



## Geological Audit Services, Inc.

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30 November 1991  
(GeoAudit LA 98C3.295)

Ms. Shahin Nourishad  
Los Angeles County - Department of Health Services  
Hazardous Materials Control Program  
2615 South Grand Avenue #601  
Los Angeles, CA 90007

Subject: Remedial Action Work Plan for Graham Printing And  
Lithograph -  
17475 Gale Avenue, City of Industry, California

Dear Ms. Nourishad:

In accordance with the request of our client, Mr. Robert Hellinger of Graham Printing and Lithograph, we have prepared this work plan to remove hydrocarbon contamination adjacent to the compressor and barrel storage areas at the referenced address.

### BACKGROUND

The following is summarized from a preliminary investigation performed by Terra Tech Labs (TTL: report dated 26 December 1988):

- o Two borings were drilled to a depth of 10 feet at the compressor area. Samples from 5 feet in those borings (Borings SB1 and SB2) indicated the presence of total petroleum hydrocarbons (TPH) at 323 and 1,190 mg/kg, respectively. The samples obtained from 10 feet were found to contain TPH of less than 35 mg/kg.
- o A surface soil sample (Sample Comp-1) obtained near the compressors indicated the presence of TPH at 180,000 mg/kg. Acetone, 2-butanone (MEK), and 4-methyl-2-pentanone were also detected in this sample at 370, 170, and 240 ug/kg, respectively.
- o Four soil borings (Borings SB3 - SB6) were drilled around the perimeter of the barrel storage area. The results of the samples did not indicate the presence of significant levels of TPH in these borings.
- o The sample from 10 feet below grade in Boring SB6 showed the detection of acetone, MEK, 1,1,1-trichloroethane (TCA), and 4-methyl-2-pentanone at 40, 19, 50, and 22 ug/kg, respectively.

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Page 2 of 4

The Los Angeles Region - California Regional Water Quality Control Board (RWQCB), in a letter dated 6 June 1989, indicated that the impact of the discharge on the ground water needed to be assessed. At a minimum, the RWQCB required the installation of a single ground water monitoring well in the down-gradient direction from the barrel storage area.

On 27 September 1989, Geological Audit Services (GeoAudit) established a ground water monitoring well as required. The sample obtained from that well on 5 November 1990 did not indicate the presence of volatile organic compounds (VOC). However, in order to monitor the water quality, the RWQCB in a letter dated 22 January 1991 has required additional sampling, which was due in January and April 1991. The results from January 1991 indicated the presence of TRPH, 1,1-dichloroethene, 1,1,1-trichloroethane (TCA), and xylene at 4 mg/kg and 7.5, 4.4, 1.4 ug/l, respectively. The results of the May 1991 sampling indicated the presence of TRPH at 0.7 mg/kg.

The Los Angeles County - Department of Health Services (DHS) issued a letter dated 11 April 1991 indicating that a proposal was required to assess the vertical extent of contamination in the compressor and barrel storage areas.

#### PROCEDURES

This work plan pertains to contamination delineation through soil removal. In order to complete the objectives, the following items need to be performed:

#### PREPARATION

- 1) Prepare a site health and safety plan (SHSP) in accordance with the Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities - Prepared by National Institute for Occupational Safety and Health, Occupational Safety and Health Administration, U.S. Coast Guard and US Environmental Protection Agency, October 1985. A copy of the SHSP was attached to the last workplan dated 30 September 1991.
- 2) Notify the DHS and RWQCB one week prior to work initiation.
- 3) Brief all involved personnel with the contents of the SHSP on-site prior to work initiation.

#### EXCAVATION

- 4) Excavate contaminated soil in the compressor area and the barrel storage area using a backhoe or excavator. We believe that the approximate depth of the excavation in the compressor area will be approximately 7 feet and 10 to 12 feet in the barrel storage area.
- 5) Monitor the excavated soil for organic vapors utilizing a photo-ionization detector (PID) to qualitatively determine when the soil is clean. The PID used is the Photovac Microtip HL-200, lamp energy 10.6 eV, calibrated to 500 ppm hexane.
- 6) Log excavations utilizing the Unified Soil Classification scheme
- 7) Obtain soil samples from every 7' x 7' (49 square feet) section of the sidewalls and the floor of the excavation using a metric volume core sampler loaded with two pre-cleaned 2 x 3-inch brass tubes. Samples will be collected 1 to 2 feet into the sidewalls and bottom of excavation.
- 8) Preserve soil samples in the lead brass tubes by covering both ends with aluminum sheets, capping, and sealing with tape.
- 9) Label and log soil samples on a chain of custody form and store samples under ice for transport to a laboratory.
- 10) Decontaminate sampling equipment in tri-sodium phosphate (TSP) solution and rinse twice with water prior to each sampling run.
- 11) Monitor auger returns and soil sample duplicates for the presence of organic vapors utilizing a PID.
- 12) Stockpile contaminated soil and cover with polyethylene sheeting. Dispose or treat contaminated soil with DHS and RWQCB approval.
- 13) Relinquish soil samples to an on-site, state certified mobile laboratory for immediate analysis. The laboratory to be used is:

Terra Tech Labs, Inc.  
1920 E. Deere Avenue, Suite 130  
Santa Ana, CA 92705  
(714) 757-7022  
(714) 757-7274 (fax)

- 14) Analyze all soil samples from for total recoverable petroleum hydrocarbons (TRPH) and VOC in accordance with EPA methods 418.1 and 8010/8020, respectively. Practical quantitation limits (PQL) of 5 to 10 ug/kg for selected VOC and 1 mg/kg for TRPH. Samples will be analyzed for VOC prior to TRPH. The laboratory report must include laboratory blank, matrix spike and duplicate recoveries, spike concentration, laboratory control standards, and extraction procedure will be included.
- 15) Apply the maximum contaminant levels (MCL) for the following compounds as the cleanup level for the soil:

<u>Compound</u>	<u>Maximum Contaminant Level (MCL)</u>
TRPH	100 mg/kg (ppm)
TCA	200 ug/kg (ppb)
Total VOC	300 ug/kg

PROJECT SUPERVISION

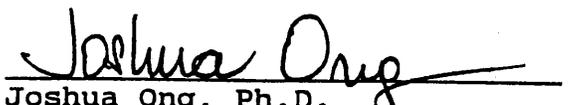
- 17) Prepare a report detailing the results of the work in a format to be submitted to the DHS, signed by a California Registered Geologist.

Please call our office if you have any questions.

Sincerely,

GEOLOGICAL AUDIT SERVICES, INC.

  
Robert D. Loeffler  
Project Geologist

  
Joshua Ong, Ph.D.  
Senior Project Hydrogeologist  
Registered Geologist No. 4725

Enclosures

- cc: (1) Mr. Robert Hellinger - Graham Printing and Lithograph  
(1) Mr. Phillip Ramsey - Los Angeles Region - RWQCB  
(1) Ms. Lisa Newcombe-Dierl - Terra Tech Labs