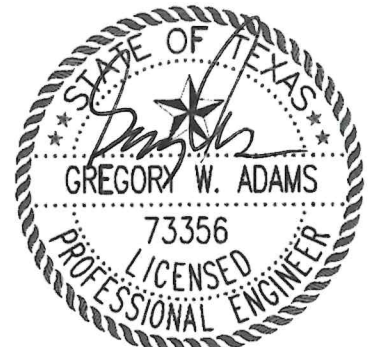
**WASTE MANAGEMENT SKYLINE LANDFILL
DALLAS AND ELLIS COUNTIES, TEXAS
PERMIT AMENDMENT APPLICATION NO. MSW 42E**

PART IV – SITE OPERATING PLAN

Prepared for



March 2026



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

3/31/2026

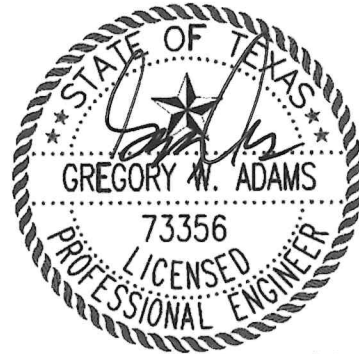
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TEXAS BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
FIRM REGISTRATION NO. F-256 AND NO. 10194895

TEXAS BOARD OF PROFESSIONAL GEOSCIENTISTS
FIRM REGISTRATION NO. 50222



2/31/2020

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

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1 INTRODUCTION

30 TAC §§330.65, 330.121, 330.123, 330.127

1.1 Purpose

This Site Operating Plan (SOP) has been prepared 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: Subchapter D, §§330.121 through 330.179, relating to Operation Standards for Municipal Solid Waste Landfill Facilities and Subchapter E, §§330.201 through 330.249, relating to Operational Standards for Municipal Solid Waste Storage and Processing Units for the 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.

1.2 Pre-Operation Notice

In accordance with §330.123, the facility will provide notice of construction of a new waste disposal area 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.

2 RECORDKEEPING REQUIREMENTS

30 TAC §330.125

2.1 Documents

The operating record for the facility will be kept 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 1.

2.2 Analytical Data

In accordance with §330.125(b), the Skyline Landfill will record and retain in the site operating record any and all records for those items listed in Table 1 within seven working days following completion or receipt of analytical data.

2.3 Site Operating Record

In accordance with §330.125(c), the Skyline Landfill will place the items included in Table 1 into the site operating record within the specified time period. The Skyline 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 Skyline Landfill will maintain personnel training records in accordance with §335.586(d) and (e). Personnel training records for facility personnel will be maintained 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 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.

2.7 Annual Waste Acceptance Rate

As listed in Table 1, the Skyline 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 Skyline 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. This SOP includes provisions for accommodating waste receipts of up to 2,412,496 tons per year or about 7,732 tons per day.

**Table 1
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. 42E	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)
Facility operation, permit modification, approvals, and technical assistance correspondence and responses	Per occurrence	§330.125(b)(9)

Table 1
Records to be Maintained in the Site Operating Record
(Continued)

Records to be Maintained in the Site Operating Record	Frequency	Rule Citation
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 8.26 – 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 Skyline Landfill will be staffed with qualified individuals experienced with municipal solid waste disposal operations. See Figure 1 for the personnel organization and Table 2 for a summary of job descriptions, minimum qualifications, and required training for landfill personnel.

Landfill Manager

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 design, SOP, and the TCEQ regulations. The landfill manager is responsible for daily operations, administers the SOP, and serves as the emergency coordinator. The landfill manager may designate other personnel to assist with the daily operations. The landfill manager will meet the requirements for a Class A operator's license and will obtain and maintain a 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 required license as a provisional license, consistent with the requirements of §30.211.

Lead Operator

The lead operator is responsible for daily landfill operations and reports to the landfill manager. 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 have experience in earthmoving operations and have the ability to be trained in municipal solid waste disposal operations. The lead operator may obtain and maintain a 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 required license as a provisional license, consistent with the requirements of §30.211.

Attendant

The attendant, stationed at the site entrance, is responsible for maintaining records of vehicles and solid waste entering the facility. The 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 attendant will be present all hours the landfill is open to the public. The attendant will report to the landfill manager.

Equipment Operator

Equipment operators are responsible for the safe operation of the equipment and report to the lead operator. As the personnel most closely involved with the landfill operations, 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 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 will be experienced in the operation of heavy equipment, and demonstrate the ability to be trained in municipal solid waste disposal operations. Equipment operators may also be trained in bird control activities.

Laborer

Permanent and part-time laborers will be employed from time to time for maintenance, construction, litter abatement, and general site cleanup.

Supplemental Personnel

Supplemental regional personnel 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 Skyline Landfill and are not involved in daily operations.

3.2 Training

Personnel will be trained consistent with applicable training requirements as defined in §335.586(a),(b), and (c). Both on-the-job training and formal instruction in solid waste management procedures, safety, emergency procedures, and facility operations procedures will be 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 Skyline 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 facility personnel will be trained in procedures relevant to the position for which they are employed. In-house training will address the following topics:

- Municipal Solid Waste Permit No. 42E.
- Site Development Plan (applicable sections).
- Site Operating Plan.
- Facility emergency monitoring equipment and plans.
- Communication and alarm systems.
- Customer notification and load inspection procedures.
- Identification of prohibited wastes including hazardous wastes and PCB wastes.
- Waste handling procedures (acceptable and prohibited wastes).
- Health and safety.
- Fire Protection Plan.
- Equipment operation and maintenance.
- Stormwater Pollution Prevention Plan.
- Recordkeeping.

The training program will incorporate the requirements of §335.586(a)(2) to train facility personnel to be able to respond effectively to emergencies by familiarizing personnel with emergency procedures, emergency equipment, and emergency systems, including:

- Procedures for 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. 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.

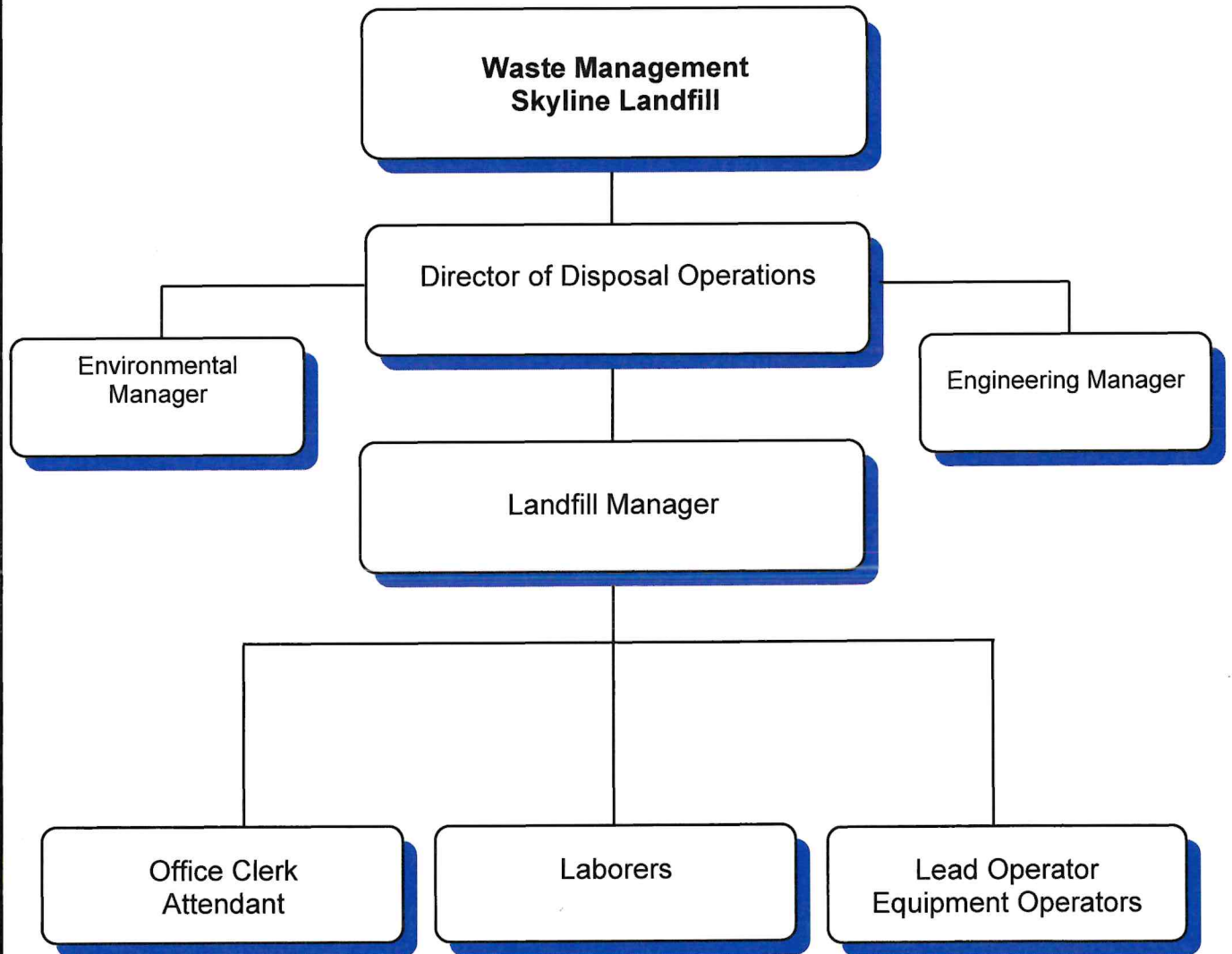
In addition to formal training, successful completion of the appropriate on-the-job training activities by an employee is required to fill an operator position. When an existing employee is transferred or promoted to a new position with training requirements that

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, 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 1

Organizational Chart



**Table 2
Skyline Landfill
Site Personnel Summary**

Position	Summary of Job Description	Minimum Qualifications	Required Training
Landfill Manager	<p>The landfill manager is responsible for:</p> <ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • Experience in earthmoving operations • Experience in MSW disposal operations • Maintains a license consistent with the requirements of §§30.201, 30.207, and 30.210 through 30.214 	<ul style="list-style-type: none"> • 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 2
Site Personnel Summary
(Continued)**

Position	Summary of Job Description	Minimum Qualifications	Required Training
Operator	<p>The operator is responsible for:</p> <ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • Experience in earthmoving operations • Experience in MSW disposal operations • Maintains licensing consistent with the requirements of §§30.201, 30.207, and 30.210 through 30.214 	<ul style="list-style-type: none"> • 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 2
Site Personnel Summary
(Continued)**

Position	Summary of Job Description	Minimum Qualifications	Required Training
Attendant	<p>The attendant is responsible for:</p> <ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • Basic understanding of accounting principles • Basic communication skills 	<ul style="list-style-type: none"> • Site Orientation • Endangered Species • Hazardous Waste Identification • Safety • Fire Prevention • Load Inspection • Prohibited Wastes • Emergency Response • SPCC • Random Inspections

**Table 2
Site Personnel Summary
(Continued)**

Position	Summary of Job Description	Minimum Qualifications	Required Training
Equipment Operator	<p>The equipment operators are responsible for:</p> <ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • 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	<p>The Laborers are responsible for:</p> <ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • Ability to be trained in completing the assigned tasks 	<ul style="list-style-type: none"> • Site Orientation • Endangered Species • Safety • Fire Prevention • Emergency Response • Litter Control • SPCC • SWPPP

4 EQUIPMENT

30 TAC §330.127(2)

Sufficient equipment will be provided to conduct site operations in accordance with the permit conditions. The equipment size, number, type, and manufacturer will vary during site operations based on operational practices and the annual waste acceptance rate.

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 3. Additional information regarding the annual waste acceptance rate is provided in Section 2.7.

Compactors are typically used for spreading and compacting the refuse and also for compacting the cover material. Dozers are typically used for soil movement and placement, to place and remove intermediate cover, and for emergency waste compaction. Scrapers or excavators and haul trucks are typically used for excavating the cover material used in site operations, soil from the future disposal areas, and 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.

In addition to the equipment listed in the table below, miscellaneous pickups, vans, or other light utility vehicles, as well as various portable pumps, instruments, and safety and training equipment will be on site as needed for operational efficiency.

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. Liquids containing refuse will be handled in the same manner as contaminated water is handled (see Section 8.24).

**Table 3
Site Equipment**

Equipment ⁽³⁾	Typical Size ⁽⁴⁾	Number ⁽⁵⁾			Function
		Less than 2000 tpd	2001 to 5000 tpd	5001 to 8000 tpd	
Compactor(s)	CAT 826, 836	1	2	3	Waste compaction and fire protection
Dozer(s)	CAT D6, D7, D8	1	2	2	Soil movement and placement, waste spreading, and fire protection
Excavator ⁽²⁾	CAT 330C	1	1	1	Soil excavation
Haul Truck(s) ⁽²⁾	10 to 40 ton	1	2	3	Soil hauling and fire protection
Motor Grader	CAT 120, 12G	1	1	1	Roadway maintenance
Farm Tractor	35 HP	1	1	1	Miscellaneous maintenance
Pickup Truck(s)	1/2 ton	1	1	1	Personnel use, litter control, maintenance
Water Truck(s)	1,000 gallons	1	1	1	Fire control, dust control, earthfill compaction
Pump(s)	10 to 500 gpm	1	1	1	Stormwater pumping

⁽¹⁾The manufacturers of the heavy equipment and miscellaneous vehicles and equipment may vary.

⁽²⁾Soil excavation will be conducted with an excavator and haul trucks(s). The landfill will determine the appropriate excavation equipment as the landfill is developed.

⁽³⁾Backup equipment will be provided from other WMTX facilities, contractors, or local rental companies to obtain equipment 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 for each piece of equipment is the minimum number for each piece of equipment to be provided.

5 DETECTION AND PREVENTION OF DISPOSAL OF PROHIBITED WASTES

30 TAC §330.127(5)

5.1 General

In accordance with §330.127(5), 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) have been established. 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 – 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 scale facility 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.

5.3 Recordkeeping

The landfill manager is required to maintain and include the following in the site operating record:

- 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. 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 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)

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. 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. 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.

Office	Phone
Ambulance	911
City of Ferris Fire Dept.	911 or 972-842-2898
City of Ferris Police Dept.	911 or 972-544-2225
Dallas County Sheriff's Office	911 or 214-749-8641
Ellis County Sheriff's Office	911 or 972-825-4901

6.1 Preparedness and Prevention Measures

6.2.1 General

- 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 Scale Facility

- 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 scale facility.
- 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

- Display speed limit, directional, and other precautionary signs.
- 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

- 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 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 scale facility or active working face, the 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 may 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 scale facility, 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 cover may be used for firefighting purposes.
- A source of earthen material will be maintained so that it is available at all times to extinguish a fire. At least two soil sources will be provided. A stockpile will be

provided adjacent to the working face, and a second soil stockpile or soil borrow source 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 sources for fire control.

- The total volume of earthen material available from the two sources will be sized to cover the working face with a minimum 6-inch layer of earthen material.
- Based on achievable production rates, the landfill equipment identified in Table 3 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 Appendix IVG.
- The active working face will be limited to the total capacity of the dozer(s) and compactor(s) to spread cover soil and the excavator and haul truck capacity to transport cover soil unless larger equipment or additional capacity is provided.

7.2 Specific Fire-Fighting Procedures

- 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 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 fire if possible, without risk to equipment operator.
- Incoming loads with burning waste will be prevented from being unloaded in the active working face of the landfill. The 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 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 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.

- If a fire occurs at the liquid stabilization facility, the 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 scale facility, 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

- Immediately contact the attendant 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 City of Ferris Fire Department by calling 911 or 972-842-2898.
- 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 in accordance with Section 3.2. 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 Skyline 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 is controlled by the perimeter fence located along the permit boundary or property boundary. Natural barriers along Ten Mile Creek also control public access to the Skyline Landfill. Access to the landfill from Business 45 is limited to the entrance road through the scale facility area. The 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, the entrance gate, and natural barriers. A perimeter fence is located along the permit boundary on the east, west, and south sides of the site. A perimeter fence and the natural barrier of Ten Mile Creek provide security on the north side. 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. The gate will be locked when the landfill is not accepting waste from public haulers.

Entrance to the landfill is monitored by the attendant during site operating hours at the scale facility. 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 is provided via the entrance road from Business 45. Signs are located along the entrance road directing traffic to the scale facility. The 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 8.26 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 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 5. Special wastes will be handled at this landfill in accordance with TCEQ regulations and with Section 8.20, Section 8.21, Appendix IVB, and Appendix IVC. Various unloading, disposal and processing areas are shown in Part III, Attachment B, Appendix B1.

Trained personnel will monitor the incoming waste on the trucks at the scale facility 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. 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 no larger than can be covered with soil to a depth of 6 inches within 1 hour with the equipment and soil borrow resources that are available.

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.

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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. 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 no larger than can be covered with soil to a depth of 6 inches within 1 hour with the equipment and soil borrow resources that are available.

A maximum of three working faces may be used during any specific time period, but typically one working face will be used except during inclement weather. The three active working faces include two working faces for disposal of municipal solid waste and one for RACM. 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. Each working face will have its own soil stockpile adjacent to the working face.

On days when RACM is accepted, the RACM unloading and disposal area will be a minimum width consistent with the rate of incoming RACM, while allowing for safe and efficient operation. RACM disposal is further discussed Section 8.20.

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 8.25.3.

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 8.25.1.

A liquid stabilization basin(s) may be located in a temporary liquid stabilization area. The temporary liquid stabilization facility is further discussed in Section 8.25.7 and Appendix IVE.

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.

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 active waste 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 for additional waste handling procedures.

8.3 Facility Operating Hours

The Skyline Landfill is authorized for waste acceptance 24 hours per day, Monday through Friday, and until 5:00 p.m. on Saturday. The Skyline Landfill accepts waste from public and private haulers from 12:01 a.m. Monday through 3:00 p.m. on Saturday. Hours for waste acceptance from private and public waste haulers are posted on the site entrance sign. The Skyline Landfill may be open other hours, as may be required to provide solid waste disposal services for special events, inclement weather, emergencies and other circumstances. The Skyline Landfill will notify the TCEQ regional office and will record waste acceptance hours outside of posted hours in the site operating record.

The Skyline Landfill is authorized for site operations 24 hours per day, 7 days per week. Site operations include construction, material delivery, maintenance, earthmoving, monitoring, transportation of construction materials, heavy equipment operation, and other non-waste acceptance operations. Access to the LFGTE facility is authorized 24 hours per day, 7 days per week.

8.4 Site Sign

A sign is displayed at the gated entrance to the site. This sign measures at least 4 feet by 4 feet, and has lettering of at least 3 inches in height. The sign states 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 is listed. 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 is 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 scale facility. A sign will be prominently displayed at the scale facility stating that all loads will 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 has litter control fences, at appropriate locations near the working face and elsewhere. The litter control fences are constructed of wire or plastic mesh screens attached to portable frames or permanent poles. The litter control fence are of sufficient height and are located as close as practical to the active area to control windblown waste and litter.
- Windblown waste and litter along the entrance road, the scale facility 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 8.26 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. 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. The existing on-site Lone Star Gas easement and TU Electric easement are marked with green posts, as required. Easements are shown on Part II, Appendix IIA.

8.6.2 Buffer Zones

The buffer zone is defined as a zone free of municipal solid waste processing and disposal activities within and adjacent to the facility boundary on property owned or controlled by the owner or operator. 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 exceed the minimum buffer distance of 125 feet. Buffer zones are shown on Part II, Appendix IIA. All buffer zones will be clearly marked as specified in Section 8.7.

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 8.26 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 table 5.

Table 5 - 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 elevation is from a United States Coast and Geodetic Survey benchmark. The permanent benchmark is a bronze survey marker stamped with the elevation and survey date and set in concrete. The location of the permanent benchmark is shown in Part II, Appendix IIA.

8.8 Materials Along the Route to the Site

Consistent with §330.145, the Skyline 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 scale facility 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 Skyline 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 entrance on Business 45 when the facility is in operation. Cleanup of the spilled materials will be performed once per day for the following regular delivery routes:

- Business 45 - north of the site entrance road for a distance of 2 miles along Business 45, East Malloy Bridge Road, and the Interstate 45 access road and South of the site entrance road for a distance of 1.4 miles to the intersection of Business 45 and 8th Street.
- East 5th Street - east of Business 45 on East 5th Street for a distance of 0.3 miles to Interstate 45.
- West 6th Street - west of Business 45 on West 6th Street for a distance of 0.7 miles (FM 664) and a distance of 0.4 miles on FM 983.
- East 8th Street - east of Business 45 on East 8th Street for a distance of 0.6 miles.

These delivery routes are shown on Part II, Appendix IIA, Drawing IIA.1. The Skyline 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 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 Skyline 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 facility will accept wastes that may generate odors including municipal water and wastewater treatment plant sludges, grease trap waste, grit trap waste, other liquid waste from municipal sources, and dead animals. The sludges and other liquid wastes are required to pass a paint filter test prior to disposal. Liquid wastes will be stabilized in accordance with Appendix IVG. Other sources of odors may include ponded water, decomposition of wastes, leachate, contaminated water, a liquid stabilization facility, and landfill gas (LFG).

- Unloading of these wastes at the active working face will be consistent with procedures established in Section 8.2, which limits the active working face to a minimum width, allowing prompt placement of daily cover or approved alternative daily cover 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 alternative daily cover will be placed over these wastes at the end of the working day consistent with procedures established in Section 8.18.
- 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 1 foot of soil upon receipt. Additional daily cover soil will be placed if needed.
- Sludges will 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. Odors will be eliminated through removal of ponded water and regrading of areas consistent with Section 8.18.
- Leachate and contaminated water will be managed and removed in accordance with Part III, Attachment D6. Leachate is discharged by direct connection to the City of Ferris 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 is conveyed to the LFGTE facility. 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

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 Skyline Landfill will conduct daily inspections as required by Section 8.26 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. Bird control procedures are provided in Appendix IVF.

8.12 Site Access Roads

The entrance road provides access from Business 45 to the scale facility and landfill haul road for waste hauling vehicles, operating personnel, and visitors. The entrance road is more than 2,200 feet to the haul road and is an all-weather surface constructed

of concrete 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 Business 45 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 Business 45, the material will be removed daily.

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 8.26 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 as well as 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.

8.15 Landfill Gas Control

The control and monitoring of landfill gas for the Skyline 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

One well identified in the TWDB database as 33-27-501 was plugged in 1992 by Waste Management; it is within the permit boundary but outside the limits of the waste disposal area and outside the groundwater monitoring system. The plugging report for 33-27-501 is located in Part III, Attachment E, Appendix E1, Figure E1-11 and E1-12. There are no other known water wells within the permit boundary of the Skyline Landfill and there are no water wells used for water supply. Should water wells be discovered during facility development, the Skyline Landfill will immediately provide written notification to the executive director of their location. Within 30 days of finding any water wells, the Skyline Landfill will provide 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 are no known oil or gas wells located within the permit boundary of the Skyline Landfill. If oil or gas wells are located, the landfill will immediately provide written notification to the TCEQ's executive director of their location. For crude oil or natural gas wells, or other wells associated with mineral recovery, the landfill will provide the executive director of the TCEQ 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. A copy of the well plugging report to be submitted to the appropriate state agency will also be submitted to the executive director of the TCEQ 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 the waste will be accomplished by a landfill compactor weighing in excess of 40,000 pounds. A 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 the TCEQ.

8.18 Landfill Cover

8.18.1 Soil Management

Soil for use as daily cover, intermediate cover, final cover, and other uses will be available onsite. 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 day's 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

Daily cover of waste is necessary to control disease vectors, windblown waste, odors, fires, scavenging, and to promote runoff from the fill area. Once within each 24-hour period that the facility receives waste, or more frequently if needed, 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 alternative daily cover is not used. Refer to Section 8.18.4 for authorized alternative daily cover materials and placement procedures.

To ensure that the daily cover soil will be adequate 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 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 8.18.8.
- 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.
- Alternative Daily Cover (ADC) may be used as daily cover in accordance with the Alternative Daily Cover Operating Plan (ADCOP) in Appendix IVE.

