LIQUID ENVIRONMENTAL SOLUTIONS OF TEXAS, LLC

Policy and Procedures
Pre-Acceptance Requirements
Houston, Texas Facility

Procedure

The Liquid Environmental Solutions of Texas, LLC (LES) Pre-Acceptance Requirements outline evaluation, process and quality control testing requirements for all wastes prior to acceptance and processing at the facility. These requirements detail the necessary paperwork, analytical information and sample requirements for all wastes being evaluated by the facility for treatment. The requirements will be updated as needed to reflect regulatory changes and to incorporate information obtained from operating experience at the facility.

Pre-Acceptance Requirements

All wastes except septic and grease trap/food-related wastes must be pre-approved prior to delivery for treatment. Pre-approval of septic and grease trap wastes is not deemed necessary because these wastes are generally unlikely to be hazardous or contain hazardous constituents. Further, these wastes are generally accepted as being compatible with treatment processes and other wastes accepted at the facility.

A completed Generator Liquid Profile Sheet, included as Appendix 1, a waste sample, and analytical information consistent with the following schedule must be submitted by the generator to the facility prior to approval for all wastes except septic and grease trap/food-related wastes for treatment. Generally, the generator-supplied information required to complete the waste characterization process will include, but may not be limited to, the following:

- **Analytical Data on Representative Sample of Waste** – The analytical data provided should include the date of sampling, analytical methods, detection levels, results, and a signature. A generator may provide information on the process generating the waste to supplement (or in lieu of) the analytical data. For a commercial chemical product, an MSDS or a technical specification sheet may be an acceptable substitute for the analytical data.

- **Representative Sample Certification** – This certification, which is included in the Generator Liquid Profile Sheet, will be required in order to (1) ascertain the representation of the sample upon which the analyses were performed and (2) demonstrate that the sample was collected in accordance with approved Environmental Protection Agency (EPA) methods.

- **Hazardous Waste Disclaimer** – This disclaimer, which is included in the Generator Liquid Profile Sheet, is required from the generator to certify that the waste does not meet the definition of a hazardous waste as outlined in 40 Code of Federal Regulation (CFR) Part 261 Subpart C (characteristic hazardous wastes)

and Part 261 Subpart D (listed hazardous wastes). Hazardous wastes will not be accepted at the facility.

Should the review of the certified written data and the inspection of the representative waste sample prove inadequate for an accurate determination of physical and chemical composition of the waste (or the possible presence of hazardous constituents in the waste), the Laboratory Manager or his/her designee may initiate waste evaluation procedures or reject that waste stream until additional information is provided by the generator. If LES elects to initiate evaluation procedures, the facility will contact an approved independent laboratory to supplement in-house analyses as required to analyze the representative waste sample submitted by the waste generator. The analytical techniques suggested herein have been selected so as to:

(1) Make a hazardous waste determination.
(2) Effectively characterize the waste.
(3) Provide data relating to compatibility with other wastes.
(4) Proved insight into optimization of waste treatment methodologies.

The LES Laboratory Manager (LM) will decide which analyses are necessary and will direct the manager of the independent contract laboratory accordingly.

Hazardous Waste Determination Testing

Hazardous waste determination analyses will be conducted prior to the acceptance of all wastes except septic, grease trap, and food-related wastes in order to prevent the inadvertent acceptance of unauthorized RCRA hazardous wastes. An important objective of these analyses will be to identify those wastes that exhibit any of the hazardous characteristics described in 40 CFR Chapter 261 Subpart C so as to prevent the processing of hazardous wastes at LES. The parameters and associated rationale for the hazardous waste determination analyses are as follows:

Ignitability: A waste sample will be analyzed to determine its ignitability. Wastes that exhibit a flash point of less that 140°F or any of the other properties outlined in 40 CFR Chapter 261.21 are characteristically hazardous due to ignitability and will not be accepted for processing.

Corrosivity: A waste sample will be tested to determine whether the waste exhibits the hazardous characteristic of corrosivity as specified in 40 CFR Chapter 261.22. Wastes having a pH of less than or equal to 2.0 or greater than or equal to 12.5 are characteristically hazardous due to corrosivity and will not be accepted for processing.

Reactivity: A waste sample will be tested to determine whether the waste exhibits the hazardous characteristic of reactivity as specified in 40 CFR Chapter 261.23. Characteristically reactive wastes will not be accepted for processing.

