

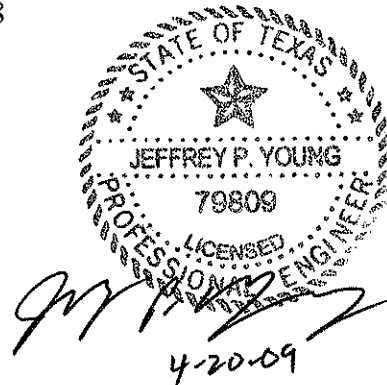
**FORT WORTH SOUTHEAST LANDFILL
CITY OF FORT WORTH, TARRANT COUNTY
TCEQ PERMIT NO. MSW-218C**

MAJOR PERMIT AMENDMENT APPLICATION

VOLUME 6 OF 6

Prepared for
City of Fort Worth
October 2007
Revised August 2008

Revised April 2009



Prepared by

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WBC Project No. 0120-435-11-68-01

**FORT WORTH SOUTHEAST LANDFILL
TARRANT COUNTY, TEXAS
TCEQ PERMIT NO. MSW-218C**

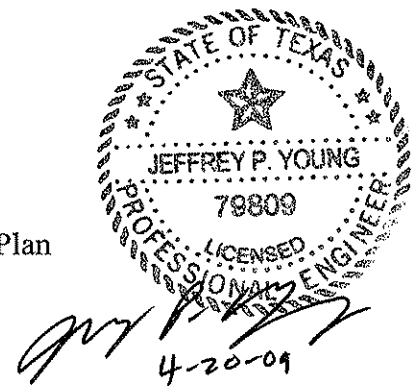
**MAJOR PERMIT AMENDMENT APPLICATION
VOLUME 6 OF 6**

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**FORT WORTH SOUTHEAST LANDFILL
TARRANT COUNTY, TEXAS
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MAJOR PERMIT AMENDMENT APPLICATION

**PART III – SITE DEVELOPMENT PLAN
APPENDIX III I
LANDFILL GAS MANAGEMENT PLAN**

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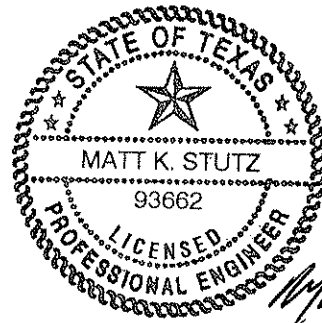


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4/20/09

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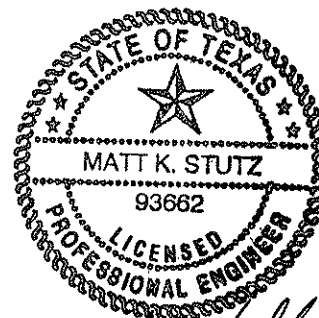
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1 INTRODUCTION

1.1 Scope

This Landfill Gas Management Plan (LGMP) has been developed for the City of Fort Worth consistent with the requirements set forth in the Texas Commission on Environmental Quality (TCEQ) Municipal Solid Waste regulations 30 Texas Administrative Code (TAC) §330.371 §330.159, and RCRA Subtitle D regulations in 40 CFR §258.23.



*This appendix
addresses
§330.371.*

In accordance with TCEQ “Guidelines for Preparing a Landfill Gas Management Plan,” this LGMP describes the existing landfill gas (LFG) monitoring network and the proposed monitoring probes which were previously permitted under MSW-218B. Seventeen new probes (GMP-5R through GMP-17R and GMP-18 through GMP-21) were installed between August 27, 2007 and September 7, 2007. A temporary authorization request for a timeline extension for the installation of the remaining four replacement probes (GMP-1R through GMP-4R) was submitted to the TCEQ on May 9, 2008, and the TCEQ approved the request on July 11, 2008. A one-time temporary authorization extension was granted on February 6, 2009, to extend the temporary authorization period until May 4, 2009. The remaining four replacement probes will be installed prior to the May 4, 2009, expiration. It also discusses the operation and monitoring of this network, procedures for verification of monitoring data, notification procedures, and outlines possible remediation activities, if required. In addition, this LGMP includes a description of a proposed Landfill Gas Collection and Control System (GCCS).