Areas with 6 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 Intermediate Cover

All areas that receive waste and then become inactive for longer than 180 days will be covered with an additional 6 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. The additional 6 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.

8.18.4 Alternative Daily Cover

The Skyline Landfill is authorized to use alternative daily cover (ADC) in accordance with §330.165(d). The ADC is limited to a 24-hour period after which either waste or 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 IVE. The Skyline Landfill may request a temporary authorization to use additional types of alternative daily cover material in accordance with §305.62(k)(1)(A).

8.18.5 Temporary Waiver

The Skyline 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).

8.18.6 Final Cover

Final cover placement over individual areas will be in accordance with Part III, Attachment H 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 8.26 of this SOP for a site inspection and maintenance schedule.

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.
- 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 final cover certification report will be maintained in the site operating record, and the cover inspection record as described in Section 8.18.8 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.

8.18.7 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 4 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 8.18.8. Refer to Section 8.26 for a site inspection and maintenance schedule. Postclosure care inspection and repair procedures of the final cover are outlined in Part III, Attachment I.

8.18.8 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, and intermediate cover, the record will specify the date cover was accomplished, area covered, how it was placed, and when it was completed. For final cover, the record will show the final cover area completed, and the date the cover was approved. 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 8.18.7 and §330.165(g), including findings and corrective action taken.

8.19 Ponded Water

- The landfill will place daily cover, intermediate cover, and final cover in accordance with requirements established in Section 8.18.
- The landfill will inspect the surface of areas that have received waste and landfill cover weekly consistent with 8.18 and Section 8.26.
- Site grading and maintenance as required by Section 8.18 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 8.18.
- 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.
- 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 Disposal of Special Wastes

Special wastes, as defined in §330.3, may be accepted for disposal at the facility in accordance with §330.171(b) and (c). Special wastes shall be accepted at the site in accordance with Appendix IVB. The special wastes that will be accepted at the site and handling procedures are discussed in Appendix IVB.

8.21 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 2 and Class 3 industrial solid wastes will be accepted for disposal consistent with the procedures outlined in Appendix IVB, provided disposal of these wastes does not interfere with proper operation of the facility.

Class 1 industrial solid waste will not be accepted, except Regulated Asbestos Containing Material (RACM) that has been designated Class 1 industrial solid waste only due to its asbestos content. RACM will be accepted for disposal. Refer to Appendix IVC for handling practices of RACM during disposal operations. Refer to Section 5, Section 8.2, and Appendix IVB for waste screening procedures.

8.22 Visual Screening of Deposited Waste

The Skyline Landfill has constructed screening berms along the south and west sides of the site to provide visual screening of the waste disposal activities. Natural screening is provided by Ten Mile Creek along the northern permit boundary. The Southern Pacific Railroad provides screening from Interstate Highway 45 east of the permit boundary. Existing topography and vegetation provide natural screening of deposited waste.

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.

8.23 Leachate and Gas Condensate Recirculation

The Skyline Landfill may recirculate leachate and landfill gas condensate in accordance with Part III, Attachment D6.

8.24 Contaminated Water Discharge

The Skyline 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.

8.25 Storage and Processing Unit Operations

8.25.1 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 of at the 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.

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.

8.25.2 Reusable Materials Staging Area

Inert materials such as brick, concrete, etc., and non-inert materials such as reclaimed asphalt pavement and shingles, are often received and staged at the facility for use as roadbase materials for facility access roads and staging areas or erosion control in drainage structures. Shingles will not be used for facility access roads. Reclaimed asphalt pavement and shingles will not be used in any drainage feature for erosion control. The reusable materials staging area 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 and concrete materials are inert, their storage will not create a public health hazard or nuisance and runoff from rainfall will not be controlled in a special manner for these materials. Since asphalt 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 items collected will be received, managed, and stored in accordance with 30 TAC Chapter 328 – Waste Minimization and Recycling and §330.209(b). The reusable materials staging area is located within the landfill footprint as noted on Part III, Attachment B, Appendix B1.

8.25.3 Citizen's Convenience Area

A citizen's convenience area for waste drop-off is shown in Part III, Attachment B, Appendix B1. 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 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. The items collected will be received, managed, and stored in accordance with 30 TAC Chapter 328 – Waste Minimization and Recycling and §330.209(b).

8.25.4 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). Existing storage tanks provide temporary leachate storage in the event that the direct connection to the POTW is not functional. The leachate storage facility is located near the maintenance facility, as shown in Part III, Attachment B, Appendix B1. The storage

facility consists of one 24,500-gallon storage tank and one 17,000-gallon storage tank. The calculations in Part III, Attachment D6, Appendix D demonstrate that the secondary containment area provides containment, with 6 inches of freeboard, for the leachate storage tanks and precipitation from the 25-year, 24-hour storm event.

8.25.5 Liquid Stabilization Facility

The facility may operate a portable metal solidification basin(s) placed within the landfill footprint in an existing lined cell as noted on Part III, Attachment B, Appendix B1. The facility may receive material requiring solidification. Trucks will discharge directly into the portable basin. Materials suitable for mixing will be materials acceptable for disposal including lime, fly ash, cement kiln dust, Portland cement, sawdust, dirt, or auto fluff. Any combination of these materials may be used for liquid stabilization. Mixing will be accomplished with a backhoe or other appropriate machinery. Each batch of stabilized material will be tested for free liquids in accordance with 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. Upon verification of the stabilized material passing the paint filter test, the mixture will be removed from the basin and deposited in the active face for landfilling on the day it is received and will not be stored within a portable metal solidification basin placed within an existing lined cell. The procedures for acceptance, processing, odor control, and stabilizing liquid wastes accepted at the facility are included in Part IV, Appendix IVE.

8.26 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 2 miles from the site entrance for loose trash. Clean up as necessary.	Daily	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
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

8.26 Site Inspection and Maintenance Schedule (Continued)

ITEM	TASK	Frequency	Inspector	Type of Inspection
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

SKYLINE LANDFILL

**APPENDIX IVA
EXAMPLE LOAD INSPECTION REPORT**

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: _____

Driver Signature

Load Inspector Signature

**WASTE MANAGEMENT SKYLINE LANDFILL
DALLAS AND ELLIS COUNTIES, TEXAS
PERMIT AMENDMENT APPLICATION NO. MSW 42E**

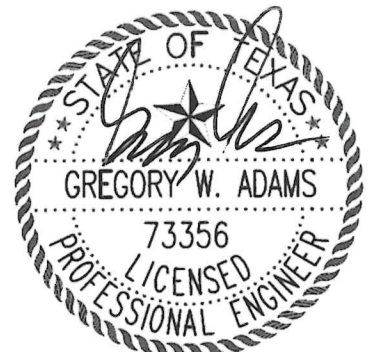
PART IV – SITE OPERATING PLAN

**APPENDIX IVB
SPECIAL WASTE ACCEPTANCE PLAN**

Prepared for



March 2026



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

3/31/2026

Prepared by

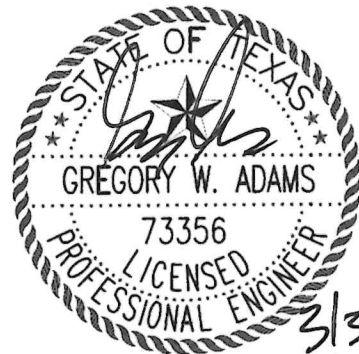


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TEXAS BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
FIRM REGISTRATION NO. F-256 AND NO. 10194895

TEXAS BOARD OF PROFESSIONAL GEOSCIENTISTS
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1 INTRODUCTION & PURPOSE

1.1 Objectives of Special Waste Acceptance Plan (SWAP)

This Special Waste Acceptance Plan (SWAP) outlines the process that will be used to review, evaluate, and determine acceptance of all Texas Commission on Environmental Quality (TCEQ) defined “special wastes” for the Skyline Landfill. 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 (and preventing the acceptance or disposal of unacceptable wastes) pursuant to facility permit conditions, applicable regulations, and operating capabilities to ensure safe and environmentally sound management of the waste. 30 TAC §330.3(155) defines a special waste as “any solid waste or combination of solid wastes that because of its quantity, concentration, physical, or chemical characteristics or biological properties require special handling and disposal to protect human health or the environment.” Although this rule goes on to identify specific waste streams as special wastes, the broad “catch-all” provision of the definition also applies, and covers many other wastes that are routinely disposed of at Municipal Solid Waste Landfill Facilities (MSWLFs).

1.2 Facility-Specific Waste Acceptance (and Prohibitions)

It is important to note that this SWAP provides the “how to” of the process that will be used to review, evaluate, and determine acceptance of special wastes. This SWAP does not establish the “what” regarding which particular waste streams will or will not be accepted, as those are established elsewhere in the permit. The facility-specific waste streams that will be accepted, as well as the prohibited wastes that shall not be accepted, and any associated limiting parameters, are set forth as follows:

The major classifications of solid waste to be accepted at the Skyline Landfill include municipal solid waste, construction demolition debris, regulated asbestos containing material (RACM) and non-regulated asbestos containing material (non-RACM), petroleum contaminated soils, special waste in accordance with §330.171, and Class 2 and 3 industrial wastes in accordance with §330.173.

Consistent with §330.15, the facility will not accept for disposal lead acid storage batteries; used motor vehicle oil; used oil filters; whole used or scrap tires; refrigerators, freezers, air conditioners or other items containing chlorinated fluorocarbon (CFC); bulk or noncontainerized liquid waste from nonhousehold sources; regulated hazardous waste; polychlorinated biphenyls (PCB) waste; radioactive materials; or other wastes prohibited by TCEQ regulations.

Hazardous waste will not be accepted (except hazardous wastes from conditionally exempt small quantity generators). Waste classified as Class 1 nonhazardous industrial waste only because of asbestos content will be accepted for disposal at this facility;

petroleum contaminated soil that is classified as Class 1 nonhazardous industrial waste only due to its total petroleum hydrocarbon concentration will be accepted for processing; and Class 1 nonhazardous industrial waste (Class 1 waste) as defined in 30 TAC 330.3 (21) will not be accepted for disposal.

Table 1 provides a description of the waste specific special waste management procedures for the special waste categories specifically identified in 30 TAC §330.3(155) Paragraphs (A) through (S); as well as for other special waste categories (e.g., types of special waste mentioned in §330.171; §330.173 and §330.15(e)).

1.3 Special Waste Approvals By Waste Type

Special Waste Approvals By Rule: The TCEQ rules specifically provide that the receipt of certain types of special waste does not require waste-specific or site-specific written approval of the TCEQ Executive Director if handled in accordance with the noted provisions for each waste (e.g., §330.171(c) and (d) and §330.173(c) and (i) - (j) of the rules). The special wastes enumerated in §330.171(c) and (d) and §330.173(c) and (i) - (j) will be accepted for disposal at the facility by operation of rule, without the necessity for any waste-specific or site-specific approvals. They will be managed at the facility in accordance with the techniques set forth in those rules and this SWAP (in particular, as noted in Table 1 of this SWAP). These waste types are identified in Table 1 of this SWAP. Specifically, the third column of the table (“Evaluation Method”) indicates whether each given special waste category requires prior written waste-specific or site-specific authorization before disposal, or not. Accordingly, this column in Table 1 also indicates whether the Special Waste Evaluation Program described in Section 2 is applicable to each listed special waste category.

Special Wastes Requiring Waste Specific/Site-Specific Authorization: 30 TAC §330.171(b)(1) provides that approvals for any other (non-enumerated) wastes must be waste-specific and/or site-specific in nature (i.e., not authorized by operation of rule); however, §330.171(b)(2) allows a generator to request approval to dispose of special waste directly from a landfill operator who has an approved waste acceptance plan that authorizes the acceptance of such waste on a site-specific basis. These waste types are identified in Table 1. As mentioned, the third column of the table (“Evaluation Method”) indicates which special waste categories trigger the required review process of the Special Waste Evaluation Program described in Section 2. Unless otherwise approved by the TCEQ Executive Director, only those non-enumerated special wastes that meet the facility’s waste acceptance criteria and have been evaluated will be accepted. These special wastes will be managed at the facility in accordance with the techniques set forth in those rules and this SWAP.

2 SPECIAL WASTE EVALUATION PROGRAM

2.1 Applicability of This Special Waste Evaluation Program

The Special Waste Evaluation Program obligations described in this section of the SWAP are not applicable to the acceptance of municipal solid waste or any materials authorized for disposal by operation of rule under 30 TAC §§330.171 and 330.173.

Instead, the Special Waste Evaluation Program described in this section is applicable to wastes for which waste-specific and/or site-specific written approval is required under 30 TAC §330.171(b). These waste-specific and/or site-specific approval requests will be made in accordance with the provisions of 30 TAC §330.171(b)(2) and using this SWAP. As mentioned, the third column of Table 1 of this SWAP indicates whether each given special waste category requires prior written waste-specific/site-specific authorization before disposal or not; and accordingly, whether Section 2 of the SWAP applies.

2.2 Overview of Special Waste Evaluation Program

In accordance with 30 TAC §330.127(5)(A), 30 TAC §330.171, and 30 TAC §335.504, Waste Management (WM) has developed a program, that is designed to take steps in addition to random inspections on incoming loads to prevent the receipt of hazardous waste, PCB waste, and other prohibited 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, PCB waste, and other prohibited waste screening mechanism that minimizes the potential of these waste streams entering the landfill.

The program specifically provides for pre-acceptance procedures, prior to acceptance of an applicable special waste to the facility. This will help 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. This process is implemented in two ways: (1) review of waste streams prior to acceptance, and (2) monitoring under qualified site personnel supervision of waste arriving at the gate and/or being disposed of at the working face. Specific procedures are also established for acceptance and handling of special wastes as defined by the TCEQ. Details of this program are presented below in the remainder of this section.

2.3 Hazardous Waste Determination and Class 1 Waste Determination

A Hazardous Waste Determination pursuant to 30 TAC §335.504 will be performed for all special wastes offered for disposal at the landfill. A Class 1 waste determination pursuant to 30 TAC §335.505 will also be performed for all special wastes offered for disposal at the landfill. Records of determination will be maintained in the site operating record either electronically and/or in hardcopy format as discussed in Section 5, and will be made available for review at the request of the TCEQ.

2.4 Digital Profiling

The primary procedures in place at WM for special waste evaluation and acceptance are electronic in nature. Profiles are submitted and processed electronically utilizing the WM electronic customer portal. First, the generator contacts WM and completes an online profile through proprietary software. Electronic forms are completed by the generator, including information to properly describe and profile the waste. The Profile documentation, which may include process knowledge, safety data sheets (SDSs), and/or analytical data are then maintained in the Control Panel digitally, which is accessible by the WM Approvals group and the specific WM disposal facility. This profile information may include a description of the chemical composition as well as any handling procedures that need to be communicated to landfill personnel. The Gatehouse personnel view generator information on-line to compare the profile with shipping documents at the time of arrival to ensure consistency. Information retained including waste profiles will be maintained in the site operating record either electronically and/or in hardcopy format as discussed in Section 5, and will be made available for review at the request of the TCEQ.

2.5 Waste Acceptance Process

Prior to acceptance of any industrial waste for disposal, information provided by the generator is screened to determine if any wastes proposed for disposal meet the definition of "Special Waste." Should any waste be identified as a special waste the customer is required to state the characteristics and origin of the special waste proposed for disposal, if not already provided. In addition, if the waste is not readily identifiable, the generator will be required to provide other pertinent information regarding the waste that might aid in its identification. The following process is completed before waste is accepted:

- a) The generator provides documentation of the nature of the waste stream to the landfill via the Generator's Waste Profile (GWP), which may be electronic or hardcopy in form or other similar documentation (an example Generator Waste Profile Form that may be used is provided in Appendix IVB-B). The customer may be required to provide laboratory analyses data for the waste stream intended for disposal. If the generator is an industrial facility that is required to have specific waste codes assigned, whether self-assigned, TCEQ-assigned, or EPA-assigned, documentation used to assign the waste classifications must be

provided for review. Dependent on the waste stream, sufficient documentation may be available in the GWP.

- b) The Waste Approval Manager (WAM) or designee will review the electronic or hardcopy GWP and all information provided by the generator. This process may include an electronic review of certain standardized (express) profiles. The WAM or designee implements the Special Waste Acceptance Plan including the review and approval for the acceptance of special waste.

Pre-acceptance review will ensure that the analytical information when applicable 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 is deemed eligible, an approval is granted, an expiration date is assigned, and all information is routed to the designated customer service representative. The customer will be informed of all conditions/limitations that apply to managing the special waste. The customer must comply with all conditions/limitations specified by the WAM.

3 QUALITY ASSURANCE/QUALITY CONTROL – ANALYTICAL INFORMATION

The laboratory analyses that will be required for review are dependent upon the type of waste stream to be disposed. Analytical data used to make a determination regarding a waste will use an EPA or TCEQ approved methodology and laboratory. Proper analytical results or equivalent information (i.e., 40 CFR §262.11 allows generator's knowledge of the waste and process generating the waste) must be obtained to ensure that the facility is not managing hazardous waste or other prohibited wastes. The generator is responsible for ensuring that a sample is representative of the waste stream and is analyzed in accordance with the appropriate methodology and laboratory prior to submitting the data for review to WM.

Information about a waste and the process which generates that waste will be used to evaluate or assist in the evaluation of a special waste. Examples of such information include, but are not limited to, material SDSs, 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 facility for disposal will receive a visual QA/QC inspection to verify the contents and nature of waste. This inspection will take place either at the Gatehouse or at the working face while the waste is being unloaded by personnel trained in prohibited waste identification. Should visual inspection detect unusual characteristics, additional QA/QC will be performed or the load will be rejected.

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 direct disposal. If the waste contains free liquids or is otherwise not certified as passing the Paint Filter Test, it will be accepted for on-site solidification/processing only if the waste is an approved waste stream and in accordance with the approved operational procedures (see Section 8.2.2 of this SWAP). [Note that an exception to this, per 30 TAC §330.15(e), are special wastes that are nonhazardous containerized liquids 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. Refer to Table 1 for the acceptance, handling, and disposal criteria for this category of special waste.]

4 WASTE APPROVAL UPDATES

The GWP for special wastes will be assigned an expiration date not to exceed three years unless otherwise required or approved by the TCEQ. WM 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 or if the generator submits additional information after a process change. If there is no change in process or additional information, the reevaluation may consist of an electronic review only. Updated analytical data may be requested but may not be required for the renewal if the generator certifies that there has not been a change in process.

5 DOCUMENTATION AND RECORDKEEPING

Shipping documentation for profiled wastes that arrive for management at WM landfills is provided to the facility upon arrival. Waste specific information included in the GWP, including any special handling or other requirements is also made available to the facility, hard copy and/or electronically. 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, as outlined in Section 6. All necessary and required paperwork relating to the acceptance of special waste will be maintained in the site operating record either electronically and/or in hardcopy format, and will be furnished upon request to the TCEQ Executive Director and must be made available for inspection/review by the TCEQ Executive Director. Refer to Appendix IVBB for an example of a GWP. As the result of potential future internal WM revisions, the format and/or information contained in the GWP may change.

6 WASTE DISCREPANCIES AND REJECTED LOADS

Gatehouse personnel screen all industrial generators to ensure that all special waste represented by the GWP has been identified and that all required paperwork, approvals, and documentation are in place. If any 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.

In the event that the description or physical characteristics of a waste being received at the facility differs from that of an approved waste stream or if previously unidentified waste is suspected, the load will be stopped and the generator/customer will be asked to provide additional process knowledge and/or chemical analysis data in order to determine the proper identity of the waste. That information will be reviewed and approved by the facility, the WAM, or their designee for acceptance or rejection, depending on the nature of the discrepancy (e.g. administrative versus waste composition issues). Copies of the discrepancy resolution, including updated or missing documentation, will be maintained by the site in accordance with Section 5.

Should an incident occur where hazardous waste, PCB wastes, radioactive or other prohibited wastes are suspected or discovered, the waste will not be authorized for disposal but will instead be rejected or 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 or radioactive 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.

7 TRAINING OF PERSONNEL AND WASTE SCREENING

In addition to the implementation of this SWAP, 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. WM 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, PCB wastes or other prohibited waste, and the requirements and procedures of this SWAP. 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 GWP 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 an industrial 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 can 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, non-household 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, they will be contacted to determine the identity of the material. If the material is determined to be a non-acceptable 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 or contain regulated levels of PCB or radioactive 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.

8 OPERATIONAL PROCEDURES

8.1 Arrival Acceptance Procedures

Special waste delivered to the landfill for disposal will be checked against the 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 records. Wastes requiring special handling are diverted to the appropriate special management area.

8.2 Special Waste Handling Procedures

8.2.1 General

Special wastes approved for receipt at this facility and accepted in accordance with the procedures will be managed in accordance with the handling and disposal criteria provisions applicable to that waste as presented in the last column of Table 1. In general, special wastes will be handled and disposed of at the site in a similar manner as municipal solid waste. The special waste will be off-loaded from transport trucks and disposed of at the appropriate unloading area/working face identified in the Site Operating Plan (SOP) based on how the waste is classified (e.g., MSW working face, regulated asbestos-containing material (RACM) disposal area, bioremediation treatment pad). The special waste will then be placed and spread using standard landfill equipment listed in the SOP. Specific handling/disposal procedures for certain wastes will be in accordance with the TCEQ regulations governing their proper disposal and as described further in Table 1 of this SWAP. For emphasis, the subsections below identify wastes of a certain type or composition that require specific handling and disposal procedures.

8.2.2 On-Site Liquid Waste Processing

The facility is authorized to perform on-site liquid waste processing. Liquid wastes will be directed to the on-site solidification facility prior to being disposed of in the landfill. Liquid waste will be processed in accordance with the procedures and requirements included in Part IV, section 8.25.7 Liquid Stabilization Facility, and Appendix IVE – Liquid Stabilization Plan.

8.2.3 Class 1 Waste

The facility is not authorized to accept Class 1 waste.

8.2.4 Odorous Wastes and Potentially Dusty/Windblown Wastes

Wastes with strong odors (such as dead animals, slaughterhouse wastes, sewage sludges, etc.), will be covered immediately upon disposal. These wastes may be placed in a select area of the working face to facilitate covering them immediately. See Table 1 of this SWAP for specific cover requirements that apply to dead animals and slaughterhouse wastes.

Potentially dusty (or otherwise prone to becoming windblown/airborne) special wastes will be transported and unloaded so as to minimize the potential for airborne particles. This includes positioning windbreaks at the working face, placing the dusty/windblown-prone special waste in contingency trenches or requiring the generator to containerize the waste. If needed, personnel may be required to wear personal protective equipment (PPE).

8.2.5 Asbestos Waste (RACM)

RACM will be managed, handled, and disposed of at the facility in accordance with the provisions and requirements of Part IV, Appendix IVC – Regulated Asbestos-Containing Material Plan.

9 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 will 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 of with the collected material.

