

**TYPE V MUNICIPAL SOLID WASTE FACILITY
TCEQ MSW PERMIT 2234A**

WASTE ACCEPTANCE and ANALYSIS PLAN

for

LIQUID ENVIRONMENTAL SOLUTIONS OF TEXAS, LLC

**Houston Facility
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Houston, Texas 77013**

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Part II
TYPE V PERMIT APPLICATION
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1. Introduction

Liquid Environmental Solutions of Texas, LLC (LES) is in the business of processing non-hazardous liquid wastes. The LES Houston Facility is a de-watering, recycling, and pre-treatment facility. The facility is designed to separate and process the waste streams received into recyclable components, water suitable for discharge into the sanitary sewer system and solid materials for appropriate disposal. The acceptance and processing of such wastes requires a Type V Municipal Solid Waste (MSW) permit.

The purpose of this major permit amendment is to increase the monthly permitted waste receipts from 6 million gallons per month to 8.35 million gallons per month. The basis for this request is included in Attachment SDP-1 to the Site Development Plan (SDP). Additional changes requested in this permit submittal include changing the name of the Owner/Operator from “Liquid Environmental Solutions of Texas, L.P.” to “Liquid Environmental Solutions of Texas, LLC” and replacing the facility boiler. The facility has received a temporary authorization from the Texas Commission on Environmental Quality (TCEQ) regarding the boiler replacement. The new boiler is reflected in Table SDP-4 of the SDP.

The original MSW permit application for Permit 2234A, currently owned and operated by LES, was submitted on April 15, 1994. Since that time, there have been a total of eight revisions to the permit documents which constitute the permit, as indicated in the following Table W-1. The Site Operating Plan (SOP) underwent a major reorganization in the November 27, 2006 revision to comply with extensive new regulatory requirements.

Date	Site Development Plan (SDP)	Site Operating Plan (SOP)	Waste Acceptance and Analysis Plan (WAAP)	Permit Edition
4/15/1994	Original	Original (Old)	Original	Original
7/13/1995	-	-	Revision 1	Revision 1
10/13/1995	Revision 1	-	-	Revision 2
6/1/2004	Revision 2	Revision 1	Revision 2	Revision 3
11/1/2005	Revision 3	Revision 2	-	Revision 4
2/1/2006	Revision 4	Revision 3	Revision 3	Revision 5
11/27/2006	-	Original (New)	-	Revision 6
6/28/2007	-	Revision 1	-	Revision 7
5/30/2008	-	Revision 2	Revision 4	Revision 8

Table W-1: Revision history for MSW Permit No. 2234A.

This permit document submittal represents a major reorganization of the previous permit documents. The documents have been reorganized to better align with the corresponding regulatory requirements. Where applicable, regulatory citations are noted. With the concurrence of the TCEQ, these documents are being submitted as clean copies without markups.

This Waste Acceptance and Analysis Plan (WAAP) addresses regulatory requirements presented in Title 30, Texas Administrative Code (TAC), Chapter 330, Sections 61 and 203. Included as part of this plan are LES policies and procedures covering Pre-Acceptance Requirements (Attachment 1), Waste Acceptance Procedures (Attachment 2), Recordkeeping and Reporting (Attachment 3), and the Laboratory Quality Assurance Plan (Attachment 4). This Plan and the corresponding attachments provide a comprehensive discussion of the facility management and testing procedures for the wastes that will be processed at the facility. The facility will only accept wastes which are compatible with the production of liquid effluent that can safely be disposed into the City of Houston sanitary sewer and solids that can be hauled offsite for beneficial reuse or disposal in a municipal solid waste landfill. Discharges to the sanitary sewer shall be in compliance with the facility's pre-treatment permit and applicable federal, state, and local regulations.

2. Sources and Characteristics of Wastes (330.61 (b), 330.203 (a))

The LES Houston Facility only accepts non-hazardous wastes that are treatable based on the processing equipment and procedures in place. LES determines the treatability of wastes based on information submitted by the generator and/or physical and chemical evaluation conducted in a laboratory. Typically, wastes permitted for processing at the facility may be broadly characterized into one of the waste groups described in this section.

Grease Trap and Food-Related Wastes

LES will accept and process non-hazardous grease trap and other food-related wastes from restaurants, food preparation facilities, other food-related industries and other sources, serviced by its own and independent third-party vacuum trucks. Since the municipal and commercial businesses that transport grease trap waste to LES do not normally generate waste streams that contain any hazardous constituents, it is very unlikely hazardous waste will be contained in this waste.