1.2 Purpose

30 TAC §330.159 requires landfills to develop a LGMP in accordance with §330.371. Compliance with §330.371 requires landfills to implement a routine monitoring program for methane to verify that (1) the concentration of methane gas generated by the facility does not exceed 1.25% by volume in facility structures (excluding LFG control or recovery system components), and (2) the concentration of methane gas does not exceed 5% by volume in monitoring points, probes, subsurface soils, or other matrices at the facility boundary defined by the legal description in the permit or permit by rule.

The purpose of the LGMP is to provide guidelines for management of LFG at the site. These guidelines cover the evaluation of the LFG migration at the permit boundary and in

5 REMEDIATION PLAN

Once verification procedures have confirmed that the methane levels are above regulatory limits in the facility buildings/structures and monitoring points or in one or more of the LFG monitoring probes/trench vents, or in other matrices, a remediation plan will be developed and implemented within 60 days of detection.

The first remediation 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/trench vent
- Sampling and laboratory analysis of LFG samples collected from the monitoring probe/trench vent to determine the concentration of methane and trace compounds
- A gas analysis to try to determine the source
- Additional LFG monitoring

Using accumulated data, an assessment will be made to determine an appropriate course of action to mitigate the LFG migration. Such actions may vary with the specific incident, but may include (and are not limited to) the implementation of a LFG collection and control system (GCCS).

Copies of the remediation plan will be placed in the operating record and provided to the Executive Director of the TCEQ along with notification that the plan has been implemented. ~~The Executive Director may establish an alternative schedule for demonstrating compliance.~~

For Alternative B, horizontal LFG collectors will be installed in areas which will receive an overliner prior to overliner installation. As shown in Figure III I-F.4, the horizontal LFG collector piping will be fabricated from solid and perforated thermoplastic pipe. The trench around the perforated section of pipe will be backfilled with coarse gravel. The perforated section will be sloped towards low points to facilitate the drainage of any landfill liquids that may collect in the trench.

The operation and maintenance of the proposed LFG system will be performed consistent with industry guidelines and practices which will be kept on-site and available for TCEQ review. Wellhead and system monitoring will be performed on a routine basis to monitor overall system performance. As needed, system adjustments are made to optimize the extraction of LFG from the landfill while controlling LFG migration and odors. In addition, the system will be routinely visually inspected for any evidence of needed repairs or other maintenance. General maintenance procedure will include the following:

- Each wellhead will be monitored and adjusted as needed to control LFG while reducing oxygen intrusion into the landfill.
- Pressure readings will be taken at various locations along the piping system to evaluate vacuum distribution.
- Condensate sumps will be checked for proper operation.
- Blowers and flares will be inspected for proper operation.

The site specific operations and maintenance plan will be kept on-site and made available for TCEQ review.

The back-up plan, should the active LFG system fail to provide active LFG collection and control, will be to place the system into passive operation by disconnecting the extraction wells and/or horizontals from the collection piping. The control valve will then be opened to allow the LFG to vent to relieve gas pressures until the active system can be repaired, at which time the extraction wells and/or horizontals will be reconnected and adjusted.

The site's current air permit was approved on March 5, 2007, by the TCEQ. The site will maintain compliance with this permit at all times including periods when LFG is being vented.

6.2 Regulatory Applicability

The site conducted a Tier 2 Nonmethane Organic Compound (NMOC) Emission Rate Test on August 29, 2005, through September 1, 2005, in accordance with the requirements in 40 CFR, Part 60, Subpart WWW, New Source Performance Standards for MSW Landfills (NSPS). The Tier 2 test determined that the site would remain below the NSPS compliance threshold of 50 megagrams per year through 2009. As such, it is

currently not required to install and operate a Landfill Gas Collection and Control System (GCCS) in accordance with 40 CFR, Part 60, Subpart WWW, however to reduce internal gas pressures to protect the integrity of the final cover, a GCCS will be installed. Additionally, a GCCS may be installed proactively before final cover placement to recover LFG for energy production and/or to reduce green house gas emissions.