**APPENDIX IVBA
TABLE 1
WASTE SPECIFIC SPECIAL WASTE MANAGEMENT
PROCEDURES**

TABLE 1 - WASTE SPECIFIC SPECIAL WASTE MANAGEMENT PROCEDURES

Special Waste Category	Authorized for Acceptance at This Facility? [YES/NO]¹	Evaluation Method²	Acceptance Determination Process³, ⁵	Handling and Disposal Criteria⁴
<p>Special wastes specifically listed in 30 TAC §330.3(155):</p> <p>Hazardous waste from conditionally exempt small-quantity generators (CESQG) that may be exempt from full controls under 30 TAC Chapter 335, Subchapter N (relating to household materials which could be classified as hazardous waste)</p>	<p>YES</p>	<p>This waste does not require prior written waste-specific or site-specific authorization before disposal, provided that it is handled in accordance with the noted provisions specified in this table for this waste, and the facility is permitted to accept these wastes. Therefore, receipt of this waste does not require the review detailed in the Special Waste Evaluation Program (Section 2) of this SWAP.</p>	<p>There are no specific acceptance criteria for municipal hazardous waste from CESQG except for the liquid waste criteria [see Note 5] and provided the amount of waste does not exceed 220 lb (100 kg) per month per generator, and provided the facility authorizes acceptance of the waste.</p>	<p>These wastes arriving at the gate and containing free liquids will be directed to the on-site liquid waste solidification/treatment area for processing OR will be rejected.</p> <p>These wastes containing no free liquids will be disposed of at the working face of the landfill.</p>

TABLE 1 - WASTE SPECIFIC SPECIAL WASTE MANAGEMENT PROCEDURES

Special Waste Category	Authorized for Acceptance at This Facility? [YES/NO] ¹	Evaluation Method ²	Acceptance Determination Process ^{3, 5}	Handling and Disposal Criteria ⁴
Class 1 non-hazardous industrial waste (Class 1 Waste)	NO	Not Applicable (N/A) – Facility not authorized to accept Class 1 waste.	N/A – Facility not authorized to accept Class 1 waste.	N/A – Facility not authorized to accept Class 1 waste.
Untreated medical waste	Only if approved by the TCEQ Executive Director when necessary to protect human health and the environment from the effects of a natural or man-made disaster.	Receipt of this waste, if authorized for approval by the TCEQ Executive Director, requires the review detailed in the Special Waste Evaluation Program (Section 2) of this SWAP.	Acceptance will require, at a minimum, a completed waste profile sheet. Additional documentation (MSDS, analytical, etc.) may be required as determined by the Waste Approval Manager or designee. If this waste contains free liquids, see Note 5 for further requirements.	Handling and disposal of this waste is by special circumstances only and must be authorized in advance by the TCEQ Executive Director. Once approved, management will be in accordance with the conditions included in the TCEQ authorization and in accordance with all applicable federal, state, and local regulations.

TABLE 1 - WASTE SPECIFIC SPECIAL WASTE MANAGEMENT PROCEDURES

Special Waste Category	Authorized for Acceptance at This Facility? [YES/NO]¹	Evaluation Method²	Acceptance Determination Process³, ⁵	Handling and Disposal Criteria⁴
Municipal wastewater treatment plant sludges, other types of domestic sewage treatment plant sludges, and water-supply treatment plant sludges	YES	This waste does not require prior written waste-specific or site-specific authorization before disposal, provided that it is handled in accordance with the noted provisions specified in this table for these wastes and that the facility is permitted to accept these wastes. Therefore, receipt of this waste does not require the review detailed in the Special Waste Evaluation Program (Section 2) of this SWAP.	Sludges or liquid wastes from municipal sources must be tested in accordance with Test Method 9095B (Paint Filter Liquids Test) and certified to contain no free liquids for direct disposal at the landfill working face. If the waste contains free liquids, see Note 5 for further requirements.	These wastes arriving at the gate and containing free liquids will be directed to the on-site liquid waste solidification/treatment area for processing OR will be rejected. These wastes containing no free liquids will be disposed of at the working face of the landfill. These wastes may pose a greater potential for objectionable odor. Odorous wastes of this type will be covered immediately upon disposal. Refer to Part IV, Section 8.10 – Odor Management Plan for further details.
Septic tank pumpings	YES	This waste does not require prior written waste-specific or site-specific authorization before disposal, provided that it is handled in accordance with the noted provisions specified in this table for this waste and that the facility is permitted to accept these wastes. Therefore, receipt of this waste does not require the review detailed in the Special Waste Evaluation Program (Section 2) of this SWAP.	Septic tank pumpings from municipal sources must be tested in accordance with Test Method 9095B (Paint Filter Liquids Test) and certified to contain no free liquids for direct disposal at the landfill working face. If the waste contains free liquids, see Note 5 for further requirements.	These wastes arriving at the gate and containing free liquids will be directed to the on-site liquid waste solidification/treatment area for processing OR will be rejected. These wastes containing no free liquids will be disposed of at the working face of the landfill. These wastes may pose a greater potential for objectionable odor. Odorous wastes of this type will be covered immediately upon disposal. Refer to Part IV, Section 8.10 – Odor Management Plan for further details.

TABLE 1 - WASTE SPECIFIC SPECIAL WASTE MANAGEMENT PROCEDURES

Special Waste Category	Authorized for Acceptance at This Facility? [YES/NO]¹	Evaluation Method²	Acceptance Determination Process³, ⁵	Handling and Disposal Criteria⁴
Grease and grit trap wastes	YES	This waste does not require prior written waste-specific or site-specific authorization before disposal, provided that it is handled in accordance with the noted provisions specified in this table for this waste and that the facility is permitted to accept these wastes. Therefore, receipt of this waste does not require the review detailed in the Special Waste Evaluation Program (Section 2) of this SWAP.	Grease trap waste, grit trap waste, or liquid wastes from municipal sources must have been treated or processed and the treated/processed material must be tested in accordance with Test Method 9095B (Paint Filter Liquids Test) and certified to contain no free liquids for direct disposal at the landfill working face. If the waste contains free liquids, see Note 5 for further requirements.	<p>These wastes arriving at the gate and containing free liquids will be directed to the on-site liquid waste solidification/treatment area for processing OR will be rejected.</p> <p>These wastes containing no free liquids will be disposed of at the working face of the landfill. These wastes may pose a greater potential for objectionable odor. Odorous wastes of this type will be covered immediately upon disposal. Refer to Part IV, Section 8.10 – Odor Management Plan for further details.</p>
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)	YES	Receipt of this waste requires the review detailed in the Special Waste Evaluation Program (Section 2) of this SWAP.	<p>Acceptance will require, at a minimum, a completed waste profile sheet. Additional documentation (MSDS, analytical, etc.) may be required as determined by the Waste Approval Manager or designee.</p> <p>If this waste contains free liquids, see Note 5 for further requirements.</p> <p>If it is determined that this waste classifies as a Class 1 waste, it may only be accepted if the facility is approved to accept Class 1 waste.</p>	<p>These wastes arriving at the gate and containing free liquids will be directed to the on-site liquid waste solidification/treatment area for processing OR will be rejected.</p> <p>These wastes containing no free liquids will be disposed of at the appropriate working face of the landfill (i.e., the approved Class 1 cell if the waste classifies as Class 1 waste and the facility is approved to accept Class 1 waste, or the MSW working face otherwise).</p>

TABLE 1 - WASTE SPECIFIC SPECIAL WASTE MANAGEMENT PROCEDURES

Special Waste Category	Authorized for Acceptance at This Facility? [YES/NO] ¹	Evaluation Method ²	Acceptance Determination Process ^{3, 5}	Handling and Disposal Criteria ⁴
Slaughterhouse wastes	YES	This waste does not require prior written waste-specific or site-specific authorization before disposal, provided that it is handled in accordance with the noted provisions specified in this table for this waste and that the facility is permitted to accept these wastes. Therefore, receipt of this waste does not require the review detailed in the Special Waste Evaluation Program (Section 2) of this SWAP.	There are no specific acceptance criteria for this waste that meets the requirements for disposal, except for the liquid waste criteria [see Note 5].	<p>Slaughterhouse waste containing no free liquids will be covered by 3 feet of other solid waste or at least 2 feet of earthen material immediately upon receipt at the working face. Refer to Part IV, Section 8.10 – Odor Management Plan for further details.</p> <p>Slaughterhouse waste arriving at the gate and containing free liquids will be directed to the on-site liquid waste solidification/treatment area for processing OR will be rejected.</p>
Dead animals	YES	This waste does not require prior written waste-specific or site-specific authorization before disposal, provided that it is handled in accordance with the noted provisions specified in this table for this waste and that the facility is permitted to accept these wastes. Therefore, receipt of this waste does not require the review detailed in the Special Waste Evaluation Program (Section 2) of this SWAP.	There are no specific acceptance criteria for this waste that meets the definition requirements for disposal.	Dead animals, other than single household pets and other single small animals, will be covered by 3 feet of other solid waste or at least 2 feet of earthen material immediately upon receipt at the working face. Refer to Part IV, Section 8.10 – Odor Management Plan for further details.

TABLE 1 - WASTE SPECIFIC SPECIAL WASTE MANAGEMENT PROCEDURES

Special Waste Category	Authorized for Acceptance at This Facility? [YES/NO] ¹	Evaluation Method ²	Acceptance Determination Process ^{3, 5}	Handling and Disposal Criteria ⁴
<p>Drugs, contaminated foods, or contaminated beverages (other than those contained in normal household waste)</p> <p>[Note – For contaminated food/beverage special waste that is in the form of a small/non-storage container holding liquid waste, see the table entry for “Nonhazardous containerized liquids 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”]</p>	<p>YES</p>	<p>Receipt of this waste requires review and approval as detailed in the Special Waste Evaluation Program (Section 2) of this SWAP.</p>	<p>Acceptance will require, at a minimum, a completed waste profile sheet. Additional documentation (MSDS, analytical, etc.) may be required as determined by the Waste Approval Manager or designee.</p> <p>If this waste contains free liquids, see Note 5 for further requirements.</p> <p>If it is determined that this waste classifies as a Class 1 waste, it may only be accepted if the facility is approved to accept Class 1 waste.</p>	<p>These wastes arriving at the gate and containing free liquids will be directed to the on-site liquid waste solidification/treatment area for processing OR will be rejected.</p> <p>These wastes containing no free liquids will be disposed of at the appropriate working face of the landfill (i.e., the approved Class 1 cell if the waste classifies as Class 1 waste and the facility is approved to accept Class 1 waste, or the MSW working face otherwise).</p> <p>At the discretion of the Site Manager or designee, a minimum of 1 foot of other municipal solid waste or 6 inches of dirt may be placed on the waste immediately upon disposal and/or additional precautionary measures may be taken to prevent scavenging and salvaging of these types of waste.</p> <p>For controlled substances (Schedule I through Schedule V as identified in 12 CFR §1308.11-1308.15) approved for acceptance, the U.S. Drug Enforcement Agency must be contacted for approval and for specific destruction, disposal, or other requirements.</p>

TABLE 1 - WASTE SPECIFIC SPECIAL WASTE MANAGEMENT PROCEDURES

Special Waste Category	Authorized for Acceptance at This Facility? [YES/NO] ¹	Evaluation Method ²	Acceptance Determination Process ^{3, 5}	Handling and Disposal Criteria ⁴
Pesticide (insecticides, herbicides, fungicides, or rodenticide) containers (i.e., empty containers that have been used for pesticides)	YES	<p>For containers that have been triple rinsed and rendered unusable, there is no required prior written waste-specific or site-specific authorization before disposal (provided that it is handled in accordance with the noted provisions specified in this table for this waste and that the facility is permitted to accept these wastes) nor does this waste require the review detailed in the Special Waste Evaluation Criteria (Section 3).</p> <p>For other containers that have been used for pesticides, receipt of this waste requires the review and approval as detailed in the Special Waste Evaluation Program (Section 2) of this SWAP.</p>	<p>Empty containers that have been triple rinsed prior to receipt at the site, and rendered unusable prior to or upon receipt at the site, may be accepted for disposal at the landfill.</p> <p>For those containers for which triple-rinsing is not feasible or practical (e.g., paper bags, cardboard containers), acceptance will require, at a minimum, a completed waste profile sheet. Additional documentation (MSDS, analytical, etc.) may be required as determined by the Waste Approval Manager or designee. Depending on the waste profile, those containers may be accepted for disposal under the provisions of 30 TAC §330.171(c)(6) [see CESQG entry in this table] or 30 TAC §330.173 [see Class 1, 2, or 3 nonhazardous industrial waste entries in this table], as applicable.</p> <p>If it is determined that this waste classifies as a Class 1 waste, it may only be accepted if the facility is approved to accept Class 1 waste.</p>	<p>These wastes arriving at the gate and containing free liquids will be directed to the on-site liquid waste solidification/treatment area for processing OR will be rejected.</p> <p>These wastes containing no free liquids will be disposed of at the appropriate working face of the landfill (i.e., the approved Class 1 cell if the waste classifies as Class 1 waste and the facility is approved to accept Class 1 waste, or the MSW working face otherwise).</p>

TABLE 1 - WASTE SPECIFIC SPECIAL WASTE MANAGEMENT PROCEDURES

Special Waste Category	Authorized for Acceptance at This Facility? [YES/NO]¹	Evaluation Method²	Acceptance Determination Process³, ⁵	Handling and Disposal Criteria⁴
Discarded materials containing asbestos: Regulated asbestos-containing material (RACM) as defined in 40 CFR §61	YES	This waste does not require prior written waste-specific or site-specific authorization before disposal, provided that it is handled in accordance with the noted provisions specified in this table for this waste and that the facility is permitted to accept these wastes. Therefore, receipt of this waste does not require the review detailed in the Special Waste Evaluation Program (Section 2) of this SWAP.	Acceptance will require, at a minimum, a completed waste profile sheet. Additional documentation (MSDS, analytical, etc.) may be required as determined by the Waste Approval Manager or designee.	Refer to Appendix IVC – Regulated Asbestos-Containing Material Plan for the handling and disposal requirements.
Discarded materials containing asbestos: Non-regulated asbestos-containing materials (non-RACM)	YES	This waste does not require prior written waste-specific or site-specific authorization before disposal, provided that it is handled in accordance with the noted provisions specified in this table for this waste and that the facility is permitted to accept these wastes. Therefore, receipt of this waste does not require the review detailed in the Special Waste Evaluation Program (Section 2) of this SWAP.	There are no specific acceptance criteria for this waste that meets the definition requirements for disposal.	Non-regulated asbestos-containing materials (non-RACM) will be disposed of at the working face of the landfill and covered in accordance with 30 TAC §330.171(c)(4). Under no circumstances may any material that contains non-RACM be placed on any surface or roadway that is subject to vehicular traffic or disposed by any means which the material could be crumbled into a friable state.

TABLE 1 - WASTE SPECIFIC SPECIAL WASTE MANAGEMENT PROCEDURES

Special Waste Category	Authorized for Acceptance at This Facility? [YES/NO]¹	Evaluation Method²	Acceptance Determination Process³, ⁵	Handling and Disposal Criteria⁴
Discarded materials containing asbestos: Asbestos containing material from industrial sources that is only Class 1 due only to its regulated asbestos content.	YES	Receipt of this waste requires review and approval as detailed in the Special Waste Evaluation Program (Section 2) of this SWAP.	Acceptance will require, at a minimum, a completed waste profile sheet. Additional documentation (MSDS, analytical, etc.) may be required as determined by the Waste Approval Manager or designee.	Handle and dispose in the same manner as RACM – see above table entry for RACM.
Incinerator ash	YES	Receipt of this waste requires review and approval as detailed in the Special Waste Evaluation Program (Section 2) of this SWAP.	Acceptance will require, at a minimum, a completed waste profile sheet. Additional documentation (MSDS, analytical, etc.) may be required as determined by the Waste Approval Manager or designee. If it is determined that this waste classifies as a Class 1 waste, it may only be accepted if the facility is approved to accept Class 1 waste.	Incinerator ash will be disposed of at the appropriate working face of the landfill (i.e., the approved Class 1 cell if the waste classifies as Class 1 waste and the facility is approved to accept Class 1 waste, or the MSW working face otherwise). The ash will be handled such that it does not become a public health nuisance, such as becoming airborne. Note that if a facility permit authorizes storage/processing of incinerator ash (e.g., associated with a solidification process), the incinerator ash may be stored and handled only in a manner that is in accordance with the approved provisions for said material.

TABLE 1 - WASTE SPECIFIC SPECIAL WASTE MANAGEMENT PROCEDURES

Special Waste Category	Authorized for Acceptance at This Facility? [YES/NO] ¹	Evaluation Method ²	Acceptance Determination Process ^{3, 5}	Handling and Disposal Criteria ⁴
Soil contaminated by petroleum products, crude oils, or chemicals in concentrations 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 30 TAC §335.521(a)(1).	YES	This table entry refers to soil 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). Receipt of this waste requires review and approval as detailed in the Special Waste Evaluation Program (Section 2) of this SWAP.	Acceptance will require, at a minimum, a completed waste profile sheet. Additional documentation (MSDS, analytical, etc.) may be required as determined by the Waste Approval Manager or designee. If this waste contains free liquids, see Note 5 for further requirements. If it is determined that this waste exceeds the concentrations listed in the first column, the waste will be classified as a Class 1 waste and may only be accepted if the facility is approved to accept Class 1 waste.	These petroleum contaminated soils exceeding the concentrations listed in the first column may only be accepted if the facility is approved to accept Class 1 waste. Petroleum contaminated soil that is classified as Class 1 nonhazardous industrial waste only due to its total petroleum hydrocarbon concentration will be accepted for processing. Refer to Appendix IVD - Bioremediation Treatment Plan.
Used oil [Note – see also the related item in this table for used oil filters from internal combustion engines]	<u>NO</u>	<u>Used oil is prohibited from disposal at MSW landfills</u>	<u>Prohibited</u>	<u>Prohibited</u>

TABLE 1 - WASTE SPECIFIC SPECIAL WASTE MANAGEMENT PROCEDURES

Special Waste Category	Authorized for Acceptance at This Facility? [YES/NO] ¹	Evaluation Method ²	Acceptance Determination Process ^{3, 5}	Handling and Disposal Criteria ⁴
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 the facility	YES	Receipt of this waste requires the review detailed in the Special Waste Evaluation Program (Section 2) of this SWAP.	<p>Waste not exempted under 40 CFR §261.4(b)(5) will require at a minimum, a completed waste profile sheet. Additional documentation (MSDS, analytical, etc.) may be required as determined by the Waste Approval Manager or designee.</p> <p>Waste exempted under 40 CFR §261.4(b)(5) will require a completed waste profile.</p> <p>If it is determined that this waste exhibits the characteristics of Class 1 waste, it may only be accepted if the facility is approved to accept Class 1 waste.</p>	<p>These wastes arriving at the gate and containing free liquids will be directed to the on-site liquid waste solidification/treatment area or other approved processing area for processing OR will be rejected.</p> <p>These wastes containing no free liquids will be disposed of at the appropriate working face of the landfill (i.e., the approved Class 1 cell if the material exhibits the characteristics of Class 1 waste and the facility is approved to accept Class 1 waste, or the MSW working face otherwise).</p>

TABLE 1 - WASTE SPECIFIC SPECIAL WASTE MANAGEMENT PROCEDURES

Special Waste Category	Authorized for Acceptance at This Facility? [YES/NO] ¹	Evaluation Method ²	Acceptance Determination Process ^{3, 5}	Handling and Disposal Criteria ⁴
Waste generated outside the boundaries of Texas that contains any industrial waste; waste associated with oil, gas, and geothermal exploration, production, or development activities; or any item listed in the definition of a special waste in 30 TAC §330.3(148)	YES	Receipt of this waste requires the review detailed in the Special Waste Evaluation Program (Section 2) of this SWAP.	<p>Waste generated outside the state boundaries of Texas 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.</p> <p>Acceptance will require, at a minimum, a completed waste profile sheet. Additional documentation (MSDS, analytical, etc.) may be required as determined by the Waste Approval Manager or designee.</p> <p>Out-of-state industrial solid waste will be handled in accordance with §330.173 and §335.508(9). Out-of-state Class 2 and 3 industrial wastes shall require written authorization by the TCEQ. A copy of the approval must accompany the waste profile prior to initial approval.</p> <p>If it is determined that this waste is a Class 1 waste or exhibits the characteristics of a Class 1 waste, it may only be accepted if the facility is approved to accept Class 1 waste.</p>	<p>These wastes arriving at the gate and containing free liquids will be directed to the on-site liquid waste solidification/treatment area for processing OR will be rejected.</p> <p>These wastes containing no free liquids will be disposed of at the appropriate working face of the landfill (i.e., the approved Class 1 cell if the material classifies as Class 1 waste or exhibits Class 1 waste characteristics and the facility is approved to accept Class 1 waste, or the MSW working face otherwise).</p> <p>If the waste is of a type that has objectionable odors, the waste will be covered immediately upon disposal. Refer to Part IV, Section 8.10 – Odor Management Plan for further details.</p>
Lead acid storage batteries	<u>NO</u>	<u>Lead acid storage battery disposal is prohibited at MSW landfills by 30 TAC §330.15(e)</u>	<u>Prohibited</u>	<u>Prohibited</u>

TABLE 1 - WASTE SPECIFIC SPECIAL WASTE MANAGEMENT PROCEDURES

Special Waste Category	Authorized for Acceptance at This Facility? [YES/NO] ¹	Evaluation Method ²	Acceptance Determination Process ^{3, 5}	Handling and Disposal Criteria ⁴
Used-oil filters from internal combustion engines	Used oil filters from internal combustion engines must not be intentionally and knowingly accepted for disposal at MSW landfills except as provided by paragraphs (1) and (2) of 30 TAC §330.171(d) (as outlined in Column 4)	Receipt of this waste requires the review detailed in the Special Waste Evaluation Program (Section 2) of this SWAP.	<p>Evaluation of whether used oil filters may be accepted for disposal is as follows:</p> <ul style="list-style-type: none"> The filter must be crushed to less than 20% of its original volume to remove all free-flowing used oil; or processed by a method other than crushing to remove all free-flowing used oil. A filter is considered to have been processed if the filter has been separated into component parts and the free flowing used oil has been removed from the filter element by some means of compression in order to remove free-flowing used oil or the used filter element of a filter consisting of a replaceable filtration element in a reusable or permanent housing has been removed from the housing and pressed to remove free-flowing used oil or the housing is punctured and the filter is drained for at least 24 hours. Used oil filters (to include filters that have been crushed and/or processed to remove free-flowing used oil) must not be offered for landfill disposal by any non-household generator. 	Waste of this type that is determined to meet the acceptance criteria outlined herein will be disposed of at the working face of the landfill.

TABLE 1 - WASTE SPECIFIC SPECIAL WASTE MANAGEMENT PROCEDURES

Special Waste Category	Authorized for Acceptance at This Facility? [YES/NO]¹	Evaluation Method²	Acceptance Determination Process³, ⁵	Handling and Disposal Criteria⁴
<p><u>Other special waste categories that are types of special wastes identified in 30 TAC §330.171 and §330.173, or are categories of special wastes based on meeting the “catch-all” definition in 30 TAC §330.3(155) [See SWAP Section 1]:</u></p> <p>Class 2 and Class 3 non-hazardous industrial solid waste.</p>	<p>YES</p>	<p>These wastes do not require prior written waste-specific or site-specific authorization before disposal, provided that the facility is permitted to accept these wastes (and provided that it is handled in accordance with the noted provisions specified in this table for this waste and that that these wastes does not interfere with facility operations).</p> <p>Receipt of these wastes will typically include the review detailed in the Special Waste Evaluation Program (Section 2) of this SWAP.</p>	<p>Acceptance will require, at a minimum, a completed waste profile sheet. Additional documentation (MSDS, analytical, etc.) may be required as determined by the Waste Approval Manager or designee. If the waste contains free liquids, see Note 5 for further requirements.</p>	<p>These wastes arriving at the gate and containing free liquids will be directed to the on-site liquid waste solidification/treatment area for processing OR will be rejected.</p> <p>These wastes containing no free liquids will be disposed of at the working face of the landfill.</p>

TABLE 1 - WASTE SPECIFIC SPECIAL WASTE MANAGEMENT PROCEDURES

Special Waste Category	Authorized for Acceptance at This Facility? [YES/NO] ¹	Evaluation Method ²	Acceptance Determination Process ^{3, 5}	Handling and Disposal Criteria ⁴
<p>Nonhazardous containerized liquids 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</p>	<p>YES</p>	<p>Receipt of this waste requires the review detailed in the Special Waste Evaluation Program (Section 2) of this SWAP.</p>	<p>Acceptance will require, at a minimum, a completed waste profile sheet. Additional documentation (MSDS, analytical, etc.) may be required as determined by the Waste Approval Manager or designee.</p> <p>If it is determined that this waste classifies as a Class 1 waste, it may only be accepted if the facility is approved to accept Class 1 waste.</p>	<p>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, or that is household waste may be disposed of at the appropriate working face of the landfill (i.e., the approved Class 1 cell if the material classifies as Class 1 waste and the facility is approved to accept Class 1 waste, or the MSW working face otherwise), provided the following takes place:</p> <p>The landfill cell in which this waste is to be disposed of shall have a minimum of 3 feet of waste in it prior to disposal of this waste.</p>
<p>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.</p>	<p>YES</p>	<p>Receipt of this waste requires the review detailed in the Special Waste Evaluation Program (Section 2) of this SWAP.</p>	<p>Acceptance will require, at a minimum, a completed waste profile sheet. Additional documentation (MSDS, analytical, etc.) may be required as determined by the Waste Approval Manager or designee. If the waste contains free liquids, see Note 5 for further requirements.</p> <p>If it is determined that this waste classifies as a Class 1 waste, it may only be accepted if the facility is approved to accept Class 1 waste.</p>	<p>These wastes arriving at the gate and containing free liquids will be directed to the on-site liquid waste solidification/treatment area for processing OR will be rejected.</p> <p>These wastes containing no free liquids will be disposed of at the appropriate working face of the landfill (i.e., the approved Class 1 cell if the waste classifies as Class 1 waste and the facility is approved to accept Class 1 waste, or the MSW working face otherwise).</p>

TABLE 1 - WASTE SPECIFIC SPECIAL WASTE MANAGEMENT PROCEDURES

Special Waste Category	Authorized for Acceptance at This Facility? [YES/NO] ¹	Evaluation Method ²	Acceptance Determination Process ^{3, 5}	Handling and Disposal Criteria ⁴
Nonhazardous abrasive wastes (e.g., blasting grit, steel shot, etc.).	YES	Receipt of this waste requires the review detailed in the Special Waste Evaluation Program (Section 2) of this SWAP.	Acceptance will require, at a minimum, a completed waste profile sheet. Additional documentation (MSDS, analytical, etc.) may be required as determined by the Waste Approval Manager or designee. If the waste contains free liquids, see Note 5 for further requirements. If it is determined that this waste classifies as a Class 1 waste, it may only be accepted if the facility is approved to accept Class 1 waste.	These wastes arriving at the gate and containing free liquids will be directed to the on-site liquid waste solidification/treatment area for processing OR will be rejected. These wastes containing no free liquids will be disposed of at the approved working face of the landfill (i.e., the approved Class 1 cell if the waste classifies as Class 1 waste and the facility is approved to accept Class 1 waste, or the MSW working face otherwise).
Nonhazardous demolition debris from non-household sources contaminated with lead based paint	YES	Receipt of this waste requires the review detailed in the Special Waste Evaluation Program (Section 2) of this SWAP.	Wastes from non-household sources containing lead-based paint will require, at a minimum, a completed waste profile sheet and analysis to determine that the concentration of lead meets the requirements of the Hazardous Waste/Class 1 Waste determination. Additional documentation (MSDS, etc.) may be required as determined by the Waste Approval Manager or designee. If it is determined that this waste classifies as a Class 1 waste, it may only be accepted if the facility is approved to accept Class 1 waste.	These wastes will be disposed of at the appropriate working face of the landfill (i.e., the approved Class 1 cell if the waste classifies as Class 1 waste and the facility is approved to accept Class 1 waste, or the MSW working face otherwise).