Grease trap waste and food-related wastes are composed of food grease, trash, food particles and/or water. Food-related wastes include wastes such as rendered greases, tallow, molasses, and off-spec/out-of-date foods such as spoiled milk. Pollutant concentrations are extremely variable, depending upon, among other factors, the generator, the size of the trap and the frequency with which the trap is pumped. In most cases, the wastes contain floating matter made up primarily of animal and vegetable grease and oil, settled food particles, and wastewater containing large amounts of dissolved and suspended food matter. The wastes are typically characterized by high levels of BOD and TSS (both 5,000 mg/L+) and are acidic, with pH levels generally in the 4.0 to 5.0 range.

Grease trap and food-related wastes are typically processed in the grease trap treatment process described in Section 3 of the SDP. If the waste has a high concentration of solids (e.g. grease trap bottoms) it may instead be processed directly through solidification.

Grit Trap/Lint Trap Wastes

LES will accept and process non-hazardous grit trap/lint trap waste from car washes, garages, laundries, service stations, repair and maintenance shops, transport firms, car dealerships, and similar generators serviced by its own and independent third-party vacuum trucks. A grit trap is an interceptor in a sewer line designed to trap sand, grit, mud and heavy soils from car washes and other facilities that wash dirt and grime from equipment.

Grit trap waste pollutant concentrations are extremely variable. In most cases, the wastes contain floating matter made up primarily of petroleum and synthetic petroleum grease and oil; settled dirt and sand with wash down products such as matches, cigarettes, spark plugs, grass and sticks; and wastewater containing suspended dirt, detergents, and oil. The wastes are typically characterized by high levels of BOD and TSS (both 5,000 mg/L+) and tend to be neutral to caustic.

Grit trap/lint trap wastes are generally processed through the grit trap treatment process described in Section 3 of the SDP. If the waste has a high concentration of solids it may instead be processed directly through solidification.

Septage

Septage includes wastes pumped from septic tanks used by residential units, schools, motels/hotels, restaurants and other establishments. Septage is composed of sewage products, inert materials and related trash. It is generally processed through the grit trap treatment process described in Section 3 of the SDP, though wastes with high solids concentrations may instead be processed directly through solidification.

Non-Hazardous Industrial Oily Wastes

These wastes include non-hazardous Class I industrial wastes and wastes resulting from petroleum storage tank and underground storage tank activities. Class I industrial wastes are described in more detail below. The characteristics of these wastes are extremely variable, though they are typically oily waste streams which may have associated emulsified oil. These waste streams undergo rigorous treatability testing as described in Attachment 1 to demonstrate that the waste can be appropriately treated on site prior to acceptance. These wastes are typically processed through the non-hazardous industrial wastewater treatment process described in Section 3 of the SDP.

Non-Hazardous Class I and Class II Industrial Wastes

The classification of industrial solid wastes is outlined in Subchapter R of 30 TAC 335. The classification of industrial wastes (i.e. classification as a Class I, II, or III) is self-implementing under the Subchapter R rules. The characteristics of such wastes are extremely variable. Generally, the non-hazardous industrial wastes to be accepted for processing by LES will be waste streams which can be substantially minimized by dewatering and/or de-

emulsification. Generators are expected to follow all applicable regulations regarding the handling and transport of Class I and Class II wastes.

All non-hazardous industrial solid wastes that are accepted for processing will be identified according to the nature of the generator, the process generating the waste, and the physical and chemical composition of the waste. The Pre-Acceptance Requirements in Attachment 1 describe the rigorous evaluation process that must be completed before industrial solid wastes can be accepted for processing.

As described previously, industrial oily wastes are typically processed through the non-hazardous industrial wastewater treatment process described in Section 3 of the SDP. Class I and Class II wastes with high solids content are typically processed through solidification.

