

LIQUID ENVIRONMENTAL SOLUTIONS of TEXAS, LLC

Policy and Procedures Laboratory Quality Assurance Plan Houston, Texas Facility

Statement of Policy

Liquid Environmental Solutions of Texas, LLC (LES) will institute a plan for the periodic maintenance and calibration of laboratory equipment used at the company facility. The purpose of the plan will be to provide a consistent program that will allow maximum performance from onsite laboratory equipment. The plan will also provide a mechanism for obtaining reliable analytical data that will allow maximum protection for each facility and subsequent compliance with federal, state, and local regulations.

Scope

LES onsite analytical laboratory.

Procedure

This Liquid Environmental Solutions of Texas, LLC Laboratory Quality Assurance Plan outlines required steps involved in the proper maintenance and calibration of onsite laboratory equipment. The following plan is provided to detail the necessary procedures, paperwork, and records retention for operation of an onsite laboratory. All information regarding internal laboratory quality assurance will be retained at the facility and be accessible for review.

Qualitative Analytical Equipment

All qualitative analytical equipment shall be kept clean and maintained in good working condition. Where applicable, appropriate maintenance and calibration procedures for each specific piece of analytical equipment will be followed on the prescribed schedule. Sufficient replacement parts will be retained at the onsite laboratory in order to minimize downtime on laboratory equipment.

If an analytical instrument will be out of service for greater than 24 hours, an alternate means for conducting the prescribed analyses must be initiated. If an alternate method is not readily available, LES may either enlist the services of an outside vendor laboratory or elect not to accept any waste stream that would require analyses by the malfunctioning equipment.

Quantitative Analytical Equipment

All quantitative analytical equipment shall be kept clean and maintained in good working condition. Calibration standards for all quantitative analytical equipment will be purchased from a vendor approved by the equipment manufacturer. Calibration standards generated by the onsite LES laboratory will be prepared according to manufacturer's specifications and preserved as required. Sufficient replacement parts will be retained at the onsite laboratory in order to minimize downtime on laboratory equipment.

If any analytical instrument will be out of service for greater than 24 hours, an alternate means for conducting the prescribed analyses must be initiated. If an alternate method is not readily available, LES may either enlist the services of an outside vendor laboratory or elect not to accept any waste stream that would require analyses by the malfunctioning equipment.

For chemical reagents used in spectrophotometer analyses, quality control measures will include the preparation of a minimum one blank for each sealed lot of reagent containers. Reagent container blanks will be marked with a date of preparation, the preparer's initials and an expiration date. The expiration date will be no longer than 30 days after the preparation of the blank.

Preventative Maintenance

The LES onsite laboratory will implement a preventative maintenance program for all available analytical equipment. The routine preventative maintenance activities will be performed in accordance with the respective manufacturer's instructions. Documentation from instrument repair and/or upgrades will be kept in a folder for the instrument.