TABLE 1 - WASTE SPECIFIC SPECIAL WASTE MANAGEMENT PROCEDURES

Special Waste Category	Authorized for Acceptance at This Facility? [YES/NO] ¹	Evaluation Method ²	Acceptance Determination Process ^{3, 5}	Handling and Disposal Criteria ⁴
<p>Materials containing Polychlorinated biphenyls (PCBs) but that are not defined as PCB waste(s) under 30 TAC §330.3(111), nor that are regulated under 40 CFR §761</p>	<p>YES [Note: PCB wastes as defined in 30 TAC §330.3(111) or that are regulated under 40 CFR §761 are prohibited and will not be accepted]</p>	<p>Receipt of this waste requires the review detailed in the Special Waste Evaluation Program (Section 2) of this SWAP.</p>	<p>Acceptance will require, at a minimum, a completed waste profile sheet. Additional documentation (MSDS, analytical, etc.) may be required as determined by the Waste Approval Manager or designee. PCB wastes as defined in 30 TAC §330.3(111) or that are regulated under 40 CFR §761 are prohibited and will not be accepted.</p>	<p>These wastes will be disposed of at the working face of the landfill.</p>
<p>Treated medical waste that contains whole, non-encapsulated hypodermic needles or syringes (per 30 TAC §330.1219(e))</p>	<p>YES</p>	<p>This waste does not require prior written waste-specific or site-specific authorization before disposal, provided that it is handled in accordance with the noted provisions specified in this table for this waste and that the facility is permitted to accept these wastes. Therefore, receipt of this waste does not require the review detailed in the Special Waste Evaluation Program (Section 2) of this SWAP.</p>	<p>Note that in general, treated medical waste may be managed as routine municipal solid waste. However, treated medical waste that contains whole, non-encapsulated hypodermic needles or syringes or intact red bags that are sent to a landfill for disposal shall be accompanied by a shipping document that includes a statement that the shipment contains whole, non-encapsulated hypodermic needles or syringes or intact red bags, as applicable, and that the medical waste was treated.</p>	<p>These wastes will be disposed of at the working face of the landfill. Treated sharps will be disposed of in accordance with 30 TAC §330.1219(b)(4) (regarding packaging/container requirements).</p>

TABLE 1 - WASTE SPECIFIC SPECIAL WASTE MANAGEMENT PROCEDURES

Special Waste Category	Authorized for Acceptance at This Facility? [YES/NO] ¹	Evaluation Method ²	Acceptance Determination Process ^{3, 5}	Handling and Disposal Criteria ⁴
Wastes that contain or are contaminated by naturally occurring radioactive material (NORM) or other radioactive substances.	YES	Receipt of this waste requires the review detailed in the Special Waste Evaluation Program (Section 2) of this SWAP.	<p>Acceptance will require, at a minimum, a completed waste profile sheet. Additional documentation (MSDS, analytical, etc.) may be required as determined by the Waste Approval Manager or designee. If the waste contains free liquids, see Note 5 for further requirements.</p> <p>NORM containing wastes must be exempt from state licensing per 25 TAC §289.259, including being below the concentration limits set forth in 25 TAC §289.259(d). Other wastes with radioactive substances must be below the radionuclide concentration and annual activity limit requirements of 30 TAC §336.365 Appendix H.</p>	<p>These wastes arriving at the gate and containing free liquids will be directed to the on-site liquid waste solidification/treatment area for processing OR will be rejected.</p> <p>These wastes containing no free liquids will be disposed of at the working face of the landfill.</p>

Notes:

- 1 – *The facility may only accept special wastes that the landfill is permitted to accept or that has been given prior written waste-specific and/or site-specific authorization by the TCEQ Executive Director (and provided that the special waste is also evaluated in accordance with this SWAP and meets the criteria specified herein for evaluation, acceptance, and disposal).*
- 2 – *Describes the level of evaluation/evaluation method that will be used to determine acceptance requirements.*
- 3- *Describes the pre-acceptance process that will be used by the Waste Approval Manager (WAM) or designee to verify that the waste meets the required criteria prior to acceptance at the facility.*
- 4- *Describes the gate acceptance, handling, and disposal requirements for the special waste. Refer to Section 8.2 of the SWAP for additional operational requirements that apply to certain types/compositions of special wastes.*

TABLE 1 - WASTE SPECIFIC SPECIAL WASTE MANAGEMENT PROCEDURES

5 – *Note that sludges, grease trap waste, grit trap waste, liquid wastes, and other waste categories that are suspected of having free liquids [other than nonhazardous containerized liquids 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] must be tested in accordance with EPA Test Method 9095B (Paint Filter Liquids Test, Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods, EPA Publication No. SW-846) and certified to contain no free liquids for direct disposal at the appropriate landfill working face. If the waste contains free liquids or is otherwise not certified as passing the Paint Filter Test, it may be accepted for on-site solidification or further processing only if the facility is approved to take that type of liquid waste and conduct on-site processing prior to disposal OR will be rejected.*

**APPENDIX IVBB
EXAMPLE GENERATOR WASTE PROFILE (GWP) FORM**

Note: This appendix contains an example of a GWP Form used by WM. As the result of potential future internal WM revisions, the format and/or information contained in the GWP Form may change.



Requested Facility: _____ Unsure Profile Number: _____
 Multiple Generator Locations (Attach Locations) Request Certificate of Disposal Renewal? Original Profile Number: _____

A. GENERATOR INFORMATION (MATERIAL ORIGIN)

- 1. Generator Name: _____
- 2. Site Address: _____
(City, State, ZIP) _____
- 3. County: _____
- 4. Contact Name: _____
- 5. Email: _____
- 6. Phone: _____ 7. Fax: _____
- 8. Generator EPA ID: _____ N/A
- 9. State ID: _____ N/A

C. MATERIAL INFORMATION

- 1. Common Name: _____
Describe Process Generating Material: See Attached
- 2. Material Composition and Contaminants: See Attached

1.	
2.	
3.	
4.	

Total composition must be equal to or greater than 100% $\geq 100\%$
- 3. State Waste Codes: _____ N/A
- 4. Color: _____
- 5. Physical State at 70°F: Solid Liquid Other: _____
- 6. Free Liquid Range Percentage: _____ to _____ N/A
- 7. pH: _____ to _____ N/A
- 8. Strong Odor: Yes No Describe: _____
- 9. Flash Point: <140°F 140°-199°F $\geq 200^\circ$ N/A

E. ANALYTICAL AND OTHER REPRESENTATIVE INFORMATION

- 1. Analytical attached Yes
Please identify applicable samples and/or lab reports:
- 2. Other information attached (such as MSDS)? Yes

G. GENERATOR CERTIFICATION (PLEASE READ AND CERTIFY BY SIGNATURE)

By signing this EZ Profile™ form, I hereby certify that all information submitted in this and all attached documents contain true and accurate descriptions of this material, and that all relevant information necessary for proper material characterization and to identify known and suspected hazards has been provided. Any analytical data attached was derived from a sample that is representative as defined in 40 CFR 261 - Appendix 1 or by using an equivalent method. All changes occurring in the character of the material (i.e., changes in the process or new analytical) will be identified by the Generator and be disclosed to Waste Management prior to providing the material to Waste Management.

If I am an agent signing on behalf of the Generator, I have confirmed with the Generator that information contained in this Profile is accurate and complete.

Name (Print): _____ Date: _____
Title: _____
Company: _____

B. BILLING INFORMATION

SAME AS GENERATOR

- 1. Billing Name: _____
- 2. Billing Address: _____
(City, State, ZIP) _____
- 3. Contact Name: _____
- 4. Email: _____
- 5. Phone: _____ 6. Fax: _____
- 7. WM Hauled? Yes No
- 8. P.O. Number: _____
- 9. Payment Method: Credit Account Cash Credit Card

D. REGULATORY INFORMATION

- 1. EPA Hazardous Waste? Yes* No
Code: _____
- 2. State Hazardous Waste? Yes No
Code: _____
- 3. Is this material non-hazardous due to Treatment, Delisting, or an Exclusion? Yes* No
- 4. Contains Underlying Hazardous Constituents? Yes* No
- 5. From an industry regulated under Benzene NESHAP? Yes* No
- 6. Facility remediation subject to 40 CFR 63 GGGGG? Yes* No
- 7. CERCLA or State-mandated clean-up? Yes* No
- 8. NRC or State-regulated radioactive or NORM waste? Yes* No
***If Yes, see Addendum (page 2) for additional questions and space.**
- 9. Contains PCBs? → If Yes, answer a, b and c. Yes No
 - a. Regulated by 40 CFR 761? Yes No
 - b. Remediation under 40 CFR 761.61 (a)? Yes No
 - c. Were PCB imported into the US? Yes No
- 10. Regulated and/or Untreated Medical/Infectious Waste? Yes No
- 11. Contains Asbestos? Yes No
→ If Yes: Non-Friable Non-Friable - Regulated Friable

F. SHIPPING AND DOT INFORMATION

- 1. One-Time Event Repeat Event/Ongoing Business
- 2. Estimated Quantity/Unit of Measure: _____
 Tons Yards Drums Gallons Other: _____
- 3. Container Type and Size: _____
- 4. USDOT Proper Shipping Name: _____ N/A

Certification Signature



Only complete this Addendum if prompted by responses on EZ Profile™ (page 1) or to provide additional information. Sections and question numbers correspond to EZ Profile™.

C. MATERIAL INFORMATION

Describe Process Generating Material (Continued from page 1): _____ If more space is needed, please attach additional pages.

Material Composition and Contaminants (Continued from page 1): _____ If more space is needed, please attach additional pages.

5.		
6.		
7.		
8.		
9.		
Total composition must be equal to or greater than 100%		≥100%

D. REGULATORY INFORMATION

Only questions with a "Yes" response in Section D on the EZ Profile™ form (page 1) need to be answered here.

1. EPA Hazardous Waste

a. Please list all USEPA listed and characteristic waste code numbers:

- b. Is the material subject to the Alternative Debris standards (40 CFR 268.45)? Yes No
- c. Is the material subject to the Alternative Soil standards (40 CFR 268.49)? → If Yes, complete question 4. Yes No
- d. Is the material exempt from Subpart CC Controls (40 CFR 264.1083)? Yes No
 → If Yes, please check **one** of the following:
 - Waste meets LDR or treatment exemptions for organics (40 CFR 264.1082(c)(2) or (c)(4))
 - Waste contains VOCs that average <500 ppmw (CFR 264.1082(c)(1)) – will require annual update.

2. State Hazardous Waste → Please list all state waste codes: _____

3. For material that is Treated, Delisted, or Excluded → Please indicate the category, below:
 Delisted Hazardous Waste Excluded Waste under 40 CFR 261.4 → Specify Exclusion: _____
 Treated Hazardous Waste Debris Treated Characteristic Hazardous Waste → If checked, complete question 4.

4. Underlying Hazardous Constituents → Please list all Underlying Hazardous Constituents:

- 5. Industries regulated under Benzene NESHAP include petroleum refineries, chemical manufacturing plants, coke by-product recovery plants, and TSDFs.
 - a. Are you a TSDF? → If yes, please complete Benzene NESHAP questionnaire. If not, continue. Yes No
 - b. Does this material contain benzene? Yes No
 - 1. If yes, what is the flow weighted average concentration? _____ ppmw
 - c. What is your facility's current total annual benzene quantity in Megagrams? <1 Mg 1–9.99 Mg ≥10 Mg
 - d. Is this waste soil from a remediation? Yes No
 - 1. If yes, what is the benzene concentration in remediation waste? _____ ppmw
 - e. Does the waste contain >10% water/moisture? Yes No
 - f. Has material been treated to remove 99% of the benzene or to achieve <10 ppmw? Yes No
 - g. Is material exempt from controls in accordance with 40 CFR 61.342? Yes No
 → If yes, specify exemption: _____
 - h. Based on your knowledge of your waste and the BWON regulations, do you believe that this waste stream is subject to treatment and control requirements at an off-site TSDF? Yes No
- 6. 40 CFR 63 GGGGG → Does the material contain <500 ppmw VOHAPs at the point of determination? Yes No
- 7. CERCLA or State-Mandated clean up → Please submit the Record of Decision or other documentation with process information to assist others in the evaluation for proper disposal. A "Determination of Acceptability" may be needed for CERCLA wastes not going to a CERCLA approved facility.
- 8. NRC or state regulated radioactive or NORM Waste → Please identify Isotopes and pCi/g: _____



Additional Profile Information

Profile Number: _____

C. MATERIAL INFORMATION

Material Composition and Contaminants (Continued from page 2):

If more space is needed, please attach additional pages.

10.	
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34.	
35.	
36.	
37.	
38.	
39.	
40.	
Total composition must be equal to or greater than 100%	
	≥100%

D. REGULATORY INFORMATION

1. EPA Hazardous Waste

a. Please list all USEPA listed and characteristic waste code numbers (Continued from page 2):

**WASTE MANAGEMENT SKYLINE LANDFILL
DALLAS AND ELLIS COUNTIES, TEXAS
PERMIT AMENDMENT APPLICATION NO. MSW 42E**

PART IV – SITE OPERATING PLAN

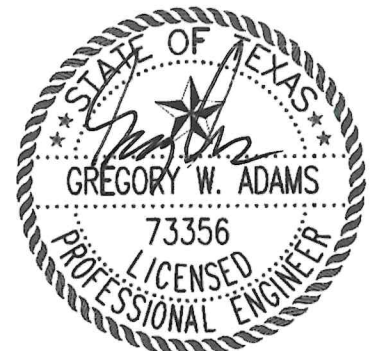
**APPENDIX IVC
REGULATED ASBESTOS-CONTAINING MATERIAL PLAN**

Prepared for



March 2026

Prepared by



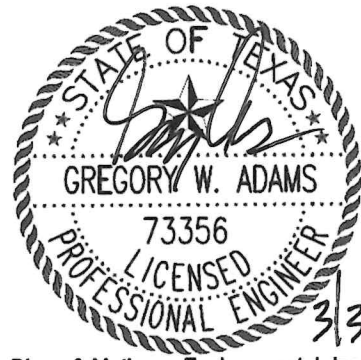
Biggs & Mathews Environmental, Inc.
Firm Registration No. F-256

3/31/2026

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

TEXAS BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
FIRM REGISTRATION NO. F-256 AND NO. 10194895

TEXAS BOARD OF PROFESSIONAL GEOSCIENTISTS
FIRM REGISTRATION NO. 50222



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

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1 INTRODUCTION

This plan has been prepared to identify proper handling practices of regulated asbestos-containing material (RACM) during disposal operations at the Skyline 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.

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

A. Notification and Recordkeeping

- (1) 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.
- (2) The gate attendant shall check the accompanying manifest (required for RACM) to ensure that necessary information is properly recorded.
- (3) If the manifest is properly completed, the gate attendant will direct the driver to the proper disposal location.
- (4) A disposal log will be maintained on site documenting the location, depth, and volume of disposal of all RACM.

B. Initial Inspection

- (1) 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.
- (2) 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.

C. Unloading

- (1) The entire permitted waste disposal footprint of the facility 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.

- (2) 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., 3 to 5 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.
- (3) Below natural grade fill areas for placement of RACM is preferred. A minimum separation of 3 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.

D. Methods of Unloading

Transporter shall use either Method 1 or Method 2, as described below to unload RACM at the landfill.

- (1) 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.
- (2) Unloading of roll-off containers is permitted when performed in accordance with the following procedures:
 - a. The truck and roll-off box are positioned to unload in a location prepared in advance for disposal of the waste.
 - b. 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.

E. Covering the Asbestos Waste

Asbestos waste will not be compacted directly. After unloading, the asbestos waste should be covered with a minimum of 3 feet of other solid waste or 1 foot of soil. Care should be exercised in the application of the cover to ensure that the bags or containers will not be ruptured.

F. 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.

A. Manifests

- (1) All shipments of RACM must be accompanied by a Uniform Hazardous Waste Manifest, or similar form, which includes:
 - a. Name, address, and telephone number of the generator.
 - b. Name, address, and telephone number of any transporter.
 - c. Description and quantity of RACM (including Class 3 Designation).
 - d. Date of receipt and signature of disposal facility representative.
 - e. 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.
- (2) A copy of the signed manifest is to be sent by the disposal facility to the waste generator within 30 days of disposal.
- (3) A copy of each manifest must be retained on site for at least 3 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.

B. Waste Shipment Records

Waste Shipment Records for each RACM load will be maintained with the minimum following information:

- (1) Name of the generator

- (2) Manifest number and WMTX Special Waste Profile number
- (3) Date of receipt
- (4) Volume of asbestos waste
- (5) Transporter name

C. 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:

- (1) The horizontal location of disposal (using the existing site grid system)
- (2) The depth or elevation of disposal
- (3) The volume of waste
- (4) The date of disposal

D. 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.

E. 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

All employees involved in the receipt and disposal of RACM are given training annually on the proper procedures of managing RACM. This training includes:

- (1) Asbestos and its health effects
- (2) Regulations on transportation, disposal, and worker protection
- (3) Paperwork, manifesting and notification requirements
- (4) Personal protection and protective equipment (including respirator fit tests)
- (5) Transportation requirements
- (6) RACM receipt procedures
- (7) RACM disposal procedures
- (8) Location logging and recordkeeping
- (9) Spill response actions

Training of employees will be completely documented and the documentation maintained on site.

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:

A. Personal Protection

- (1) Get upwind of the RACM.
- (2) Employees involved in cleanup should make use of their spill control kits, including:
 - a. Respirator
 - b. Disposable coveralls
 - c. Shoe covers
 - d. Gloves
 - e. Safety glasses or goggles
- (3) Keep others away until cleanup is complete.

B. Notification

- (1) Notify the landfill office / landfill manager.
- (2) Should the spill involve one pound or more, the landfill manager or his designated representative will notify the National Response Center (NRC).

C. Emergency Cleanup Actions

- (1) Summon water truck, wet down waste with a misting spray of water.
- (2) Scoop the waste and put it into a properly labeled bag or a closed container and dispose of it with the other RACM.
- (3) Wash any contaminated equipment or machinery.

- (4) Dispose of gloves, coveralls, and shoe covers in a tightly sealed 6-mil plastic bag.
- (5) Wash all other personal protective equipment with soap and water.
- (6) Check respirator and refit with new filter cartridges, and place into a resealable, airtight container for future use.

D. Spill Response Equipment

- (1) An OSHA approved respirator with the proper prefilters
- (2) A disposable, Tyvek or similar coverall suit
- (3) Disposable gloves
- (4) Rubber boots
- (5) 6-mil plastic bags with asbestos warning
- (6) Water spray tank
- (7) Roll of duct tape
- (8) Broom and shovel

E. Emergency Response Contractor

The landfill manager may contract with an outside contractor to conduct the landfill's spill response for RACM.

**WASTE MANAGEMENT SKYLINE LANDFILL
DALLAS AND ELLIS COUNTIES, TEXAS
PERMIT AMENDMENT APPLICATION NO. MSW 42E**

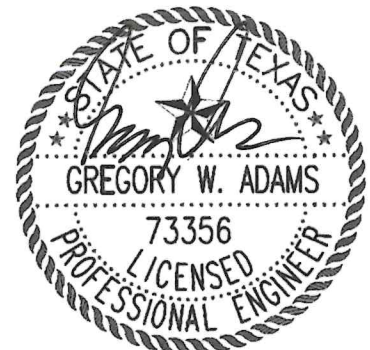
PART IV – SITE OPERATING PLAN

**APPENDIX IVD
LIQUID STABILIZATION PLAN**

Prepared for



March 2026



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

3/31/2026

Prepared by



BIGGS & MATHEWS ENVIRONMENTAL

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

TEXAS BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
FIRM REGISTRATION NO. F-256 AND NO. 10194895

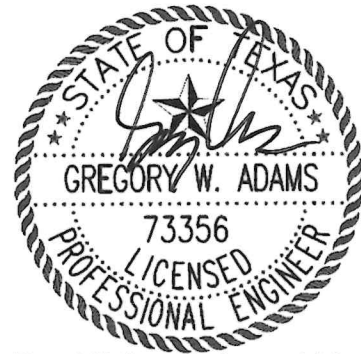
TEXAS BOARD OF PROFESSIONAL GEOSCIENTISTS
FIRM REGISTRATION NO. 50222

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APPENDIX IVDA

Liquid Stabilization Approval



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

3/31/2020

1 INTRODUCTION

Sludges, grease trap waste, grit trap waste, Class 2 liquid industrial waste, liquid waste from drilling activities, or liquid wastes from municipal sources may be accepted at the Skyline Landfill; refer to Appendix IVB – Special Waste Acceptance Plan for pre-acceptance procedures for special wastes. The facility may perform on-site liquid processing/stabilization of sludges, grease trap wastes, grit trap wastes, Class 2 liquid industrial wastes, or liquids from municipal sources in accordance with 30 TAC §330 Subchapter E.

The wastes to be accepted for processing at the liquid waste stabilization facility are those sludges, grease trap waste, grit trap waste, Class 2 liquid industrial waste, liquid waste from drilling activities, or liquid waste from municipal sources that have been tested but have not passed Method 9095 (Paint Filter Liquids Test) and certified to contain no free liquids. These wastes to be accepted for processing will have a hazardous waste and Class 1 non-hazardous industrial waste determination performed in accordance with Appendix IVB, Section 2. Wastes classified as hazardous waste or Class 1 non-hazardous industrial waste will not be accepted at the Skyline Landfill.