Toxicity: Unless the analysis is not required based on process knowledge of the origin of the waste, the Toxicity Characteristic Leaching Procedure (TCLP) will be conducted on a waste sample (as referenced in 40 CFR Chapter 261.24) to determine the concentrations of toxic hazardous metals and organics in leachate derived from the waste sample. Should the concentration of any contaminant exceed Toxicity Characteristic (TC) regulatory levels established in 40 CFR Chapter 261.24, the waste will not be accepted for processing.

Waste Characterization ("Fingerprint") Testing

Waste characterization analyses will be conducted prior to the acceptance of all wastes except septic, grease trap, and food-related wastes to provide adequate waste characterization information. A purpose for conducting fingerprint testing is to provide a benchmark for comparison to actual shipments of approved wastes to mitigate the risk that unauthorized hazardous materials are accepted at the facility. The parameters and associated rationale for the waste characterization analyses, which may be used for each approved waste stream, are as follows:

Physical Appearance: A visual examination will be conducted in order to ascertain the general physical characteristics of the waste and establish a basis for waste load inspections. This will facilitate the comparison with samples of wastes actually transported to the site for processing.

Odor: Obvious strong incidental odors will be noted and described for comparison to incoming waste loads.

pH: A pH benchmark will be established to provide a basis for comparison to waste shipments.

Chemical Oxygen Demand: A COD benchmark may be established to provide a basis for comparison to waste shipments.

Density/Specific Gravity: The specific gravity or density of the waste sample may be measured and recorded for comparison to waste shipments.

Total Suspended Solids: The fraction of suspended solids present in the sludge and slurry wastes may be determined for a waste sample.

Metals: A benchmark will be established for numerous metals, including, at a minimum, Antimony, Arsenic, Cadmium, Chromium, Cobalt, Copper, Cyanide, Lead, Nickel, Silver, Tin, Titanium, Vanadium, and Zinc.

Waste Composition: A waste sample will be evaluated for percent solids, water content, and free-phase organics content.

Ignitability: A waste sample may be evaluated for ignitability.

Reactivity: A waste sample may be evaluated for reactivity.

Treatability: A waste sample will be evaluated for treatability. Treatability tests mimic available treatment processes used at the facility (settling, phase separation, etc.) to demonstrate that the wastes received can be adequately processed.

Analytical Requirements

This section describes information and analytical data that will be required prior to acceptance of a waste for processing. Note that Sample Evaluation Reports are described more in the section of this document entitled "Sample Evaluation." Because the facility is subject to the Centralized Waste Treatment Point Source Category regulations for metal bearing and oily waste pretreatment, found at 40 CFR 437 Subpart D, certain waste types, as noted in the following paragraphs, require analytical data for these "regulated parameters": Antimony, Arsenic, Cadmium, Chromium, Cobalt, Copper, Cyanide, Lead, Mercury, Nickel, Silver, Tin, Titanium, Vanadium, Zinc, Bis-2-ethylhexyl phthalate, Carbazole, n-Decane, Fluoranthene, and n-Octadecane. At the discretion of the LES Laboratory Manager, analysis for selected constituents may be omitted based upon knowledge of the generating process associated with the waste. Many of the required analyses may be performed at the LES facility. An outside vendor laboratory may be contracted for analytical testing not preformed at the LES facility or as otherwise needed.

A. For reasons described previously, septic wastes, grease trap wastes, and food-related wastes do not require submission of a completed and signed Generator Liquid Profile Sheet (GLPS) or a Sample Evaluation Report completed by the Laboratory Manager. However, they must have an acceptable completed manifest or trip ticket prior to acceptance.

B. All other wastes require submission of a completed and signed GLPS and a representative sample. The LES Laboratory Manager will complete a Sample Evaluation Report for these wastes. In addition, an analysis for the 40 CFR 437 regulated parameters is required. Depending upon the origin and the nature of the wastes, the facility may require applicable Material Safety Data Sheets (MSDSs) and/or data from a recent Toxicity Characteristic Leaching Procedure (TCLP) analysis for review as part of the pre-acceptance evaluation.

C. Any materials that are to be accepted for beneficial reuse must be approved by the LES Laboratory/Compliance Manager. Although these materials may be useable for specific in-plant operations, the use must be consistent with the initial purpose intended for the product. In addition, the generator must be notified in writing regarding the intended use of the material.

