

LOS ANGELES FIRE DEPARTMENT



UNDERGROUND STORAGE TANK PROGRAM SITE ASSESSMENT REPORT REQUIREMENTS

A Site Assessment Report must contain complete documentation of the environmental investigation work performed at the site and a comprehensive evaluation of the findings. The narrative report should be accompanied by maps and cross sections that show the geologic and hydrogeologic conditions and the distribution of contaminants. All reports should summarize the findings in a conclusion and also provide recommendations for future assessment and/or mitigation of the contamination at the site.

The report shall be certified by one of the following California licensed professionals:

- Professional Civil Engineer (PE)
- Professional Geologist (PG)
- Certified Engineering Geologist (CEG)
- Certified Hydrogeologist (CHG)
- Professional Petroleum Engineer (PPE)

All work must be performed under the direct supervision of a PE, PG, CEG, CHG or PPE. The report must contain a **wet ink signature in blue ink and a seal** indicating expiration date of the licensed professional who is responsible for the project.

Deviations from the LAFD-approved work plan must be addressed and justified, pursuant to Article 11, Section 2722 (c) and (d) of the California Code of Regulations, June, 2001 and Division 31 of the City of Los Angeles Fire Code, 1998 Edition.

A. Site Information

1. Name and address of the site and Responsible Party.
2. Name and telephone number of the appropriate contact person.
3. LAFD case number.
4. Complete mailing list of all record fee title owners and written certification that the landowner notification requirement has been met.

B. Site History/Future Use

1. Current and previous type(s) of business activities on site.
2. Hazardous material(s) spill/release history at the site.
3. Current site conditions including summary of all previous site investigations, soil vapor studies, remedial actions, etc.

4. Location, capacity, content, and construction material of existing and removed tank systems.
5. Future site use and development plans.
6. Adjacent site uses

C. Maps

1. Site Map(s) – including name and address of facility
 - The location of all tanks (past and present) with associated product piping; chemical storage and processing areas; and transfer/drain lines.
 - The location of all previous sampling points (with sample results for TPHg, TPHd, Benzene and MTBE), borings, and monitoring wells.
 - The location of surface and subsurface features and structures (buildings, pump islands, and planters).
 - The location of utilities (sewer, water, gas and power lines).
 - Tank excavations (past, existing, and proposed).
 - If the sampling points, borings or wells differ from the approved work plan: The location of sampling points proposed in the work plan.
 - The location of current sampling points (with sample results for TPHg, TPHd, Benzene and MTBE), borings, trenches, and monitoring wells.
 - Include a scale, legend, date, streets, and compass direction.
2. Vicinity Map
 - Name and address of facility
 - An index map showing the regional area and site boundaries. U.S. Geological Survey topographic map or a street guide map is recommended.
 - The location of geographic features (surface waters, water wells, schools, and hospitals).
 - The location of topographic features (depressions, slopes, cliffs, etc.)
 - Include a scale, legend, date, and compass direction.

D. Regional and Site-Specific Geology

1. Describe lithology of soil and any bedrock formations using the United Soil Classification System.
2. Include color, grain distribution, and general characteristics of the subsurface soil and/or bedrock.
3. Determine soil and contaminant properties which affect mobility of vapor, water, and contaminants in the vadose zone, capillary fringe, and saturated zone(s)
4. Identify any unique site features which may influence movement of contaminants or groundwater.

E. Regional and Site-Specific Hydrogeology

1. Indicate both the current depth to shallowest groundwater and the historic high groundwater level. If LAC DWP Hydraulic/Water Conservation Division records are used, indicate the depth of the well and screening interval.
2. Provide groundwater basin information including known and potential beneficial uses.
3. Groundwater gradient and direction of groundwater flow.

F. Delineation of Contamination

1. Summary table(s) of analytical data with sample identification, depth, location, analysis method(s), and results.
2. Map(s) showing horizontal extent of soil contamination, probable contamination sources, contaminant migration pathways, well and boring locations, sample locations, and **sample results – at a minimum, include values for TPHg, TPHd, Benzene & MTBE.**
3. Cross sections showing vertical and horizontal extent of soil contamination, contamination source(s), lithology, water table, sample locations, and sample results.
4. Map(s) showing horizontal extent of groundwater contamination, well locations, sample results, product thickness in wells, groundwater elevation in wells, groundwater elevation contours, and groundwater flow directions
5. Environmental parameters or man-made features which may affect the spread of contamination
6. Estimated volume of contaminated soil and/or water
7. Estimated mass of contaminant in soil and/or water

G. Boring Logs

All monitoring wells and all other borings shall be logged during drilling according to the requirements contained in Title 23, Division 3, Chapter 16, Section 2649:

- (A) Soil shall be described in the geologic log according to the Unified Soil Classification System as presented in Geotechnical Branch Training Manual Numbers 4, 5, and 6, published in January of 1986 (available from the Bureau of Reclamation).
- (B) Rock shall be described in the geologic log in a manner appropriate for the purpose of the investigation;
- (C) All wet zones above the water table shall be noted and accurately logged. Where possible, the depth and thickness of saturated zones shall be recorded in the geologic log; and
- (D) Geologic logs shall be prepared by a professional geologist or civil engineer, who is registered or certified by the State of California and who is experienced in the use of the Unified Soil Classification System. The geologic logs may also be prepared by a technician trained and experienced in the use of the Unified Soil Classification System who is working under the direct supervision of one of the aforementioned professionals, provided that the professional reviews the logs and assumes responsibility for the accuracy and completeness of the logs.

H. Sampling and Laboratory Analysis

1. Describe sampling and laboratory analysis protocols.
2. Submit laboratory data electronically as required by Title 23, Chapter 16, Article 12.
3. Chain-of-custody:
 - a. Dates and times of sampling and receipt by laboratory
 - b. Sample ID correlating to field ID and laboratory ID
 - c. Signatures of personnel relinquishing and receiving sample
 - d. Analysis methods to be used
 - e. List nature of sample (solid/liquid/vapor)
 - f. Size and type of container (e.g., 2" x 6" brass sleeve, 500 ml plastic jar, tedlar bag, etc.)

I. Stockpiled Soil Management

1. Soil generated during the drilling of borings and water produced from development or purging activities must be adequately contained on-site.
2. The materials must be manifested and transported to a permitted disposal location within 90 days if they are found to be hazardous.

J. Summary/Conclusions/Recommendations

1. Horizontal and vertical extent of soil and groundwater contamination defined.
2. Recommendations for additional assessment.
3. Recommendations for mitigation alternatives.

K. Signature/Registration

1. Signature(s) of report preparer(s)
2. Signature(s) and registration number(s) of the registered professional(s) who supervised and is responsible for designated portions of the report.
3. Authorized signature for the company preparing the report (original signatures required; no draft or unsigned reports)

L. Appendices

1. Well/boring logs.
2. Hazardous waste manifests and disposal receipts
3. Permits (Air Quality Management District, Fire Department, etc.)
4. Laboratory data sheets
5. Chain-of-custody forms

If you require additional information from the Los Angeles Fire Department, Please contact the Environmental Unit Plan Check at 213-482-7115.□