2 OPERATIONAL METHODS

The facility may operate a portable metal solidification basin(s) placed within an existing lined cell facility. The facility may receive material requiring solidification. Trucks will discharge directly into a portable basin. Materials suitable for mixing will be materials acceptable for disposal including lime, fly ash, cement kiln dust, Portland cement, sawdust, dirt, or auto fluff. Any combination of these materials may be used for liquid stabilization.

The materials suitable for mixing will be located above existing lined areas in stockpiles adjacent to the portable metal solidification basin and will be relocated as the portable metal solidification basin moves. The size of the stockpiles may vary depending on the amount of mixing materials received at any given time. The mixing materials will be managed in a manner that will prevent runoff of contaminated water, discharge of waste, or the creation of nuisance conditions.

The mixing materials will be located within the liquid stabilization area run-off control berms that provide for control of contaminated water and discharge of waste. Surface water that comes into contact with the mixing materials will be treated as contaminated water and disposed of in accordance with Part III, Attachment D6, Section 3. The mixing materials will be used for liquid stabilization within 15 days of receipt provided that the storage of these wastes does not create nuisance odors. The mixing materials will be directly deposited and stored in the metal solidification basin in the event that the storage of these materials in stockpiles results in nuisance odors in accordance with §330.245.

Mixing will be accomplished with a backhoe or other appropriate machinery. Each batch of stabilized material will be tested for free liquids in accordance with 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. Upon verification of the stabilized material passing the paint filter test, the mixture will be removed from the basin and deposited in the active face for landfilling on the day it is received and will not be stored within a portable metal solidification basin placed within an existing lined cell. The maximum time allowed for storage of unprocessed waste is 72 hours. In the event of equipment failure or operational breakdown expected to last longer than the allowable maximum storage time, acceptance of liquid waste will cease and any unprocessed liquid waste in the solidification basin will be transported to a properly permitted liquid waste processing facility.

The processing/stabilization of the liquid wastes received will be conducted in a manner so as to minimize the potential for odor-related nuisances and contamination of stormwater runoff.

3 FACILITY DESCRIPTION

A temporary metal solidification basin(s) may be placed within an existing lined cell. Part III, Attachment B, Appendix B1, Drawing B.6 depicts design details of the liquid stabilization area. The basin will be secured during waste placement operations and soil will be graded around the basin to ensure that stormwater runoff is directed away from the basin. The basin will be placed so that a minimum of 1 foot of the basin extends above the surrounding soil. The bottom of the basin will be at least 10 feet above the top of protective cover soil of the lining system and founded in waste. The basin will be separated from waste by clean cover soil. The basin will be constructed of place steel and will vary in size; the metal basins onsite provide a capacity of between 20 and 30 cubic yards. Basins with varying capacity may be used to accommodate increased liquid waste acceptance. When solidification procedures are not occurring, the basin will be covered with either a portable synthetic daily cover or fitted cover to prevent accumulation of rainfall within the basin or the discharge of contaminated liquids from the basin.

The liquid stabilization area will be constructed within the limits of an existing lined cell as noted on Part III, Attachment B, Drawing B.2. The liquid stabilization area will be constructed as shown on Part III, Attachment B, Drawing B.6. The mixing basin will have a volumetric capacity of 20 to 30 cubic yards with dimensions as shown on Part III, Attachment B, Drawing B.6.

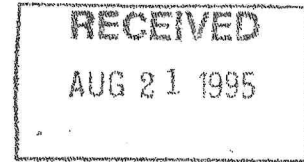
Each time a basin is moved, it will be inspected for holes or other signs of leakage. If holes are observed during the inspection of the basin, the basin will be removed from the waste and the pit in the waste will be observed for the presence of free liquids. If present, free liquids will be removed to an alternate basin or transferred to the liquid stabilization facility. The basin will be repaired or replaced prior to further use.

In order to minimize the potential for odor-related nuisances, the basin will be located so as to maintain a minimum distance of 1,000 feet from the nearest off-site residence. A misting system that uses odor neutralizers to minimize odors may be used at the stabilization basin in the event of odor problems. The liquid waste stabilization operations are covered by the Standard Air Permit for the Skyline Landfill (Standard Permit No. 78422).

SKYLINE LANDFILL
APPENDIX IVDA
LIQUID STABILIZATION APPROVAL

File 3.1.95

Pam Reed, *Commissioner*
R. B. "Ralph" Marquez, *Commissioner*
Dan Pearson, *Executive Director*



TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Protecting Texas by Reducing and Preventing Pollution

August 17, 1995

Mr. Walter Hunt, P.E.
Waste Management of Texas, Inc.
P.O. Box 400
Ferris, TX 75125

Re: Municipal Solid Waste - Dallas/Ellis County
WMT/Skyline - Permit No. MSW-42C
N of Ferris At End of North Main Street

Dear Mr. Hunt:

This is in response to your letter, dated August 11, 1995, submitting a detail drawing of the proposed liquid stabilization basin for a Class I Modification approved on July 27, 1995, for the subject site. These documents are acceptable and will be included in the file for this site.

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 MC-124, P.O. Box 13087, Austin, Texas 78711; telephone number (512) 239-6671.

Sincerely,

A handwritten signature in cursive script, appearing to read "Michael D. Graeber".

Michael D. Graeber, P.E.
Permits Section
Municipal Solid Waste Division

MDG/jad

cc: TNRCC Region 4

Skyline Recycling & Disposal Facility
1201 N. Central Ave.
P.O. Box 400
Dallas, Texas 75125
214/842-5710 • 214/842-5713 Fax



A Waste Management Company

File

August 11, 1995

Ms. Susan Janek, P.E. Team Leader
Permits Section
Municipal Solid Waste Division
12015 Park 35 Circle
Austin, Texas 78753

**SUBJECT: MUNICIPAL SOLID WASTE - DALLAS AND ELLIS COUNTIES
SKYLINE LANDFILL PERMIT MSW 42C**

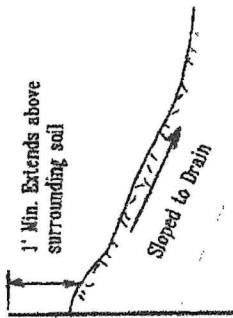
Dear Ms. Janek:

On behalf of Waste Management of Texas, Inc. (WMTX), and in accordance with a letter from you, this letter is written to submit a detail of the liquids stabilization basin and how it will be integrated into the site. I trust this letter will be sufficiently detailed for your needs, however should you have any questions please call me or Tommy James at Skyline at 214-842-5710.

Sincerely,
Waste Management of Texas, Inc.

Walter C. Hunt P.E.
Environmental Engineer

cc: Mr. Melvin Lewis (TNRCC Duncanville)



STABILIZATION BASIN

LANDFILL MATERIAL

DEPTH TO VARY AS LANDFILL DEVELOPS

APPROVED LINER

WASTE MANAGEMENT OF TEXAS, INC.
SIXTONE RECYCLING AND DISPOSAL FACILITY
LIQUID WASTE STABILIZATION BASIN

AUGUST 1985

3.1.95.

John Hall, *Chairman*
Pam Reed, *Commissioner*
R. B. "Ralph" Marquez, *Commissioner*
Dan Pearson, *Executive Director*



TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Protecting Texas by Reducing and Preventing Pollution

July 27, 1995

Mr. Tommy James, General Manager & Division President
Waste Management of Texas, Inc.
P.O. Box 400
Ferris, TX 75125

SUBJECT: Municipal Solid Waste - Dallas and Ellis County
WMT/Skyline - Permit No. MSW-42C
N of Ferris At End of North Main Street

Dear Mr. James:

This is in response to your letter, dated June 25, 1995, requesting a modification to the Site Development Plan (SDP) of the subject permit. The requested modification is to add a liquids stabilization basin to the subject site. The request has been reviewed and was found to be acceptable, with one exception noted below. The modification for addition of the liquids stabilization basin to the subject site is hereby approved as a Class I Modification to the SDP of Permit No. MSW-42C in accordance with 30 Texas Administrative Code (TAC) Section (§) 305.70(g)(22), subject to the submittal of a detail drawing of the basin and how it will be integrated into the site. The detail drawing shall be submitted prior to August 25, 1995.

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., at MC-124, P.O. Box 13087, Austin, Texas 78711; telephone number (512) 239-6671.

Respectfully,

Susan Janek
Susan Janek, P.E., Team Leader
Permits Section
Municipal Solid Waste Division

SHJ/MDG/clc

cc: Michael Graeber - MSW Permits

Skyline Recycling & Disposal Facility
1201 N. Central Ave.
P.O. Box 400
Ferris, Texas 75125
214/842-5710 • 214/842-5713 Fax



A Waste Management Company

June 25, 1995

Mr. Mike Graeber, P.E
Team Leader, Permits Section
Texas Natural Resource Conservation Commission
12015 Park 35 Circle
Austin, Texas 78753

**SUBJECT: MUNICIPAL SOLID WASTE - DALLAS AND ELLIS COUNTIES
SKYLINE RECYCLING AND DISPOSAL FACILITY, PERMIT MSW 42C
PERMIT MODIFICATION - LIQUID STABILIZATION PROCESS**

Dear Mr. Graeber:

This letter is written to request a Class I Modification for the addition of a portable sludge, grease trap, grit trap, municipal liquid waste and class II and class III industrial liquid waste processing/stabilization facility at the referenced site. This revision will allow this facility to provide an alternate waste disposal option for generators and transporters of these waste. This modification reflects a minor change to the facility's operation and does not alter the permit conditions or reduce the capacity of the facility to protect the environment.

In detail this modification provides for the addition of a portable liquid processing/stabilization facility to be located and operated within the limits of a TNRCC approved lined cell. These operations will be in accordance with 31 TAC 330.136(b)(7) and are proposed in such a manner as to enhance the disposal operations of the facility while insuring that both the operational and environmental aspects of the facility are in no way adversely affected. An outline is attached, which further describes the stabilization processes and equipment. It should also be noted that this modification is the same as the stabilization processes which have previously been approved and are in operation at many other facilities in Texas.

I trust this letter will be sufficiently detailed for your needs, however should you have any questions please feel free to call me or Walter Hunt at Skyline RDF at 214-842-5710.

Sincerely,
Waste Management of Texas, Inc.

Tommy James
General Manager and Division President - Skyline RDF

cc: Melvin Lewis (TNRCC Duncanville)

**OUTLINE FOR THE
STABILIZATION OF LIQUID WASTES**

Liquid processing/stabilization of sludges, grease trap wastes, grit trap wastes, Class II and Class III liquid industrial waste and liquid waste from other municipal sources will be performed at Skyline RDF consistent with 31 TAC Section 330.136(b)(7) and as described below.

Skyline RDF will provide a metal stabilization basin placed within the lined cell. The basin will be secured with landfilled material and soil will be graded around the basin to insure that stormwater runoff is directed away from the basin. The basin will be placed to insure a minimum of one foot of the basin extends above the surrounding soil.

Once the basin is in place, trucks will be able to discharge directly into the basin. Mixing will be accomplished with a backhoe or other appropriate machinery. Each batch of stabilized material will be tested for free liquids in accordance with 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). Upon verification of the stabilized material passing the paint filter test, the mixture will be removed from the basin and deposited in the active face for landfilling.

Each time the basin is either emptied or moved, it will be inspected for holes or other signs of leakage. The basin will be covered when not in use with either a water resistant tarp cover or a fitted metal cover to exclude rainfall from the basin.

**WASTE MANAGEMENT SKYLINE LANDFILL
DALLAS AND ELLIS COUNTIES, TEXAS
PERMIT AMENDMENT APPLICATION NO. MSW 42E**

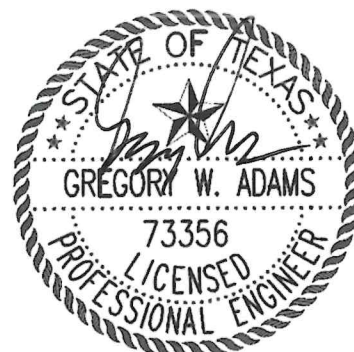
PART IV – SITE OPERATING PLAN

**APPENDIX IVE
ALTERNATIVE DAILY COVER OPERATING PLAN**

Prepared for



March 2026



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

3/31/2026

Prepared by

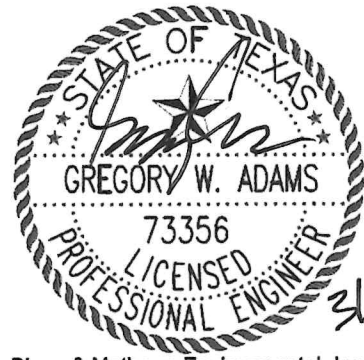


BIGGS & MATHEWS ENVIRONMENTAL

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

TEXAS BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
FIRM REGISTRATION NO. F-256 AND NO. 10194895

TEXAS BOARD OF PROFESSIONAL GEOSCIENTISTS
FIRM REGISTRATION NO. 50222



CONTENTS

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

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3	OPERATIONAL METHODS	4
4	ADC VERIFICATION AND INSPECTION PROCEDURES	5

APPENDIX IVEA

Alternative Daily Cover – Contaminated Soils (TCEQ Approval Package)

APPENDIX IVEB

Alternative Daily Cover – Posi-Shell Base Mix and Quick Cover Alternate Daily Cover

1 INTRODUCTION

This Alternative Daily Cover Operating Plan (ADCOP) has been prepared for the Skyline Landfill consistent with §330.165(d)(4)-(5). The purpose of this ADCOP is to address the following issues:

1. Description and thickness of each ADC material
2. Chemical composition of the material and the MSDS(s) for the ADC (if applicable)
3. Operation methods to be utilized at the site when using the ADC
4. Effect of the ADC on vectors, fires, odors, and windblown litter

As specified in Part IV, SOP, Section 8.18.4 – Alternative Material 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 IVF-A for TCEQ approval of contaminated soil as alternative daily cover at the Skyline Landfill. Refer to Appendix IVF-B for the material information for Posi-Shell Base Mix and Quick Cover as Alternate Daily Cover including the temporary authorization approval letter and the status reports for each two-month period during the temporary authorization period.

2 MATERIAL CHARACTERISTICS

2.1 Description of ADC Materials

The following types of ADC materials may be used at the Skyline Landfill.

- Contaminated Soils – Contaminated soil, which may be petroleum product contaminated soils having a total petroleum hydrocarbon (TPH) concentration of 1,500 ppm or less or are otherwise authorized by the TCEQ for disposal and use as cover material, may be applied as ADC. The contaminated soil to be used as daily cover will only be used after the special waste handling procedures identified in Appendix IVB – Special Waste Acceptance Plan have been conducted. The contaminated soil will be placed to a minimum thickness of 6 inches. Clean daily cover soil may be combined with the contaminated soil if necessary.
- Posi-Shell Base Mix – Posi-Shell Base Mix (Posi-Shell) is a blend of clay binders, fibers and polymers manufactured by LSC Environmental Products, LLC. The material specification sheet is provided in Appendix IVF-B. The product is deployed as a hydromulch by a hydroseeder.
- Quick Cover Alternate Daily Cover – Quick Cover Alternate Daily Cover (Quick Cover) is a blend of cellulose fiber mulch and binding agent manufactured by Central Fiber. The material specification sheet is provided in Appendix IVF-B. The product is deployed as a hydromulch by a hydroseeder.

2.2 Chemical Characteristics

The requirements for acceptance of petroleum contaminated soils based on constituent limits are included in §330.165(d)(4); these soils will meet the following TCEQ requirements for alternative daily cover material:

1. The constituents of concern for the petroleum contaminated soil will not exceed the concentrations listed in Table 1 – Constituents of Concern and Their Maximum Leachable Concentrations, located in 30 TAC §335.521(a)(1).
2. The petroleum contaminated soil will not contain polychlorinated biphenyl wastes that are subject to the disposal requirements in 40 CFR Part 761.
3. The petroleum contaminated soil will not contain total petroleum hydrocarbons in concentrations greater than 1,500 milligrams per kilogram.

The chemical characteristics of the Posi-Shell Base Mix and Quick Cover Alternate Daily Cover are found in Appendix IVF-B.

In accordance with §330.165(d)(5), ADC materials must not exceed constituent limitations imposed on waste authorized to be disposed of at the Skyline Landfill.

2.3 Effectiveness

In accordance with §330.165(d)(1)(B), the ADC materials to be used at the Skyline Landfill have proven to be effective on vectors, fires, odors, and windblown litter and waste. The materials identified for use as ADC materials have been used at the facility. Material effectiveness will be included in the status report(s) as required by §330.165(d)(2) and Section 4 of this ADCOP.

Petroleum contaminated soils provide the same effective control as clean soil ensuring protection from vectors, fires, odors, and windblown litter and waste. No petroleum contaminated soils will be used if they exceed the constituent limits in §330.165(d)(4) or if they would create nuisance odors.

3 OPERATIONAL METHODS

This section discusses the operational procedures that will be used to employ the proposed 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.

Contaminated Soils

- Contaminated soil may be stockpiled near the working face and spread over waste with a dozer or similar equipment to a minimum thickness of 6 inches. Clean soil may be added as necessary to obtain the appropriate thickness.
- The contaminated soil will be placed in one lift, with a minimum thickness of 6 inches, and placed consistent with procedures for placement of daily cover in accordance with Part IV – SOP, Section 8.18.2 – Daily Cover.
- The contaminated soil will be used as alternative daily cover within fifteen days of receipt. The contaminated soil will be located within the working face run-off control berms that provide for control of contaminated water and discharge of soils.
- Surface water that comes into contact with the contaminated soil will be treated as contaminated water and disposed of in accordance with Part III, Attachment D6, Section 3.

Posi-Shell material will be deployed as follows:

- The Posi-Shell material will be prepared as specified by the manufacturer.
- The slurry will be sprayed over the active working face by a hydroseeder.
- The slurry will be applied at a thickness so that no waste is visible following its application.
- The slurry will be applied from at least two directions and will achieve a minimum of 0.25 inches over the exposed waste.

Quick Cover material will be deployed as follows:

- The Quick Cover material will be prepared as specified by the manufacturer.
- The slurry will be sprayed over the active working face by a hydroseeder.
- The slurry will be applied at a thickness so that no waste is visible following its application.
- The slurry will be applied from at least two directions and will achieve a minimum of 0.25 inches over the exposed waste.

4 ADC VERIFICATION AND INSPECTION PROCEDURES

At the end of each working day, landfill personnel will inspect the working face to verify that the minimum thickness of an approved ADC has been placed over the exposed wastes in accordance with this ADCOP. 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.

In the event that the ADC does not control vectors, fires, odors, or windblown waste, the ADC application process will be re-evaluated to ensure that the ADC materials adequately cover the working face and serve their intended purpose. Any required changes to the ADC operational procedures will be documented in the site operating record.

Skyline Landfill may request temporary authorization to use additional types of alternative daily cover material in accordance with §305.62(k)(1)(A). A status report on the additional alternative daily cover materials will be submitted on a two-month basis during the temporary authorization period describing the effectiveness of the alternative material in accordance with §330.165(d)(2). If no unresolved problems have occurred within the temporary authorization period, status reports may no longer be required.

SKYLINE LANDFILL

APPENDIX IVEA

**ALTERNATIVE DAILY COVER – CONTAMINATED SOILS
(TCEQ APPROVAL PACKAGE)**

Kathleen Hartnett White, *Chairman*
Larry R. Soward, *Commissioner*
Glenn Shankle, *Executive Director*



KFC 7/24/06
Scanned 7/24
101-01-110

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

July 21, 2006

Ms. Paula Carboni
Market Area Compliance Manager
Waste Management of Texas, Inc.
P.O. Box 400
Ferris, TX 75125

Re: Municipal Solid Waste – Dallas and Ellis Counties
Skyline Recycling and Disposal Facility - MSW Permit No. 42C
Permit Modification: Site Operating Plan Approval
WWC Nos. 11017907, 11183682, 11267403, 11337231, 11324625, and 11359429
RN100542232 / CN600127856

Dear Ms. Carboni:

We have completed the technical review of the modification request dated June 24, 2005 and received by the Municipal Solid Waste (MSW) Permits Section on June 27, 2005, and revisions dated November 23, 2005, February 15, 2006, April 12, 2006, and May 25, 2006, and received on November 23, 2005, February 17, 2006, April 17, 2006, and May 25, 2006, respectively, regarding the above referenced MSW facility. The modification provides updates to the existing site operating plan to comply with Title 30 Texas Administrative Code Chapter 330 Subchapter F, Operational Standards for Solid Waste Land Disposal Sites, as effective prior to March 27, 2006. The information presented is technically sufficient for a permit modification and we have prepared a draft modification.

Enclosed is a copy of the above referenced modification which is now part of your permit and should be attached thereto. 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 Ms. Alayna M. Goetsch at (512) 239-2383. When addressing written correspondence, please use Mail Code 124 (MC 124).

Sincerely,

A handwritten signature in cursive script, appearing to read "Richard C. Carmichael".

Richard C. Carmichael, Ph.D., P.E.
Manager, Municipal Solid Waste Permits Section
Waste Permits Division

RCC/AMG/fp

cc: Mr. Kenneth J. Welch, P.E., Senior Engineer, Biggs and Mathews Environmental, Mansfield

Enclosure

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



MODIFICATION TO
MUNICIPAL SOLID WASTE PERMIT No. 42C

Skyline Recycling and Disposal Facility

Municipal Solid Waste Permit No. 42C is hereby modified as follows:

Description of Change:

This modification revises the Site Operating Plan to comply with Title 30 Texas Administrative Code Chapter 330 Subchapter F, Operational Standards for Solid Waste Land Disposal Sites, effective December 2, 2004.

The details of this permit modification are contained in the application dated June 24, 2005, and received on June 27, 2005, and the revisions dated November 23, 2005, February 15, 2006, April 12, 2006 and May 25, 2006, and received on November 23, 2005, February 17, 2006, April 17, 2006, and May 25, 2006, respectively.

Part of Permit Modified:

Part IV – Site Operating Plan

This modification is a part of Permit No. 42C and should be attached thereto.

APPROVED, ISSUED, AND EFFECTIVE in accordance with Title 30 Texas Administrative Code Section 305.70(I).

ISSUED DATE:

JUL 18 2006



For the Commission

SKYLINE LANDFILL

APPENDIX IVEB

**ALTERNATIVE DAILY COVER – POSI-SHELL BASE MIX AND
QUICK COVER ALTERNATE DAILY COVER**

**SKYLINE LANDFILL
DALLAS AND ELLIS COUNTY, TEXAS
TCEQ PERMIT APPLICATION NO. MSW 42C**

PERMIT AMENDMENT APPLICATION

**PART IV - SITE OPERATING PLAN
APPENDIX IVB
ALTERNATE DAILY COVER OPERATING PLAN**

Prepared for
Waste Management

April 2006



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

CONTENTS

1	INTRODUCTION	IVB-1
2	MATERIAL CHARACTERISTICS	IVB-2
	2.1 Description of ADC Materials	IVB-2
	2.2 Chemical Characteristics	IVB-3
3	OPERATIONAL METHODS	IVB-4
4	ADC VERIFICATION AND INSPECTION PROCEDURES	IVB-5



1 INTRODUCTION

This Alternate Daily Cover Operating Plan (ADCOP) has been prepared for the Skyline Landfill consistent with §330.133(c). The purpose of this ADCOP is to address the following issues:

- Description and thickness of each 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 8.18.4—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.

2 MATERIAL CHARACTERISTICS

2.1 Description of ADC Materials

The following types of ADC materials may be used at the Skyline Landfill. The ADC tarp materials identified have been approved by TCEQ.

- Contaminated Soils - Contaminated soil materials may be petroleum product contaminated soils having a total petroleum hydrocarbon (TPH) concentration of 1500 ppm or less, or are otherwise authorized by the TCEQ for disposal and use as cover material, may be applied as ADC. Contaminated soil materials may also consist of other contaminated soil type materials, which conforms with the TCEQ criteria approved for disposal at Type I municipal solid waste disposal facilities. The contaminated soil material to be used as daily cover will only be used after the special waste handling procedures identified in Appendix IVD - Special Waste Acceptance Plan, have been conducted. The contaminated soil will be placed to a minimum thickness of 6 inches. Clean daily cover soil may be combined with the contaminated soil if necessary.