Waste types that will not be accepted for treatment at this facility include, but are not necessarily limited to:

- Characteristically hazardous wastes (40 CFR Part 261, Subpart C);
- Listed hazardous wastes (40 CFR Part 261, Subpart D);
- Prohibited wastes, as defined by 40 CFR Part 268;
- Wastes regulated by the Toxic Substances Control Act (TSCA);
- Radioactive wastes;
- Hydrophoric and polyphoric wastes;
- Explosives and shock-sensitive materials;
- Infectious, biological, etiological, or pathogenic wastes;
- Pressurized gases, gas cylinders, or aerosol cans;
- Wastes which are not amenable to safe and effective treatment at the LES facility;
- Unknown or unidentified wastes;
- Non hazardous Industrial waste not authorized by permit, without prior approval from the TCEQ;
- Polychlorinated Biphenyls (PCBs) wastes, as defined under 40 Code of Federal Regulations, Part 761;
- Do-it-Yourself (DIY) used motor vehicle oil; and
- Regulated Asbestos Containing Materials.

3. Waste Storage and Processing Information (330.203 (b))

The LES Houston facility is requesting a permitted capacity increase to 8.35 million gallons per month of total waste receipts. The basis for this request is included in Attachment SDP-1 to the SDP. The current permitted capacity is 6 million gallons per month.

In accordance with its permit, LES requires all non-hazardous industrial waste accepted at the facility to be manifested. LES submits monthly waste summary reports to the TCEQ by the 25th day of each month in accordance with 30 TAC §330.173(h). LES will not accept special or industrial wastes not authorized in its permit without submitting a request for authorization in writing to the executive director. The request will include the information required by 30 TAC §330.173(d).

As described in the Pre-Acceptance Requirements in Attachment 1, the wastes received by this facility are all amenable to the treatment processes on site. A comprehensive discussion of the treatment processes at the facility is provided in Section 3 of the SDP.

Waste acceptance procedures are described in Attachment 2. Generally speaking, as a waste is received it is classified, compared to the permitted waste list to confirm it is an approved receipt, and directed to the appropriate treatment train for processing. Laboratory personnel in charge of receiving wastes keep an instantaneous running computer log of the volume of daily waste received. Each incoming load is added to the daily total prior to unloading, to ensure compliance with the permitted monthly volume limit.

Wastes received at the facility are routed to one of the following four treatment processes depending upon the waste characterization:

- Grease trap treatment process,
- Solidification,
- Industrial oily waste treatment process, and
- Septic/grit/lint treatment process.

Receipt, storage, and processing data for each of these waste types are provided in the following Table W-2. Daily waste receipts assume an average over 30 days per month operation. Wastes are typically processed immediately upon acceptance and receipt. At a maximum, waste processing begins within 72 hours of receipt.

Waste Type:		Grease Trap	Solidification	Industrial Oily Wastes	Septic/Grit/Lint
Received Daily (gallons)		120,000	15,000	130,000	15,000
Max Storage (gallons)		170,000	25,000	200,000	35,000
Waste On Site (Days)	Max	13	6	63	6
	Avg.	1	0.5	1	0.2
Waste Processing Time (Days)	Max	10	3	60	3
	Avg.	1	0.5	1	0.2

Table W-2: Receipt, Storage, and Processing Data for Wastes at LES

Treatment of wastes on site yields treated effluent, dried sludge, and recovered oil and grease. These facility-generated wastes are disposed of as described in Section 7 of the SOP.

4. Sampling of Wastes Received and Facility Effluent (330.203 (c))

Analytical testing of wastes received depends upon waste type and is fully described in the Pre-Acceptance Requirements, included as Attachment 1, and the Waste Acceptance Procedures, included as Attachment 2. Sampling of facility effluent is described in Section 7 of the SOP.

Minimal analytical requirements are specified at 30 TAC 330.203 (c) pertaining to wastes received, sludges disposed at landfills, and facility effluent. Recordkeeping and methods requirements are also stated. These requirements, listed below, are also incorporated into the referenced sections of the facility permit documents:

1. Wastes received will be analyzed at least annually for benzene, lead, and total petroleum hydrocarbons (TPH) – refer to Attachment 1.
2. Grit trap wastes will be analyzed at least annually for biochemical oxygen demand, total suspended solids, benzene, TPH, and lead – refer to Attachment 1.
3. Sludges to be disposed of at a municipal solid waste landfill will be analyzed annually for benzene, lead, and TPH – refer to SOP, Section 7.
4. At a minimum, effluent from the facility will be analyzed annually for TPH, fats, oil and grease, and pH – refer to SOP, Section 7.
5. Records of each analysis will be maintained at the facility for a minimum of three years – refer to SOP, Section 14.
6. All sampling and analysis for the above testing will be done according to EPA approved methods – refer to the corresponding Attachments and sections referenced above.