Sample Evaluation

Prior to the initiation of **ANY** evaluation testing, information provided by the generator will be reviewed by the Laboratory Manager to determine whether the waste is hazardous and if it can be processed and treated by the facility. If the waste is determined to be non-

hazardous, the sample, GLPS, MSDS, and any required analytical data will be submitted to the laboratory for testing treatability. If the waste is determined to be hazardous, the sample will be transported off-site by an authorized transporter in accordance with applicable industrial and hazardous waste regulatory requirements.

The facility laboratory and/or an approved contract laboratory will perform the required testing as outlined on the Sample Evaluation Report and any other testing deemed necessary by the Laboratory Manager. A blank Sample Evaluation Report is provided in Appendix 2. All samples will be evaluated before and after bench scale treatability testing to determine the effectiveness of the prescribed treatment processes. At that time, a determination will be made to insure that the waste stream is compatible with the treatment processes available at the facility.

Results of all evaluation testing will be reported on the Sample Evaluation Report and submitted along with the complete file to the Division Manager for final approval. If a waste stream is rejected, the Division Manager is notified and the sales representative notifies the generator that their waste stream has been rejected.

Waste Treatment Evaluation Testing

Materials such as lime, ferric chloride, sulfuric acid, and polymers are used in processing operations. Waste treatment evaluation testing is performed for new and for non-typical waste streams. Analyses of several parameters (COD, total and suspended solids and density/specific gravity) may be conducted using mixtures of waste and pre-clarification chemicals (polymers, acidification and neutralization agents) under laboratory conditions duplicative of the proposed treatment process to aid in determining an adequate treatment recipe to optimize the following:

> **Recoverability of Recyclables:** The degree to which elements of the waste stream (such as hydrocarbons) can be recovered and means by which recovery for recycling can be enhanced.
>
> **Effluent Clarification:** The effect on flocculation and de-emulsification characteristics of the waste stream of alternative mixtures.

The results of these analyses will determine whether the treatment capabilities in place at the facility are such that the waste stream can be effectively and economically treated consistent with Federal, State and local regulations. Important considerations will include the quality of the effluent, settling times, and chemical clarification enhancements. The analyses will provide LES the ability to prepare any waste-specific processing plans.

Following the waste evaluation, LES will notify the generator whether the waste has been accepted or rejected. Rejected samples that are deemed to be hazardous are packaged and transported off-site by an authorized transporter in accordance with applicable industrial and hazardous waste regulatory requirements.

Periodic Reviews and Updates

All profiles will be reviewed and updated on an annual basis. At a minimum, a new GLPS will be obtained from the generator. The GLPS will provide an annual recertification of generator knowledge that the profiled material is non-hazardous. Where applicable, additional laboratory data will be obtained to confirm that the characteristics of the wastes have remained unchanged. If significant deviations from the original profile become evident, the material may require re-profiling.

In accordance with 30 TAC 330.203 (c), all wastes received will be analyzed for benzene, lead, and total petroleum hydrocarbons (TPH). Additionally, grit trap wastes will be analyzed at least annually for biochemical oxygen demand, total suspended solids, benzene, TPH, and lead. Sampling and analyses conducted to satisfy this regulatory requirement will be conducted in accordance with EPA approved methods.

Environmental Health and Safety

All facility staff who handle wastes are expected to wear the following personal protective equipment (PPE):

- Safety glasses;
- Hard hat;
- Steel-toed boots;
- Long-sleeved chemically-resistant clothing; and
- Latex gloves.

An appropriate HMIS designation will be recorded on the Sample Evaluation Report for Class 1 and Class 2 industrial wastes. The HMIS designation will subsequently follow the waste throughout the acceptance and processing of the material.

Laboratory Files

Copies of approved profiles, MSDS (if applicable), analytical data and completed Sample Evaluation Reports will be sent to the lab to establish the laboratory fingerprint file described herein. An individual fingerprint log will be maintained onsite for each approved profile at the facility. Results from these analyses will be recorded in the receiving log and used to establish consistency with previously received loads.

APPENDIX 1

GENERATOR LIQUID PROFILE SHEET

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APPENDIX 2

SAMPLE EVALUATION REPORT