2.2 Chemical Characteristics

The ADC materials proposed for use at the new Skyline Landfill are not reactive, ignitable, or corrosive. The contaminated soil materials will not exceed the maximum contaminant levels for petroleum contaminated soils or other contaminated soil type materials. Contaminated soils to be accepted and used for alternate daily cover will be accepted and used for alternate daily cover after the special waste handling procedures identified in Appendix IVD Special Waste Acceptance Plan, have been conducted.

3 OPERATIONAL METHODS

This section discusses the operational procedures that will be used to employ the proposed 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.

- Contaminated soil material may be stockpiled near the working face and spread over waste with a dozer or similar equipment to a minimum thickness of 6 inches. Clean soil may be added as necessary to obtain the appropriate thickness.
- The contaminated soil materials will be placed in one lift, with a minimum thickness of six inches, and placed consistent with procedures for placement of daily cover in accordance with Section 8.18.2 Daily Cover.

4 ADC VERIFICATION AND INSPECTION PROCEDURES

At the end of each working day, landfill personnel will inspect the working face to verify that the minimum thickness of an approved ADC has been placed over the exposed wastes in accordance with this ADCOP. Landfill personnel will routinely assess the effectiveness of each ADC in controlling vectors, fires, odors, and windblown waste. The quarterly report will describe the effectiveness of the alternative materials, any problems that may have occurred, and corrective actions required. Quarterly reporting will not be required after four consecutive quarters of use with no problems.

The Skyline Landfill has used contaminated soils as ADC material. The Skyline Landfill has previously submitted to the TCEQ a status report on a quarterly basis in accordance with §330.133(c)(2).

MATERIALS



MATERIAL SAFETY DATA SHEET

Date of Preparation: November, 2012

SECTION 1 — IDENTIFICATION

Supplier: LSC Environmental Products, LLC
2183 Pennsylvania Ave
Apalachin, NY 13732

Emergency Telephone: 800-800-7671 (LSC Environmental Products, LLC)
Product/Trade Name: **Posi-Shell Base Mix**
Chemical Name: SODIUM MONTMORILLONITE CLAY WITH ADDITIVES, POLYESTER FIBERS AND BROWN FERROUS OXIDE COLOR
Generic Name: SMC with proprietary additives, Polyester Fibers and Brown Color

SECTION 2 — HAZARD(S) IDENTIFICATION

POTENTIAL HEALTH EFFECTS (See Section 11 for toxicological data.)

EYE: Mechanical irritant.

SKIN: Possible drying resulting in dermatitis.

INGESTION: No adverse effects.

INHALATION: *Acute* (short term) exposure to dust levels exceeding the PEL may cause irritation of respiratory tract resulting in a dry cough. *Chronic* (long term) exposure to airborne SMC dust containing respirable size ($\approx 10\mu$) quartz particles, where respirable quartz particle levels are higher than TLVs, may lead to development of silicosis or other respiratory problems. Persistent dry cough and labored breathing upon exertion may be symptomatic.

CARCINOGENICITY: SMC is not listed by ACGIH, IARC, NTP, or OSHA. IARC, 1997, concludes that there is sufficient evidence in humans for the carcinogenicity of inhaled crystalline silica from occupational sources (IARC Class 1), that carcinogenicity was not detected in all industrial circumstances studied and that carcinogenicity may depend on characteristics of the crystalline silica or on external factors affecting its biological activity. NTP classifies respirable crystalline silica as "known to be a human carcinogen" (NTP 9th Report on Carcinogens - 2000). ACGIH classifies crystalline silica quartz as a suspected human carcinogen (A2).

NOTE: Polyester Staple is a family of fiber products having similar hazard and physical property characteristics. The polymer immobilizes the constituents of the polymer system (delusterants, catalyst residues, etc.) which, therefore, present no likelihood of exposure under normal conditions of processing and handling.

SECTION 3 — COMPOSITION / INFORMATION ON INGREDIENTS

Composition / Information on Ingredients

Sodium Montmorillonite Clay with Additives	CAS# 1318-93-0
Crystalline Silica (SiO ₂) as Quartz	CAS# 14808-60-7
Polyethylene terephthalate polymer and one or more surface finishes (organic lubricants) – Polyester Staple	CAS#25038-59-9
Brown Ferrous Oxide	CAS#1309-37-1

SECTION 4 — FIRST AID MEASURES

Page 2

EYE: Flush eyes with plenty of water until irritation ceases.

SKIN: Wash with soap and water until clean.

INHALATION: Move to area free from dust. If symptoms of irritation persist, contact physician. Inhalation may aggravate existing respiratory illness.

SECTION 5 — FIRE-FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASH POINT: Not applicable.

SPECIAL FIRE FIGHTING PROCEDURES: Not applicable.

UNUSUAL FIRE AND EXPLOSION HAZARDS: None. Product will not support combustion.

FLAMMABILITY LIMITS

LEL: Not applicable.

UEL: Not applicable.

HAZARDOUS COMBUSTION PRODUCTS: During a fire, smoke may contain the original material in addition to unidentified toxic and / or irritating compounds. Hazardous combustion products may include and are not limited to carbon monoxide, carbon dioxide.

OTHER FLAMMABILITY INFORMATION: Polyester fibers will burn if exposed to flame. Decomposition products generated from molten polymer may be subject to autoignition. Combustion products will be comprised of carbon, hydrogen, and oxygen. The exact composition will depend on the conditions of combustion.

EXTINGUISHING MEDIA: None for product. Any media can be used for the packaging. Product becomes slippery when wet.

FIRE FIGHTING INSTRUCTIONS: Keep people away. Isolate fire area and deny unnecessary entry. Soak thoroughly with water to cool and prevent re-ignition. Cool surroundings with water to localize fire zone. Hand held carbon dioxide or dry chemical hazard may result from forceful application of fire extinguishing agents.

PROTECTIVE EQUIPMENT FOR FIRE FIGHTERS: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, pants, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance. Fire fighters should protect themselves from decomposition and combustion products that may include carbon monoxide and other toxic gases.

SECTION 6 — ACCIDENTAL RELEASE MEASURES (See Section 15 for Regulatory Information)

PROTECT PEOPLE: Avoid breathing dust; wear respirator approved for silica bearing dust. Material becomes slippery when wet.

CLEANUP: Vacuum up to avoid generating airborne dust. Avoid using water.

SECTION 7 — HANDLING AND STORAGE

Page 3

HANDLING: Use NIOSH/MSHA respirators approved for silica bearing dust when free silica containing airborne SMC dust levels exceed PEL/TLVs. Clean up spills promptly to avoid making dust. Storage area floors may become slippery if wetted. Personal hygiene measures, such as washing hands and face immediately after working with the fibers and before eating, smoking, or using lavatory facilities, are recommended.

STORAGE: Store in a dry place. Store below 90 F (32 C).

SECTION 8 — EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: Mechanical, general room ventilation. Use local ventilation to maintain PELs/TLVs.

PERSONAL PROTECTIVE EQUIPMENT

EYE / FACE PROTECTION: Generally not necessary. Personal preference.

SKIN PROTECTION: Generally not necessary. Personal preference.

RESPIRATORY PROTECTION: Use respirators approved by NIOSH/MSHA for silica bearing dust.

EXPOSURE GUIDELINES:

Permissible Exposure Limits (for air contaminants):

	<u>OSHA PEL</u> <u>(8 hr. TWA)</u>	<u>ACGIH TVL</u>
SMC as "Particulates not otherwise regulated" (formerly nuisance dust)		
Total Dust	15 mg/m ³	N/D
Respirable Dust	5 mg/m ³	N/D
Crystalline Quartz (respirable)	0.1 mg/m ³	0.1 mg/m ³
Iron Oxide	Not Est.	Not Est.

Inhalation of finish mist above the recommended 3 mg/m³ 8-hour TWA would be an exposure of concern.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point (°F):	N/A
Vapor Pressure (mm. Hg):	N/A
Vapor Density (Air=1):	N/A
Solubility in Water:	Insoluble, forms colloidal suspension
Density (at 20° C):	55 lbs/cu ft as product
Specific Gravity (H ₂ O=1):	2.45-2.55
Melting Point:	Approx. 1450° C
Evaporation Rate (Butyl Acetate=1):	N/A
pH:	8-10 (5% aqueous suspension)

SECTION 10 — STABILITY AND REACTIVITY

CHEMICAL STABILITY: Polyethylene terephthalate is chemically stable and resistant to attack by oils, solvents, weak acids, and weak alkalis. SMC is stable. Ferrous Oxide is stable.

CONDITIONS TO AVOID: None.

Page 4

HAZARDOUS DECOMPOSITION PRODUCTS: None.

HAZARDOUS POLYMERIZATION: None.

INCOMPATIBILITY WITH OTHER MATERIALS: None.

SECTION 11 — TOXICOLOGICAL INFORMATION

(See Section 3 for Potential Health Effects. For detailed toxicological data, write or call the address or non-emergency number shown in Section 1). This product has not been fully evaluated for toxicological properties. Preliminary evaluation of chemical components used in the finish and toxicological testing of the ingredients have given no indication that health problems would occur in normal handling and use.

SECTION 12 — ECOLOGICAL INFORMATION

(For detailed Ecological data, write or call the address or non-emergency number shown in Section 1)

ECOTOXICITY: Not expected to be acutely toxic.

SECTION 13 — DISPOSAL CONSIDERATIONS

(See Section 15 for Regulatory Information)

DISPOSAL: Product should be disposed of in accordance with applicable local, state, and federal regulations.

SECTION 14 — TRANSPORT INFORMATION

DEPARTMENT OF TRANSPORTATION (D.O.T.): This product is not regulated by D.O.T. when shipped domestically by land.

CANADIAN TDG INFORMATION: For TDG regulatory information, if required, consult transportation regulations, product shipping papers.

SECTION 15 — REGULATORY INFORMATION

(Not meant to be all-inclusive—selected regulations represented)

NOTICE: The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws. The following specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations. See other sections for health and safety information.

U.S. REGULATIONS

These products are not classified as hazardous wastes under the Resource Conservation and Recovery Act, and unless prohibited by state or local regulation, can be disposed of in a municipal landfill or incinerated. Any finish oils contained in plant wastewater should be biodegradable in conventional biological wastewater treatment systems.

SECTION 16 — OTHER INFORMATION

Page 5

MSDS STATUS: Revised to 16 Section format.

All information presented herein is believed to be accurate; however, it is the user's responsibility to determine in advance of need that the information is current and suitable for their circumstances.

No warranty or guarantee, expressed or implied, is made by LSC Environmental Products, LLC as to this information or as to the safety, toxicity, or effect of the use of this product.



Safety Data Sheet – SDS

Product Type: Cellulose Fiber Hydraulic Mulch with Tackifer
Revision Date: July 2015

1. Identification and Product Identification

Product Name: Quick Cover Alternate Daily Cover
Company Name: Space Savers, Inc.
136 Pecan Street
Keller, TX 76248
Emergency Contact: 817.337.0112
Recommended Use: Hydraulic Mulch used as alternate daily cover for landfills
Restrictions: None known

Manufactured By: Central Fiber
4814 Fiber Lane
Wellsville, KS 66092

2. Hazardous Identification

WARNING! MAY FORM COMBUSTIBLE DUST CONCENTRATIONS IN AIR (DURING PROCESSING).
CAUSES EYE IRRITATION (AT HIGH CONCENTRATIONS).

PRECAUTIONS: Wear protective gloves / protective clothing / eye protection / face protection. Avoid generating dust. Keep away from heat, sparks, open flames, and hot surfaces. No Smoking.

3. Composition, Information on Ingredients

CAS NUMBER	NAME	PERCENT
9004-34-6	Cellulose Fiber	81-89%
7732-18-5	Water	9-15%
Proprietary	Polysaccharide Tackifier	1%
41272-40-6 or 3844-45-9	Green Dye or Blue Dye	<0.1%

4. First-Aid Measures

Inhalation: Avoid breathing dust. Remove to fresh air. No acute hazard known.
Eye contact: Flush eyes with copious amount of water. No acute hazard known.
Skin contact: Wash exposed skin with soap and water. No acute hazard known.
Ingestion: Call poison control. Do not induce vomiting. No acute hazard known.



Safety Data Sheet – SDS

Product Type:	Cellulose Fiber Hydraulic Mulch with Tackifer
Revision Date:	July 2015

9. Physical and Chemical Properties

Flash Point:	Not Applicable
Boiling Point (F):	Not Applicable
Vapor Pressure (mm Hg):	Not Applicable
Vapor Density:	Not Applicable
Solubility in Water:	Insoluble, Dispersible
Bulk Density (packaged product):	16-18lb/ft ³
Reactivity in Water:	Dispersible
Melting Point:	Not Applicable
Appearance & Odor:	Fibrous material, green or blue-green in color. No discernible odor.
LEL/UEL:	No data available

10. Stability & Reactivity

Stability:	Stable
Conditions to Avoid:	Avoid extreme heat and flame
Hazardous Decomposition:	May produce carbon monoxide and carbon dioxide
Hazardous Polymerization:	Will not occur

11. Toxicological Information

Component*	LD50 Oral	LD50 Dermal	LC50 Inhales (dust)
Cellulose	Non-toxic	Non-toxic	Non-toxic

*Components not listed are not hazardous substances.

May cause irritation to eye and respiratory system. Persons with respiratory problems should avoid breathing dust. Can cause irritation to mucous membrane and upper respiratory system. Remove to fresh air.

12. Ecological Information

Cellulose fiber slowly biodegrades in water, is not eco-toxic and persists in arid soils (landfills). The green or blue dye used in this product is not believed to be eco-toxic at concentrations found in this product. The polysaccharide tackifier used in this product is biodegradable and is not eco-toxic.



What is Quick Cover?

Quick Cover is a blend of cellulose fiber mulch and a binding agent that form a slurry when mixed with water. The materials the mulch is made from are biodegradable and are not reactive, ignitable, or corrosive.

Quick Cover is easily applied to a landfill working face by spraying with a commercial hydro-seeder or similar equipment. Total mixing and application time takes one person about 60 minutes.

What are the benefits of Quick Cover?

- Easy Application. Just apply and forget about it, no removal necessary!
- Saves airspace and extends landfill life.
- Meets all regulatory requirements for daily landfill covers.

Quick Cover ADC SPECS

- ◇ Cellulose fiber mulch and synthetic takifier
- ◇ Bags are 8x10x27, 50 lbs, and 40 per pallet
- ◇ 880 bags per order
- ◇ Available in Leaf Green or Earth Tone Brown
- ◇ Quick Cover Plus with flame retardant is also available.

Start saving by ordering Quick Cover today!



Order Online or by Phone at Space Savers, Inc:
136 Pecan Street
Keller, TX 76249
817.337.0112
www.spacesaversadc.com



Product Information Sheet

Detailed Material Description

Quick Cover ADC is a blend of cellulose fiber mulch and a binding agent that form a slurry when mixed with water. The mulch is manufactured from recycled fiber stock (mixed papers) and the binding agent is synthetic tackifier. None of the materials are reactive, ignitable or corrosive. Quick Cover is packaged in 50-pound plastic bags, with a nominal bag size of 8" x 10" x 27".

Quick Cover is applied to a landfill working face by spraying with special application equipment similar to a commercial hydro-seeder which is typically pulled by a bulldozer or other landfill equipment. Quick Cover is mixed, at a ratio of approximately one 50-pound bag of Quick Cover to every 100 gallons of water, within the reservoir of the application equipment. The materials are mixed by mechanical agitation until they form a smooth homogenous slurry. The materials stay in suspension after they are mixed allowing a uniform spray application that allows the material to conform to the shape of the underlying waste.

Application Procedures

The following procedures are recommended for the daily application of the Quick Cover ADC:

1. Fill ADC application equipment with water;
2. Add one 50-pound bag of Quick Cover to every 100 gallons of water;
3. Allow the materials to mix until they form a homogeneous slurry, 15 minutes is typically sufficient;
4. Apply the compacted refuse by spraying directly on the working face. Use proper application nozzle to provide consistent coverage. Quick Cover may be sprayed up to 180 feet depending on the type of application equipment used.

Quick Cover dries to form a uniform coating on top of the waste. Drying time is typically 30-minutes to one-hour depending on weather conditions. During windy conditions, the slurry may need to be sprayed from two directions to ensure proper coverage.

Regulatory Compliance

When properly applied, Quick Cover forms a uniform coating that conforms to the shape of the underlying waste and provides the following additional beneficial functions:

- Covers the underlying waste and reduces available breeding sites for flies, mosquitoes and other insects as well as discouraging solid waste from being an attractant to domestic/feral and wild animals;
- Serves as an odor barrier or filter for odors emanating from solid waste;
- Reduces the potential for fires within the landfill; and
- Improves the aesthetics for site users and neighbors.

TEMPORARY AUTHORIZATION APPROVAL LETTERS

Bryan W. Shaw, Ph.D., P.E., *Chairman*
Toby Baker, *Commissioner*
Jon Niermann, *Commissioner*
Richard A. Hyde, P.E., *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

October 2, 2015

Ms. Paula Carboni
Environmental Compliance Manager
Waste Management of Texas, Inc.
1201 North Central St.
Ferris, Texas 75125

Re: Waste Management Skyline Landfill – Ellis County
Municipal Solid Waste (MSW) – Permit No. 42D
Temporary Authorization – Use of Posi-Shell Base Mix and Quick Cover as Alternate
Daily Cover (ADC)
Tracking No. 19629612; RN100542232/CN603572132

Dear Ms. Carboni:

The Texas Commission on Environmental Quality MSW Permits Section reviewed the referenced facility's request dated September 2, 2015, for a temporary authorization to use Posi-Shell Base Mix and Quick Cover as ADC on a trial basis to evaluate their effectiveness as ADC materials. In accordance with Title 30 Texas Administrative Code, §305.62(k), our evaluation indicates that the information presented is sufficient to allow the requested temporary authorization with the conditions established in the enclosed issuance document.

The enclosed copy of the referenced temporary authorization should be maintained in the facility's files. The documentation prepared and submitted to support the temporary authorization request shall be considered as requirements of the permit.

If you have any questions concerning this matter, please contact Mr. Charles Brown at (512) 239-6234. When addressing written correspondence, please use mail code MC 124.

This action is taken under authority delegated by the executive director of the Texas Commission on Environmental Quality.

Sincerely,



Chance Goodin, Manager
Municipal Solid Waste Permits Section
Waste Permits Division

CG/CBB/vkm

cc: Mr. Kenneth J. Welch, P.E., Biggs and Mathews Environmental, Inc., Mansfield

Enclosure

Texas Commission on Environmental Quality



Temporary Authorization Municipal Solid Waste Permit No. 42D Waste Management Skyline Landfill

Municipal Solid Waste (MSW) Permit No. 42D is hereby authorized as follows:

Description of Temporary Authorization:

Waste Management Skyline Landfill, MSW Permit No. 42D is hereby authorized to use the following materials on a trial basis to evaluate their effectiveness as an alternative daily cover (ADC), subject to the following conditions.

1. The permittee shall contact the Texas Commission on Environmental Quality Region 4 office at least ten days prior to the use of ADC materials and on a regular basis thereafter, ~~to allow inspection and monitoring of the performance of the ADC materials during this trial period.~~
2. Types of ADC materials to be used during this trial period shall be limited to the following:
 - Posi-Shell Base Mix (Posi-Shell) manufactured by LSC Environmental Products, LLC.
 - Quick Cover Alternate Daily Cover (Quick Cover) manufactured by Central Fiber.
3. The ADC material must be prepared as specified by the manufacturer, and applied from at least two different directions or as prescribed by the manufacturer, whichever yields better coverage, to achieve an overall thickness of not less than 0.25 inches over the exposed waste.
4. Storm water runoff from areas that have been covered with contaminated soil ADC and from contaminated soil ADC stockpiles shall be controlled and managed as contaminated water.
5. The use of ADC materials is limited to a 24-hour period after which either waste or daily cover as defined in Title 30 Texas Administrative Code (30 TAC), §330.165(a) must be placed.
6. The trial period shall begin 15 days after the date this temporary authorization is issued, unless an alternate start date was requested in writing by the permittee and approved as part of this temporary authorization.

Temporary Authorization
MSW Permit No. 42D
Page 2 of 2

7. The ADC trial period should include all seasons of the year; therefore, as the facility nears the end of the initial trial period, an extension may be requested. Each ADC material listed in this temporary authorization may be used for not more than 180 days following initiation of the trial period, and for an additional trial period not to exceed 180 days upon approval of a one-time extension. This temporary authorization for the first trial period will expire 180 days after the initiation of the trial period.
8. If after a one year trial period, the ADC materials prove to be effective as daily cover in accordance with 30 TAC §330.165(d), the facility may request to incorporate the materials as an option in the permit by an amendment in accordance with 30 TAC §305.62, or a modification with notice in accordance with 30 TAC §305.70(k)(1).
9. In accordance with 30 TAC §330.165(d)(2), written status reports for each ADC material shall be submitted on a two-month basis to the executive director during the trial period. The reports shall include usage logs listing the days the ADC was used at the site, and shall contain information describing the effectiveness of the ADC material, any problems that may have occurred, and corrective action required as a result of such problems. If an ADC material is not utilized during each two month period, the status report should also discuss this fact.

The details of this temporary authorization are contained in the request dated September 2, 2014, and shall be considered as requirements of the permit.

Approved, Issued and Effective in accordance with 30 TAC §305.62(k), for 180 days.

Issued Date: October 2, 2015


For the Commission

Bryan W. Shaw, Ph.D., P.E., *Chairman*
Toby Baker, *Commissioner*
Jon Niermann, *Commissioner*
Richard A. Hyde, P.E., *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

April 8, 2016

Ms. Paula Carboni
Environmental Compliance Manager
Skyline Landfill
Waste Management of Texas, Inc.
1201 North Central Street
Ferris, Texas 75125-2101

Re: Skyline Landfill – Dallas and Ellis Counties
Waste Management Municipal Solid Waste – Permit No. 42D
Temporary Authorization – Alternative Daily Cover – Extension of Trial Period for
Posi-Shell Base Mix and Quick Cover
Tracking No. 20393988; RN100542232/CN603572132

Dear Ms. Carboni:

We have reviewed your request dated March 21, 2016, for reissuance of the temporary authorization first issued October 2, 2015, for the trial use of *Posi-Shell Base Mix* and *Quick Cover* spray-on alternative daily cover materials. The request was submitted on your behalf by Mr. Kenneth J. Welch, P.E., of Biggs and Mathews Environmental, Inc., Mansfield, Texas. Our evaluation indicates that the information presented is sufficient for a one-time extension of the temporary authorization for a term not to exceed 180 days in accordance with Title 30 Texas Administrative Code, §305.62(k), with the conditions established in the enclosed issuance document.

The reissued temporary authorization should be maintained in the facility's files. The documentation prepared and submitted to support the temporary authorization request shall be considered as requirements of the permit.

If you have any questions concerning this matter, please contact Mr. Arten Avakian at (512) 239-4419. When addressing written correspondence, please use mail code MC 124.

This action is taken under authority delegated by the executive director of the Texas Commission on Environmental Quality.

Sincerely,

A handwritten signature in cursive script, appearing to read "Chance Goodin".

Chance Goodin, Manager
Municipal Solid Waste Permits Section
Waste Permits Division

CG/AJA/cgm

Enclosure

cc: Mr. Kenneth J. Welch, P.E., Biggs and Mathews Environmental, Inc., Mansfield

Texas Commission on Environmental Quality



Temporary Authorization Municipal Solid Waste Permit No. 42D Waste Management Skyline Landfill

Municipal Solid Waste (MSW) Permit No. 42D is hereby authorized as follows:

Description of Temporary Authorization:

Waste Management Skyline Landfill, MSW Permit No. 42D is hereby authorized to use the following materials on a trial basis to evaluate their effectiveness as an alternative daily cover (ADC), subject to the following conditions.

1. The permittee shall contact the Texas Commission on Environmental Quality Region 4 office at least ten days prior to the use of ADC materials and on a regular basis thereafter, to allow inspection and monitoring of the performance of the ADC materials during this trial period.
2. Types of ADC materials to be used during this trial period shall be limited to the following:
 - Posi-Shell Base Mix (Posi-Shell) manufactured by LSC Environmental Products, LLC.
 - Quick Cover Alternate Daily Cover (Quick Cover) manufactured by Central Fiber.
3. The ADC material must be prepared as specified by the manufacturer, and applied from at least two different directions or as prescribed by the manufacturer, whichever yields better coverage, to achieve an overall thickness of not less than 0.25 inches over the exposed waste.
4. Storm water runoff from areas that have been covered with contaminated soil ADC and from contaminated soil ADC stockpiles shall be controlled and managed as contaminated water.
5. The use of ADC materials is limited to a 24-hour period after which either waste or daily cover as defined in Title 30 Texas Administrative Code (30 TAC), §330.165(a) must be placed.
6. The trial period shall begin 15 days after the date this temporary authorization is issued, unless an alternate start date was requested in writing by the permittee and approved as part of this temporary authorization.

7. The ADC trial period should include all seasons of the year; therefore, as the facility nears the end of the initial trial period, an extension may be requested. Each ADC material listed in this temporary authorization may be used for not more than 180 days following initiation of the trial period, and for an additional trial period not to exceed 180 days upon approval of a one-time extension. This temporary authorization for the first trial period will expire 180 days after the initiation of the trial period.
8. If after a one year trial period, the ADC materials prove to be effective as daily cover in accordance with 30 TAC §330.165(d), the facility may request to incorporate the materials as an option in the permit by an amendment in accordance with 30 TAC §305.62, or a modification with notice in accordance with 30 TAC §305.70(k)(1).
9. In accordance with 30 TAC §330.165(d)(2), written status reports for each ADC material shall be submitted on a two-month basis to the executive director during the trial period. The reports shall include usage logs listing the days the ADC was used at the site, and shall contain information describing the effectiveness of the ADC material, any problems that may have occurred, and corrective action required as a result of such problems. If an ADC material is not utilized during each two month period, the status report should also discuss this fact.

The details of this temporary authorization are contained in the request dated September 2, 2014, and shall be considered as requirements of the permit.

Approved, Issued and Effective in accordance with 30 TAC §305.62(k), for 180 days.

Issued Date: April 8, 2016


For the Commission

OBSERVATION REPORTS



DECEMBER 21, 2015

Chance Goodin
MSW Section MC 124
TCEQ
12100 Park 35 Circle Building F
Austin, Texas 78753

RE: WM Skyline Landfill, MSW Permit No. 0042D, Dallas and Ellis Counties
ADC Written Status Report

Dear Mr. Goodin:

As per the approved Temporary Authorization for use of Posi-Shell Base Mix and Quick Cover as Alternate Daily Cover (ADC) item 9 approved October 2, 2015, WM Skyline Landfill is submitting its first two-month written status report. This report covers the period of October 1, 2015 to November 30, 2015. During this period, did not utilize the ADC material.

The next reporting period is December 1, 2015 to January 31, 2016 with the report being submitted by February 28, 2016. As per item 1 of the TA, the TCEQ Region 4 was notified and a site visit is set up for January 6, 2016. The inspection is to monitor the first application of the ADC with a return visit to see the results. During this site visit, it will be discussed how often WM needs to notify the region to comply with item 1 of the TA. As per item 6 of the TA, the trial period is beginning 15 days after the TA was issued.

If you have any questions, please contact me at 972-842-5881.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Paula Carboni'.

Paula Carboni
Area Environmental Manager
WM Texoma Area

cc: Site Operating Records
TCEQ Region 4



FEBRUARY 16, 2016

Chance Goodin
MSW Section MC 124
TCEQ
12100 Park 35 Circle Building F
Austin, Texas 78753

RE: WM Skyline Landfill, MSW Permit No. 0042D, Dallas and Ellis Counties
ADDC Written Status Report

Dear Mr. Goodin:

As per the approved Temporary Authorization for the use of Posi-Shell Base Mix and Quick Cover as Alternate Daily Cover (ADC) item 9 approved October 2, 2015, WM Skyline Landfill is submitting the second two-month written status report. This report covers the period of December 1, 2015 to January 31, 2016. During this period, the Quick Cover was used as ADC and the status report is attached.

The next reporting period is February 1, 2016 to March 31, 2016 with the report being submitted by April 30, 2016. The Temporary Authorization expires on April 29, 2016. As per item 7 of the approved TA, WM will be asking for an extension prior to the next report being submitted.

As per item 1 of the TA, the TCEQ Region 4 was onsite the afternoon of January 14, 2016 and morning of January 15, 2016 to monitor the first application of the Quick Cover ADC. WM plans to start using the Posi-Shell ADC the first week of March 2016 and the TCEQ Region 4 will again be onsite to monitor the first application.

If you have any questions, please contact me at 972-842-5881.

Sincerely,

A handwritten signature in blue ink, appearing to read 'P. Carboni'.

Paula Carboni
Area Environmental Manager
Waste Management Texas-Oklahoma Area

cc: Site Operating Records
TCEQ Region 4

**SKYLINE LANDFILL
TWO MONTH ADC STATUS REPORT**

DATE	TYPE ADC USED	AMOUNT USED	EFFECTIVE Yes or No	PROBLEMS OCCUR DURING APPLICATION	CORRECTIVE ACTION TAKEN	ADDITIONAL COMMENTS
1/18/2016	Quick Cover	10 bags	Yes	Application went on good even with small amount of wind.	NA	NA
1/19/2016	Quick Cover	10 bags	No	Could not get trailer that application machine on through the trash with tractor. Had to cover some of the area with dirt	Putting hitch on dozer to pull the trailer.	NA
1/20/2016	Quick Cover	10 bags	Yes	No	NA	Dozer pulling the trailer corrected the issue from 1/19/16.
1/21/2016	Quick Cover	30 bags	Yes	No	NA	NA
1/22/2016	Quick Cover	10 bags	Yes	Lighting was not good so took longer to cover.	Move light plants over to area to have better lighting.	NA
1/25/2016	Quick Cover	10 bags	Yes	No	NA	NA
1/26/2016	Quick Cover	10 bags	Yes	No	NA	NA
1/27/2016	Quick Cover	10 bags	Yes	No	NA	NA
1/28/2016	Quick Cover	10 bags	Yes	No	NA	NA
1/29/2016	Quick Cover	10 bags	Yes	No	NA	NA

Bryan W. Shaw, Ph.D., P.E., *Chairman*
Toby Baker, *Commissioner*
Jon Niermann, *Commissioner*
Richard A. Hyde, P.E., *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

March 10, 2016

Ms. Paula Carboni
Area Environmental Manager
Waste Management Texas-Oklahoma Area
Waste Management of Texas, Inc.
P.O. Box 400
Ferris, Texas 75125-0400

Re: Skyline Landfill – Dallas and Ellis Counties
Municipal Solid Waste – Permit No. 42D
Alternative Daily Cover Status Report – Second Two-Month Reporting Period
Tracking No. 20292710; RN100542232/CN603572132

Dear Ms. Carboni:

We received a status report covering the second two months of a trial period for using spray-on alternative daily cover (ADC) at the referenced facility. The trial period was authorized in a temporary authorization (TA) issued October 2, 2015, for the trial use of *Posi-Shell Base Mix* and *Quick Cover* spray-on ADC materials. The status report was provided in your letter dated February 16, 2016, with attached table, in accordance with Title 30 Texas Administrative Code, Chapter 330, Section 330.165(d)(2), and with the provisions of the TA.

Thank you for the submission. The report indicates that *Quick Cover* was used for the first time on January 14, 2016, and was used 10 more days in January of 2016. The report indicates that *Quick Cover* was not effective when applied during windy conditions, but was effective when applied when winds were gentler or calm. The report also indicated that the equipment used to apply the ADC could not be pulled by a tractor over the area to be covered, and that the problem was overcome by pulling it with a bulldozer instead. Your cover letter further indicated that *Posi-Shell* ADC has not yet been tried, and that you anticipate you will start using it during the first week of March 2016.

We have added the ADC status report to our files for this facility, and will look forward to receiving additional reports for the remainder of the trial period. In the meantime, if you have any questions concerning this matter, please contact me at (512) 239-4419. When addressing written correspondence, please use mail code MC 124.

Sincerely,

A handwritten signature in blue ink, appearing to read "Arten J. Avakian".

Arten J. Avakian, Project Manager
Municipal Solid Waste Permits Section
Waste Permits Division

AJA/cgm

P.O. Box 13087 • Austin, Texas 78711-3087 • 512-239-1000 • tceq.texas.gov

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SKYLINE LANDFILL
1201 North Central Ave.
Ferris, Texas

APRIL 20, 2016

Chance Goodin
MSW Section MC 124
TCEQ
12100 Park 35 Circle Building F
Austin, Texas 78753

RE: WM Skyline Landfill, MSW Permit No. 0042D, Dallas and Ellis Counties
ADC Written Status Report

Dear Mr. Goodin:

As per the approved Temporary Authorization for the use of Posi-Shell Base Mix and Quick Cover as Alternate Daily Cover (ADC) item 9 approved October 2, 2015, WM Skyline Landfill is submitting the third two-month written status report. This report covers the period of February 1 to March 31, 2016. During this period, the Quick Cover and Posi-Shell was used as ADC and the status report is attached.

The next reporting period is April 1 to May 31, 2016 with the report being submitted by June 30, 2016.

The Temporary Authorization expires on April 29, 2016. As per item 7 of the approved TA, WM has asked and received an extension, which expires October 5, 2016.

As per item 1 of the TA, the TCEQ Region 4 was onsite the afternoon of March 28, 2016 and morning of March 29, 2016 to monitor the first application of the Posi-Shell ADC. WM plans to start using the Posi-Shell ADC the first week of March 2016 and the TCEQ Region 4 will again be onsite to monitor the first application.

If you have any questions, please contact me at 972-842-5881.

Sincerely,


Paula Carboni
Area Environmental Manager
Waste Management Texas-Oklahoma Area

cc: Site Operating Records
TCEQ Region 4

**SKYLINE LANDFILL
TWO MONTH ADC STATUS REPORT**

DATE	TYPE ADC USED	AMOUNT USED	EFFECTIVE Yes or No	PROBLEMS OCCUR DURING APPLICATION	CORRECTIVE ACTION TAKEN	ADDITIONAL COMMENTS
2/1/2016	Quick Cover	10 bags	Yes	No	NA	NA
2/2/2016	Quick Cover	10 bags	Yes	No	NA	Slight wind but no issues
2/3/2016	Quick Cover	10 bags	Yes	Had to respray mattress	NA	NA
2/4/2016	Quick Cover	10 bags	Yes	No	NA	Had to use dirt on top and some or the side
2/5/2016	Quick Cover	10 bags	Yes	No	NA	NA
2/8/2016	Quick Cover	10 bags	Yes	No	NA	NA
2/9/2016	Quick Cover	10 bags	Yes	No	NA	NA
2/10/2016	Quick Cover	10 bags	Yes	No	NA	NA
2/11/2016	Quick Cover	10 bags	Yes	Had to respray mattress	NA	NA
2/12/2016	Quick Cover	10 bags	Yes	No	NA	NA
2/15/2016	Quick Cover	10 bags	Yes	No	NA	NA
2/16/2016	Quick Cover	10 bags	Yes	No	NA	NA
2/17/2016	Quick Cover	10 bags	Yes	No	NA	NA
2/18/2016	Quick Cover	10 bags	Yes	No	NA	NA

**SKYLINE LANDFILL
TWO MONTH ADC STATUS REPORT**

2/19/2016	Quick Cover	10 bags	Yes	No	NA	NA
2/22/2016	Quick Cover	20 bags	Yes	No	NA	Used More because wet
2/23/2016	Quick Cover	20 bags	Yes	No	NA	Used More because wet
2/24/2016	Quick Cover	10 bags	Yes	No	NA	NA
2/25/2016	Quick Cover	10 bags	Yes	No	NA	NA
2/26/2016	Quick Cover	10 bags	Yes	No	NA	NA
2/29/2016	Quick Cover	10 bags	Yes	No	NA	NA
3/1/2016	Quick Cover	10 bags	Yes	No	NA	Slight wind but no issues
3/2/2016	Quick Cover	10 bags	Yes	No	NA	NA
3/3/2016	Quick Cover	10 bags	Yes	No	NA	NA
3/4/2016	Quick Cover	10 bags	Yes	No	NA	NA
3/7/2016	Quick Cover	10 bags	Yes	No	NA	Medium wind but no issues
3/8/2016	Quick Cover	20 bags	Yes	No	NA	Larger Area
3/10/2016	Quick Cover	20 bags	Yes	No	NA	Larger Area
3/11/2016	Quick Cover	20 bags	Yes	No	NA	Larger Area
3/14/2016	Quick Cover	10 bags	Yes	No	NA	NA
3/15/2016	Quick Cover	20 bags	Yes	No	NA	Larger Area
3/16/2016	Quick Cover	10 bags	Yes	No	NA	NA
3/17/2016	Quick Cover	10 bags	Yes	No	NA	NA
3/18/2016	Quick Cover	10 bags	Yes	No	NA	NA
3/21/2016	Quick Cover	10 bags	Yes	No	NA	NA
3/22/2016	Quick Cover	10 bags	Yes	No	NA	NA
3/23/2016	Quick Cover	10 bags	Yes	No	NA	NA
3/24/2016	Quick Cover	20 bags	Yes	No	NA	NA
3/25/2016	Quick Cover	10 bags	Yes	No	NA	NA
3/28/2016	Posi-Shell	10 bags	Yes	No	NA	TCEQ Region 4 onsite to observe the application of Posi-Shell since first time use. Came back on 3/29/16 in morning to see how the cover looked the next morning.

**SKYLINE LANDFILL
TWO MONTH ADC STATUS REPORT**

3/29/2016	Posi-Shell	10 bags	Yes	No	NA	NA
3/30/2016	Posi-Shell	10 bags	Yes	No	NA	NA
3/31/2016	Posi-Shell	10 bags	Yes	No	NA	NA

Bryan W. Shaw, Ph.D., P.E., *Chairman*
Toby Baker, *Commissioner*
Jon Niermann, *Commissioner*
Richard A. Hyde, P.E., *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 4, 2016

Ms. Paula Carboni
Environmental Compliance Manager
Skyline Landfill
Waste Management of Texas, Inc.
1201 North Central Street
Ferris, Texas 75125-2101

Re: Skyline Landfill - Dallas and Ellis Counties
Municipal Solid Waste - Permit No. 42D
Alternative Daily Cover Status Report - Third Two-Month Reporting Period
Tracking No. 20444405; RN100542232/CN603572132

Dear Ms. Carboni:

We received a status report covering the third two months of a trial period for using spray-on alternative daily cover (ADC) at the referenced facility. The trial period was authorized in a temporary authorization (TA) issued October 2, 2015, for the trial use of *Posi-Shell Base Mix* and *Quick Cover* spray-on ADC materials. The status report was provided in your letter dated April 20, 2016, with attached table, in accordance with Title 30 Texas Administrative Code, Chapter 330, Section 330.165(d)(2), and with the provisions of the TA.

Thank you for the submission. The report indicated that *Quick Cover* was used on 39 days during the two-month period, from February 1 through March 25, 2016, and that it was effective, though on several occasions a large item (mattress) needed additional spraying to cover. The report also indicated that *Posi-Shell* ADC was used beginning March 28 (first use) through March 31, 2016, and that it was effective and that no problems were encountered.

We have added the ADC status report to our files for this facility. If you have any questions concerning this matter, please contact me at (512) 239-4419. When addressing written correspondence, please use mail code MC 124.

Sincerely,

A handwritten signature in black ink, appearing to read "Arten J. Avakian".

Arten J. Avakian, Project Manager
Municipal Solid Waste Permits Section
Waste Permits Division

AJA/cgm



SKYLINE LANDFILL
1201 North Central Ave.
Ferris, Texas

JUNE 2, 2016

Chance Goodin
MSW Section MC 124
TCEQ
12100 Park 35 Circle Building F
Austin, Texas 78753

RE: WM Skyline Landfill, MSW Permit No. 0042D, Dallas and Ellis Counties
ADC Written Status Report

Dear Mr. Goodin:

As per the approved Temporary Authorization for the use of Posi-Shell Base Mix and Quick Cover as Alternate Daily Cover (ADC) item 9 approved October 2, 2015, WM Skyline Landfill is submitting the fourth two-month written status report. This report covers the period of April 1 to May 31, 2016. During this period, the Quick Cover and Posi-Shell were used as ADC and the status report is attached.

The next reporting period is June 1 to July 31, 2016 with the report being submitted by August 31, 2016.

The Temporary Authorization now expires on October 5, 2016.

If you have any questions, please contact me at 972-842-5881.

Sincerely,

A handwritten signature in blue ink that reads 'P. Carboni'.

Paula Carboni
Area Environmental Manager
Waste Management Texas-Oklahoma Area

cc: Site Operating Records
TCEQ Region 4

**SKYLINE LANDFILL
TWO MONTH ADC STATUS REPORT**

DATE	TYPE ADC USED	AMOUNT USED	EFFECTIVE Yes or No	PROBLEMS OCCUR DURING APPLICATION	CORRECTIVE ACTION TAKEN	ADDITIONAL COMMENTS
4/5/2016	Quick Cover	10 bags	Yes	No	NA	NA
4/6/2016	Quick Cover	12 bags	Yes	No	NA	NA
4/7/2016	Quick Cover	12 bags	Yes	No	NA	NA
4/8/2016	Posi-Shell	12 bags	Yes	No	NA	NA
4/11/2016	Posi-Shell	12 bags	Yes	No	NA	1/2" Rain
4/12/2016	Posi-Shell	12 bags	Yes	No	NA	NA
4/13/2016	Posi-Shell	12 bags	Yes	No	NA	1/4" Rain
4/14/2016	Posi-Shell	12 bags	Yes	No	NA	NA
4/18/2016	Posi-Shell	24 bags	Yes	No	NA	Used More because wet
4/19/2016	Posi-Shell	12 bags	Yes	No	NA	1/4" Rain
4/20/2016	Posi-Shell	12 bags	Yes	No	NA	1.5" Rain
4/21/2016	Posi-Shell	12 bags	Yes	No	NA	1" Rain
4/22/2016	Posi-Shell	24 Bags	Yes	No	NA	Used More because wet

**SKYLINE LANDFILL
TWO MONTH ADC STATUS REPORT**

4/25/2016	Posi-Shell	24 bags	Yes	No	NA	Used More because wet
4/27/2016	Posi-Shell	12 bags	Yes	No	NA	NA
4/28/2016	Posi-Shell	12 bags	Yes	No	NA	NA
4/29/2016	Posi-Shell	12 bags	Yes	No	NA	NA
5/2/2016	Posi-Shell	24 bags	Yes	No	NA	Used More because wet; 1/2" Rain
5/3/2016	Quick Cover	10 bags	Yes	No	NA	NA
5/4/2016	Quick Cover	10 bags	Yes	No	NA	NA
5/5/2016	Quick Cover	10 bags	Yes	No	NA	NA
5/8/2016	Quick Cover	10 bags	Yes	No	NA	1/2" Rain
5/9/2016	Quick Cover	10 bags	Yes	No	NA	1/2" Rain
5/10/2016	Quick Cover	10 bags	Yes	No	NA	NA
5/11/2016	Quick Cover	10 bags	Yes	No	NA	NA
5/12/2016	Quick Cover	10 bags	Yes	No	NA	1" Rain
5/13/2016	Quick Cover	10 bags	Yes	No	NA	1/4" Rain
5/16/2016	Quick Cover	10 bags	Yes	No	NA	NA
5/17/2016	Quick Cover	20 Bags	Yes	No	NA	Both Working Faces
5/18/2016	Quick Cover	20 Bags	Yes	No	NA	Both Working Faces: 1/2" Rain
5/19/2016	Quick Cover	10 bags	Yes	No	NA	1" Rain
5/20/2016	Quick Cover	10 bags	Yes	No	NA	NA
5/20/2016	Posi-Shell	10 bags	Yes	No	NA	NA
5/23/2016	Quick Cover	20 Bags	Yes	No	NA	Both Working Faces
5/24/2016	Quick Cover	20 Bags	Yes	No	NA	Both Working Faces
5/25/2016	Quick Cover	10 bags	Yes	No	NA	NA
5/26/2016	Quick Cover	20 bags	Yes	No	NA	Both Working Faces
5/27/2016	Quick Cover	20 Bags	Yes	No	NA	Both Working Faces: 1.5" Rain
5/31/2016	Quick Cover	10 bags	Yes	No	NA	2.75" Rain

Bryan W. Shaw, Ph.D., P.E., *Chairman*
Toby Baker, *Commissioner*
Jon Niermann, *Commissioner*
Richard A. Hyde, P.E., *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

June 15, 2016

Ms. Paula Carboni
Area Environmental Manager
Waste Management Texas-Oklahoma Area
Skyline Landfill
1201 North Central Street
Ferris, Texas 75125-2101

Re: Skyline Landfill - Dallas and Ellis Counties
Municipal Solid Waste - Permit No. 42D
Alternative Daily Cover Status Report - Fourth Two-Month Reporting Period
Tracking No. 20518985; RN100542232/CN603572132

Dear Ms. Carboni:

We received an alternative daily cover (ADC) status report spanning the period from April 1 through May 31, 2016, representing the fourth two months of a trial period for using spray-on ADC at the referenced facility. The trial period was authorized in a temporary authorization (TA) issued October 2, 2015, and reissued April 8, 2016, for the trial use of *Posi-Shell Base Mix* and *Quick Cover* spray-on ADC materials. The status report was provided in your letter dated June 2, 2016, with attached table, in accordance with Title 30 Texas Administrative Code, Chapter 330, §330.165(d)(2), and with the provisions of the TA.

Thank you for the submission. The report indicated that *Quick Cover* was used on 24 days and *Posi-Shell* on 16 days during the two-month period, and that no problems occurred during application. On June 7, 2016, we sent you an email seeking clarifications about which working faces were in operation during the reporting period, and whether ADC was used on May 9 (a Sunday); on June 13 we received your email response. The response clarified which working faces were in operation during the reporting period, and made a correction clarifying that ADC was used on May 9 (a Monday), rather than on May 8 (a Sunday) as indicated in the original report.

We have added the ADC status report to our files for this facility. If you have any questions concerning this matter, please contact me at (512) 239-4419. When addressing written correspondence, please use mail code MC 124.

Sincerely,

A handwritten signature in black ink, appearing to read "Arten J. Avakian".

Arten J. Avakian, Project Manager
Municipal Solid Waste Permits Section
Waste Permits Division

AJA/cgm



WASTE MANAGEMENT

SKYLINE LANDFILL
1201 North Central Ave.
Ferris, Texas

AUGUST 11, 2016

Chance Goodin
MSW Section MC 124
TCEQ
12100 Park 35 Circle Building F
Austin, Texas 78753

RE: WM Skyline Landfill, MSW Permit No. 0042D, Dallas and Ellis Counties
ADC Written Status Report

Dear Mr. Goodin:

As per the approved Temporary Authorization for the use of Posi-Shell Base Mix and Quick Cover as Alternate Daily Cover (ADC) item 9 approved October 2, 2015, WM Skyline Landfill is submitting the fifth two-month written status report. This report covers the period of June 1 to July 31, 2016. During this period, the Quick Cover and Posi-Shell were used as ADC and the status report is attached.

The next reporting period is August 1 to September, 2016 with the report being submitted by October, 2016. This will be the final status report. To cover item 8 of the approved temporary authorization, a modification with the notice in accordance with 30 TAC 305.70(k)(1) will be submitted.

The Temporary Authorization expires on October 5, 2016.

If you have any questions, please contact me at 972-842-5881.

Sincerely,

Paula Carboni
Area Environmental Manager
Waste Management Texas-Oklahoma Area

cc: Site Operating Records
TCEQ Region 4

**SKYLINE LANDFILL
TWO MONTH ADC STATUS REPORT**

DATE	TYPE		AMOUNT USED	EFFECTIVE Yes or No	PROBLEMS OCCUR DURING APPLICATION	CORRECTIVE ACTION TAKEN	ADDITIONAL COMMENTS
	ADC USED						
6/1/2016	Quick Cover		20 bags	Yes	No	NA	1.5" Rain
6/2/2016	Quick Cover		10 bags	Yes	No	NA	1.5" Rain
6/3/2016	Posti-Shell		36 bags	Yes	No	NA	Wet from 3" last 2 days
6/6/2016	Quick Cover		10 bags	Yes	No	NA	NA
6/7/2016	Quick Cover		10 bags	Yes	No	NA	NA
6/8/2016	Quick Cover		12 bags	Yes	No	NA	NA
6/9/2016	Posti-Shell		20 bags	Yes	No	NA	NA
6/10/2016	Quick Cover		20 bags	Yes	No	NA	2.5" Rain
6/13/2016	Quick Cover		10 bags	Yes	No	NA	2.5" Rain
6/14/2016	Quick Cover		20 bags	Yes	No	NA	NA
6/15/2016	Quick Cover		20 bags	Yes	No	NA	NA
6/16/2016	Quick Cover		20 bags	Yes	No	NA	NA
6/17/2016	Quick Cover		20 bags	Yes	No	NA	NA
6/20/2016	Quick Cover		20 bags	Yes	No	NA	NA
6/21/2016	Quick Cover		20 bags	Yes	No	NA	NA
6/22/2016	Quick Cover		20 bags	Yes	No	NA	NA
6/23/2016	Quick Cover		20 bags	Yes	No	NA	NA
6/24/2016	Quick Cover		10 bags	Yes	No	NA	NA
6/27/2016	Quick Cover		20 bags	Yes	No	NA	0.25" Rain
6/28/2016	Quick Cover		20 bags	Yes	No	NA	NA
6/29/2016	Quick Cover		20 bags	Yes	No	NA	NA
6/30/2016	Quick Cover		20 bags	Yes	No	NA	NA
7/1/2016	Quick Cover		20 bags	Yes	No	NA	1.5" Rain
7/4/2016	Quick Cover		10 bags	Yes	No	NA	0.5" Rain
7/5/2016	Quick Cover		20 bags	Yes	No	NA	NA
7/6/2016	Quick Cover		10 bags	Yes	No	NA	NA
7/7/2016	Quick Cover		10 bags	Yes	No	NA	NA
7/8/2016	Quick Cover		10 bags	Yes	No	NA	NA
7/11/2016	Quick Cover		10 bags	Yes	No	NA	NA

**SKYLINE LANDFILL
TWO MONTH ADC STATUS REPORT**

7/12/2016	Quick Cover	10 bags	Yes	No	NA	NA
7/14/2016	Quick Cover	10 bags	Yes	No	NA	NA
7/15/2016	Quick Cover	10 bags	Yes	No	NA	NA
7/18/2016	Quick Cover	10 bags	Yes	No	NA	NA
7/19/2016	Quick Cover	10 bags	Yes	No	NA	NA
7/20/2016	Quick Cover	10 bags	Yes	No	NA	NA
7/21/2016	Quick Cover	10 bags	Yes	No	NA	NA
7/22/2016	Quick Cover	10 bags	Yes	No	NA	NA
7/25/2016	Quick Cover	10 bags	Yes	No	NA	NA
7/26/2016	Quick Cover	10 bags	Yes	No	NA	NA
7/27/2016	Quick Cover	10 bags	Yes	No	NA	NA
7/28/2016	Quick Cover	10 bags	Yes	No	NA	NA
7/29/2016	Quick Cover	10 bags	Yes	No	NA	NA

Bryan W. Shaw, Ph.D., P.E., *Chairman*
Toby Baker, *Commissioner*
Jon Niermann, *Commissioner*
Richard A. Hyde, P.E., *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

August 18, 2016

Ms. Paula Carboni
Area Environmental Manager
Waste Management Texas-Oklahoma Area
Skyline Landfill
1201 North Central Street
Ferris, Texas 75125-2101

Re: Skyline Landfill - Dallas and Ellis Counties
Municipal Solid Waste - Permit No. 42D
Alternative Daily Cover Status Report - Fifth Two-Month Reporting Period
Tracking No. 20699803; RN100542232/CN603572132

Dear Ms. Carboni:

We received an alternative daily cover (ADC) status report spanning the period from June 1 through July 29, 2016, representing the fifth two months of a trial period for using spray-on ADC at the referenced facility. The trial period was authorized in a temporary authorization (TA) issued October 2, 2015, and reissued April 8, 2016, for the trial use of *Posi-Shell Base Mix* and *Quick Cover* spray-on ADC materials. The status report was provided in your letter dated August 11, 2016, with attached table, in accordance with Title 30 Texas Administrative Code, Chapter 330, §330.165(d)(2), and with the provisions of the TA.

Thank you for the submission. The report indicated that *Quick Cover* was used on 40 days and *Posi-Shell* on 2 days during the two-month period, and that no problems occurred during application.

We have added the ADC status report to our files for this facility. If you have any questions concerning this matter, please contact me at (512) 239-4419. When addressing written correspondence, please use mail code MC 124.

Sincerely,

A handwritten signature in black ink, appearing to read "Arten J. Avakian".

Arten J. Avakian, Project Manager
Municipal Solid Waste Permits Section
Waste Permits Division

AJA/cgm



SKYLINE LANDFILL
1201 North Central Ave.
Ferris, Texas

OCTOBER 3, 2016

Chance Goodin
MSW Section MC 124
TCEQ
12100 Park 35 Circle Building F
Austin, Texas 78753

RE: WM Skyline Landfill, MSW Permit No. 0042D, Dallas and Ellis Counties
ADC Written Status Report

Dear Mr. Goodin:

As per the approved Temporary Authorization for the use of Posi-Shell Base Mix and Quick Cover as Alternate Daily Cover (ADC) item 9 approved October 2, 2015, WM Skyline Landfill is submitting the sixth and final two-month written status report. This report covers the period of August 1 to September 30, 2016. During this period, the Quick Cover and Posi-Shell were used as ADC and the status report is attached.

To cover item 8 of the approved temporary authorization, a modification with the notice in accordance with 30 TAC 305.70(k)(1) will be submitted by October 10, 2016.

The Temporary Authorization expires on October 5, 2016. WM Skyline has ceased using the ADC on September 30, 2016 and will not resume use of ADC until the modification is approved by the agency.

If you have any questions, please contact me at 972-842-5881.

Sincerely,

Paula Carboni
Area Environmental Manager
Waste Management Texas-Oklahoma Area

cc: Site Operating Records
TCEQ Region 4

**SKYLINE LANDFILL
TWO MONTH ADC STATUS REPORT**

DATE	TYPE ADC USED	AMOUNT USED	EFFECTIVE		PROBLEMS OCCUR DURING APPLICATION	CORRECTIVE ACTION TAKEN	ADDITIONAL COMMENTS
			Yes or No				
8/1/2016	Quick Cover	10 bags	Yes		No	NA	NA
8/2/2016	Quick Cover	10 bags	Yes		No	NA	NA
8/3/2016	Quick Cover	10 bags	Yes		No	NA	NA
8/4/2016	Quick Cover	10 bags	Yes		No	NA	NA
8/8/2016	Quick Cover	10 bags	Yes		No	NA	NA
8/9/2016	Quick Cover	10 bags	Yes		No	NA	NA
8/10/2016	Quick Cover	10 bags	Yes		No	NA	NA
8/11/2016	Quick Cover	10 bags	Yes		No	NA	NA
8/12/2016	Quick Cover	10 bags	Yes		No	NA	NA
8/15/2016	Quick Cover	20 bags	Yes		No	NA	1" Rain
8/16/2016	Quick Cover	20 bags	Yes		No	NA	1" Rain
8/17/2016	Quick Cover	20 bags	Yes		No	NA	0.75" Rain
8/18/2016	Quick Cover	20 bags	Yes		No	NA	1.5" Rain
8/19/2016	Quick Cover	30 bags	Yes		No	NA	0.5" Rain
8/23/2016	Quick Cover	10 bags	Yes		No	NA	Trace Rain
8/24/2016	Quick Cover	10 bags	Yes		No	NA	NA
8/25/2016	Quick Cover	20 bags	Yes		No	NA	NA
8/26/2016	Quick Cover	10 bags	Yes		No	NA	NA
8/29/2016	Quick Cover	20 bags	Yes		No	NA	NA
8/30/2016	Quick Cover	10 bags	Yes		No	NA	0.25" Rain
8/31/2016	Quick Cover	10 bags	Yes		No	NA	NA
9/1/2016	Quick Cover	10 bags	Yes		No	NA	Trace Rain
9/2/2016	Quick Cover	10 bags	Yes		No	NA	NA
9/5/2016	Quick Cover	10 bags	Yes		No	NA	NA
9/6/2016	Quick Cover	10 bags	Yes		No	NA	NA
9/7/2016	Quick Cover	10 bags	Yes		No	NA	NA
9/8/2016	Quick Cover	10 bags	Yes		No	NA	NA
9/9/2016	Quick Cover	10 bags	Yes		No	NA	NA
9/12/2016	Quick Cover	10 bags	Yes		No	NA	NA
9/13/2016	Quick Cover	10 bags	Yes		No	NA	NA

**SKYLINE LANDFILL
TWO MONTH ADC STATUS REPORT**

9/14/2016	Quick Cover	10 bags	Yes	No	NA	NA
9/15/2016	Quick Cover	10 bags	Yes	No	NA	Trace Rain
9/16/2016	Quick Cover	10 bags	Yes	No	NA	NA
9/19/2016	Quick Cover	10 bags	Yes	No	NA	NA
9/20/2016	Quick Cover	10 bags	Yes	No	NA	NA
9/21/2016	Quick Cover	20 bags	Yes	No	NA	NA
9/22/2016	Quick Cover	10 bags	Yes	No	NA	NA
9/23/2016	Quick Cover	10 bags	Yes	No	NA	NA
9/26/2016	Posi Shell	20 bags	Yes	No	NA	1" Rain
9/27/2016	Posi Shell	12 Bags	Yes	No	NA	0.5" Rain
9/28/2016	Posi Shell	12 Bags	Yes	No	NA	NA
9/29/2016	Posi Shell	12 Bags	Yes	No	NA	NA
9/30/2016	Posi Shell	12 Bags	Yes	No	NA	NA

**WASTE MANAGEMENT SKYLINE LANDFILL
DALLAS AND ELLIS COUNTIES, TEXAS
PERMIT AMENDMENT APPLICATION NO. MSW 42E**

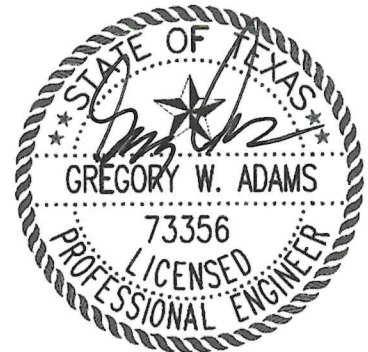
PART IV – SITE OPERATING PLAN

**APPENDIX IVF
BIRD CONTROL PLAN**

Prepared for



March 2026



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

3/31/2026

Prepared by



BIGGS & MATHEWS ENVIRONMENTAL

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

TEXAS BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
FIRM REGISTRATION No. F-256 AND No. 10194895

TEXAS BOARD OF PROFESSIONAL GEOSCIENTISTS
FIRM REGISTRATION No. 50222



09 March 2026

Mr. Gregg Adams
Biggs & Matthews Environmental, Inc.
1700 Robert Road, Suite 100
Mansfield, Texas 76063

Re: Skyline Landfill Expansion – Bird Control Plan
Approximately 887 acres associated with the proposed expansion of the Skyline Landfill located on the northeastern corner of Ferris Road and Farm-to-Market Road 664 in the City of Ferris, Dallas and Ellis Counties, Texas

Dear Mr. Adams,

Landfills typically attract a large number of birds due to the availability of food, water, and roosting opportunities. Given Skyline landfill's proximity to Lancaster Airport (approximately 7,500 feet from the runway) the risk of bird-aircraft collisions could be elevated. This Bird Control Plan has been developed to proactively reduce bird activity associated with landfill operations through targeted management strategies, thereby supporting aviation safety while maintaining compliance with applicable environmental and regulatory requirements. Bird control measures associated with the proposed expansion of Skyline Landfill are intended to prevent adverse interactions between wildlife, landfill activities, and aircraft by deterring bird species from foraging, loafing, or congregating on landfill property and in surrounding airspace, while also reducing the attraction of the site to additional birds drawn by the presence of others.

Preventative measures are the primary component of the Bird Control Plan and are intended to reduce the attractiveness of the landfill to birds by eliminating food sources, limiting habitat suitability, and discouraging loafing and roosting behavior. These measures include maintaining the smallest practicable working face by promptly applying cover to exposed waste and routinely inspecting and repairing cover materials to address wind or operational damage. Waste handling and site operations will be managed to minimize the staging of uncovered waste and to ensure timely disposal of incoming loads. Litter control will be conducted on a regular basis within the active disposal area and along site access roads. Habitat modification practices will include eliminating or minimizing standing water, where feasible, managing leachate and drainage features, and managing vegetation to reduce roosting, nesting, and shelter opportunities. Visual and physical deterrents, such as predator effigies, raptor kites, reflective materials, netting, wire systems, or perch deterrents, may be installed and relocated periodically to prevent bird habituation. Preventative measures will be monitored and adjusted, as necessary, based on observed bird activity, seasonal trends, and operational conditions, and will be implemented in coordination with active deterrence methods and in full compliance with applicable federal, state, and local wildlife protection regulations.

Additionally, active bird control is achieved by consistently utilizing non-lethal, humane measures to deter birds from the working face and other operational areas, especially during peak seasonal or daily activity periods. These measures are aimed at preventing birds from gathering food on-site and inhibiting activities like circling, landing, and loitering, which can attract more birds. All bird control measures are conducted in complete compliance with federal, state, and local wildlife laws, and techniques are altered over time as site circumstances, operations, and bird behavior change. Maintaining these activities on a constant basis helps to assure the landfill's safety and reduces risks to surrounding airport operations.

All bird control activities will be implemented in full compliance with applicable federal, state, and local regulations, including wildlife protection laws. Bird control strategies will be adaptive and modified as necessary to maintain effectiveness as landfill operations, site conditions, and bird behavior change over time. Continuous and persistent control efforts will be required for the duration of landfill operations to ensure long-term effectiveness and ongoing protection of landfill and airport safety.

BIRD CONTROL PLAN

Landfills can attract a large number of birds. Large populations could present a risk of bird–aircraft collisions, given the landfill’s proximity to Lancaster Airport (approximately 7,500 ft from the runway to the closest edge of the landfill) and therefore represents a potential aviation safety concern.

Bird–aircraft strikes pose significant risks to flight operations, passenger safety, and airport infrastructure. Large-bodied and flocking bird species are of particular concern, as they are frequently drawn to landfill sites and have a higher likelihood of causing damaging impacts. As landfill activities continue, the potential to attract and sustain larger bird populations exists unless effective management measures are in place.

This Bird Control Plan has been developed to proactively address these risks through a combination of preventive and adaptive strategies designed to minimize bird attractants and deter the presence of hazardous and nuisance bird species within and around the Skyline Landfill. The plan’s primary objective is to reduce bird activity associated with landfill operations; thereby, supporting aviation safety while maintaining compliance with all relevant environmental and regulatory requirements.

GENERAL LANDFILL IMPLEMENTATION

Exposed Waste Control and Prohibition of Bird Feeding

Landfill operations are managed to limit the size of the working face by continuously applying soil cover over filled areas. These measures minimize the amount of exposed waste and reduce food availability for birds, helping to discourage the attraction of birds. All facility personnel receive training on these requirements to promote compliance and prevent behaviors that could condition birds to associate the site with food.

Efficient Habitat Modification Practices

The facility maintains on-going habitat modification practices to reduce environmental conditions that attract or support bird use. Standing water is actively managed through grading, drainage improvements, and stormwater controls to prevent the creation of ponds or loafing areas. Vegetation is routinely maintained to limit roosting and nesting opportunities by managing grass height and trimming or removing trees and other structures where feasible. Regular site inspections are conducted to identify and correct habitat features that may encourage bird activity, ensuring the landfill remains unattractive to nuisance bird species over time.

Visual Predator Decoy Deterrence

Visual predator decoys may be used as part of the facility’s active bird management strategy. Decoys representing natural predators are strategically placed in areas with frequent bird activity and periodically repositioned to prevent habituation. These visual deterrents are coordinated with other operational and habitat management measures to enhance their overall effectiveness. The facility continually monitors bird behavior and adjusts the placement and frequency of decoys as needed to maintain consistent deterrent results.

BIRD CONTROL PLAN IMPLEMENTATION

Personnel

One staff member (Bird Controller) should be assigned the responsibility for bird control. A backup person should be available to cover lunch hours or periods of illness or vacation. The Bird Control responsibilities of the Bird Controller include:

1. Discourage the presence of birds.
2. Maintaining equipment and ordering supplies.
3. Assigning back-up personnel.
4. Evaluating effectiveness and relaying problems to the Bird Control Consultant.
5. Interacting with the monitoring consultant to upgrade program, as needed.

The landfill active face must be routinely observed by the bird control staff during operational hours. The amount of time devoted to bird control will vary and may be reduced over time. This expectation is based on established bird-control practices showing that consistent wildlife deterrent application within the site reduces foraging opportunities, as well as seasonal migratory patterns, resulting in decreased site use over time. The degree of reduction depends on maintaining consistent control efforts and may vary. Once most wildlife is conditioned to avoid the site, the number that will have to be repelled will be less. Equipment operators are in a good position to respond to wildlife occurrence as the need arises. Equipment operators should be considered assistants to the Bird Controller. Prompt attention to wildlife occurrence should be the rule.

Pyrotechnic Device

The recommended procedure involves the use of pyrotechnic devices. Pyrotechnic devices are wildlife deterrent tools that produce loud noises, flashes of light, or smoke through controlled ignition. They are commonly used to scare and disperse birds and other wildlife by creating sudden sensory stimuli that simulate danger or disturbance. When used at landfills, pyrotechnic devices are intended to deter wildlife from approaching or remaining in the area by interrupting feeding and roosting behavior, thereby reducing wildlife concentrations and associated safety risks. Other methods are available to supplement this approach, but they should not be necessary if pyrotechnics are used consistently and effectively.

Only one device is recommended in this situation. It is the Double-shot Pistol Launcher which uses a 0.22 caliber blank cartridge to propel a "Screamer-Siren." Fire only the number of shots necessary to discourage wildlife from attempting to land or from circling over the site as if investigating it. Please note that only the regular Screamer - Sirens are to be used as an enhanced pyrotechnic that will typically trigger the need for a federal permit.

To be effective, the stimuli provided by these devices should be applied near one or more of the bird species. Firing devices when flocks of birds are more than 1,000 feet from their face usually are not warranted. Firing too frequently and/or when birds are outside the effective range reduces the technique's effectiveness.

The Bird Controller should become familiar with the equipment's effective range. Following firing, the birds should change direction of flight, accelerate, look about nervously, shake their feathers, break flight formation, or move directly away from the site. If none of these responses or some variant thereof is observed, the birds probably were out of range. Birds that have experienced these devices previously will respond to lower intensity stimuli than novices that just arrived at the site or were too far away on previous firings. The devices provide several stimuli that alarm wildlife, including: noise, flash of light, concussion, smoke and the sound of the propellant.

It is recommended that at least three (3) pistols be kept in stock. They should be cleaned and oiled on a regular basis. It is not unusual to fire these devices daily, so it is important that an adequate supply be kept on hand and that ordering occurs at a predetermined interval. We recommend that a 5-day supply always be on hand as shippers occasionally encounter delays of a week or more.

Use of Equipment and Safety

The following safety considerations are recommended:

Pyrotechnic Devices

1. Fire pistols with arm fully extended. Powder burns can be expected if the pistol is fired close to exposed skin.
2. Wear safety glasses. The spent cartridges are automatically ejected upon firing. Occasionally, these objects will be propelled with some force into the firer's face.
3. Hold the pistol at an angle between 30 to 80 degrees when firing. The devices should not be fired so low that they land on the ground as they could start a paper fire.
4. Do not fire toward equipment or people.
5. Treat the pistols as a dangerous weapon and do not keep loaded in vehicles, cock only at time of firing, and allow only experienced persons access to pistols.

Contingency Plan/Alternate Action

In the event that the deterrent actions are not successful, all parties will meet to discuss the proposed revisions to this plan and develop an alternate solution. The engineers and their consultants will prepare/present a revised plan to accommodate the particular issue. This revised plan will be submitted to all federal, state, and local governing parties, as needed, for approval prior to implementation.

IES appreciates the opportunity to work with you and Biggs & Matthews Environmental, Inc. on this project and hopes we may be of assistance to you in the future. If you have any comments, questions, or concerns, please do not hesitate to contact me at (972) 562-7672 or rgomez@intenvsol.com, or Executive Vice President Rudi Reinecke at rreinecke@intenvsol.com.

Sincerely,

Integrated Environmental Solutions, LLC.



Mr. Rafael Gomez
Natural Resource Director

Attachments

File ref: 04.393.033

SKYLINE LANDFILL

**APPENDIX IVG
FIRE PROTECTION SOIL CALCULATIONS**



Fire Protection Soil Calculations

The working area cannot be larger than is able to be covered by 6" of soil within 1 hour.

The maximum working area is determined by:

- Available equipment to haul and spread soil
- Available soil in borrow source and in adjacent stockpiles

Table 4-1 of the SOP provides a list of the equipment dedicated to the Skyline Landfill

The following tables provide the production, transport, and application rates for the equipment listed in Table 4-1.

Note: The precision of the calculations is for demonstration purposes only and is not meant to imply exact conditions in the field.

Table 1. Load time for soil loading equipment.

Equipment	Cubic Yards per Load	Loads per Hour	Time per Load	Cubic Yards per Hour
Excavator	3	240	0.25 min	720 ¹

Table 2. Load, transport, and unload capacity for soil transport equipment.

Equipment	Cubic Yards per Load	Load Time	Transport Time (2500 ft at 15 mph, x2 for round trip)	Unload Time	Total Load, Transport, and Unload Time	Loads per Hour	Cubic Yards Delivered per Hour
Haul Truck	16	1.33 min (loaded by excavator)	3.8 min	1 min	6.13 min	9.8	157
Scraper	20	4.9 min (self-loaded)	3.8 min	1 min	9.7 min	6.19	124

Table 3. Spreading capacity for soil spreading equipment.

Equipment	Spreading Rate (cubic yards per hour)	Area that Can Be Covered 6 Inches Deep in 1 Hour	Nominal Working Face Dimensions (square)	Nominal Working Face Dimensions (rectangle 2:1 width:depth)
Dozer	600 ²	32,400 sq ft	180 ft x 180 ft	254.6 ft x 127.3 ft
Compactor	600 ²	32,400 sq ft	180 ft x 180 ft	254.6 ft x 127.3 ft

Fire Protection Soil Calculations (Continued)

Table 4. Example scenarios of equipment capacity and soil needs for covering working face within 1 hour. Other combinations achieving equivalent capacity may be used.

Working Face Dimensions (width x depth, ft)	Working Face Area (sq ft)	Volume of Soil to Cover 6 Inches Deep (cu yd)	Transport Equipment	Volume of Soil Transport from Borrow Source within 2500 ft (cu yd)	Volume of Soil Stockpile at Working Face (cu yd)	Equipment for Spreading Soil within 1 Hour
150 x 150	22,500	417	1 Haul Truck	157	260	1 Dozer or 1 Compactor
250 x 150	37,500	694	1 Haul Truck and 1 Scraper	281	413	1 Dozer and 1 Compactor
350 x 200	70,000	1,296	2 Haul Trucks and 1 Scraper	438	858	2 Dozers and 1 Compactor
450 x 200	90,000	1,667	2 Haul Trucks and 2 Scrapers	562	1,105	2 Dozers and 1 Compactor
550 x 250	137,500	2,546	3 Haul Trucks and 2 Scrapers	719	1,827	2 Dozers and 3 Compactors

¹ One excavator can produce enough soil to load a haul truck 45 times per hour (up to 4 haul trucks).

² Low end of range published in *Excavation Handbook*, Horace C. Church 1991.

