R0266

Tank Closure Report on Removal of Underground Fuel Storage Tanks and Related Structures Harrison Street Garage
1432-1434 Harrison Street
Oakland, California

February 22, 1994
2680.00-32

Prepared for
Mr. Alvin H. Bacharach
Ms. Barbara J. Borsuk
383 Diablo Road, Suite 100
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ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

February 22, 1994 LF 2680.00-32

Mr. Thomas F. Peacock
Supervising Hazardous Materials Specialist
Alameda County Health Care Services Agency
Department of Environmental Health
Division of Hazardous Materials
80 Swan Way, Room 350
Oakland, California 94621

Subject: Tank Closure Report on Removal of Underground Fuel Storage Tanks and Related Structures, Harrison Street Garage, 1432-1434 Harrison Street, Oakland, California

Dear Mr. Peacock:

Enclosed is the tank closure report for the subject site. If you have any questions about the report, please call either of the undersigned.

Sincerely,

John Sturman, P.E., R.G.
Senior Geotechnical Engineer

Ted Splitter, P.E., G.E.
Principal Geotechnical Engineer

Enclosure

cc: Mr. Alvin H. Bacharach/Ms. Barbara J. Borsuk
Mark Borsuk, Esq.
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CERTIFICATION

All engineering information, conclusions, and recommendations have been prepared under the supervision of and reviewed by a Levine·Fricke California Professional Engineer.

John O. Sturman
Senior Geotechnical Engineer
California Civil Engineer (049765)

2/22/94
Date

February 22, 1994 LF 2680.00-32

DRAFT TANK CLOSURE REPORT ON REMOVAL OF UNDERGROUND FUEL STORAGE TANKS AND RELATED STRUCTURES HARRISON STREET GARAGE 1432-1434 HARRISON STREET, OAKLAND, CALIFORNIA

1.0 INTRODUCTION

On behalf of Mr. Alvin H. Bacharach and Ms. Barbara J. Borsuk ("the client"), Levine·Fricke, Inc. ("Levine·Fricke") has prepared this report to describe activities related to the removal of two approximately 1,000-gallon and two approximately 750-gallon underground storage tanks (USTs), two hydraulic lifts, one sump, and related structures at the Harrison Street Garage. The garage is located at 1432-1434 Harrison Street and 1439-1443 Alice Street in Oakland, California ("the Site"; Figure 1).

This report describes the demolition associated with UST, lift, and sump removal, the excavation and stockpiling of soil, the stabilization and removal of the USTs and related structures, and the soil sampling activities, and presents laboratory analysis results and our conclusions and recommendations. Levine·Fricke was retained by Mr. Bacharach and Ms. Borsuk to provide services to assist with closure of the USTs, including preparation of a site health and safety plan (HSP), permitting, compliance, field observation, air monitoring, sampling, and preparation of this closure report.

2.0 BACKGROUND

The Site currently is operated as a parking garage. We understand that prior to 1988, gasoline was sold through two dispensers and some automobile repair service also was performed at the Site. Four USTs were used at the Site. Two steel single-walled USTs approximately 1,000 gallons in capacity under the sidewalk on Harrison Street (see Figure 2), with dispensers nearby, were reported to have contained motor fuel. Two other steel single-walled USTs approximately 1,000 gallons in capacity in the basement near Alice Street (Figure 3) contained waste oil. The gasoline USTs reportedly have not been in use since 1988. We understand that the waste oil USTs located beneath the basement slab had not been used for some years before that time (Figure 4).

Previous investigations of the area surrounding the subject USTs have been performed by Subsurface Consultants, Inc., SCS Engineers, Inc., RGA Environmental, Inc. (RGA), and Levine·Fricke. Results for soil samples collected during these investigations indicated that hydrocarbons identified as gasoline (and possibly diesel) were present in soil near the Harrison Street USTs.

3.0 WORK PERFORMED

Power Engineering Contractors, Inc., of Palo Alto, California, performed the demolition, soil excavation, and UST removal under contract to Levine·Fricke. Prior to initiation of subsurface activities, utility locations were identified and marked by Underground Services Alert.

Site work was performed in accordance with the project HSP (RGA Environmental 1992). Levine·Fricke developed an addendum to the HSP (Levine·Fricke 1992). Both documents were reviewed and approved by the Alameda County Department of Environmental Health (ACDEH).

The closure of the USTs was performed in accordance with the UST Closure Plan, which was approved by the ACDEH on November 10, 1993.

3.1 Demolition

On November 20 and 21, 1993, Power Engineering and its subcontractor, Nichols Diamond Tool, Inc., of Redwood City, California, sawcut concrete around the gasoline tanks on the Harrison Street sidewalk and the hydraulic lift and sump area inside the western portion of the garage. The concrete within these areas was then broken up and removed from the Site. A masonry block wall in the hydraulic lift and sump area was also demolished and removed.

The concrete and masonry debris and rubble was hauled to the Specialty Crushing facility in Emeryville (a concrete recycler).

The concrete overlying the former waste oil USTs and appurtenant piping had been removed during the previous investigation by SCS Engineers, Inc.

3.2 Foundation Assessment

On November 21, 1993, the building foundation adjacent to the tanks under the Harrison Street sidewalk was exposed for evaluation. Levine·Fricke geotechnical engineers and the client observed that the foundation adjacent to the tanks consisted of bricks with grout extending approximately 1.5 to 2 feet below sidewalk surface. Based on this observation, Levine·Fricke recommended to the client that appropriate measures be taken to support the southern portion of the excavation during removal of the adjacent UST to avoid potential structural damage to the building.

Power Engineering was requested by Levine·Fricke to provide plans for installing such excavation support measures. While those plans were in process, the soil around the footing was replaced and the excavation was covered with trench plates and surrounded by a chain-link fence. Power directed its field efforts at the other USTs and the lifts and sumps while the excavation support measures were being developed. Power Engineering designed a system consisting of H-beams in drilled piers with hydraulic bracing. The system was installed on December 3, 1993.

3.3 Waste-Oil UST and Piping Removal

Approximately 60 cubic yards of soil were removed from around the waste-oil USTs to expose the piping and loosen the tanks. The soil was stockpiled by Power Engineering in the basement near the USTs. As the soil was being removed, it was inspected by Levine·Fricke for indications of volatile petroleum hydrocarbons; the inspection included screening with a field photoionization detector (PID). Soil that appeared affected by VOCs was covered with polyethylene sheets after stockpiling.

Before the evacuation of the tank contents, the north tank was approximately full, containing about 46 inches of liquid and sludge. The south tank was approximately half-full, containing about 23 inches of liquid and sludge. Under subcontract to Power Engineering, Erickson Vacuum Services evacuated liquids from the waste-oil tanks on November 23, using a vacuum truck. Although Erickson removed the liquids and sludge to the degree possible using the vacuum truck, some sludge remained in the tanks at the time that they were rendered inert and removed. The liquid and sludge were removed from the Site under hazardous waste manifest by Erickson Vacuum Services.

After removing overburden soils, Power Engineering carefully disconnected the piping associated with the waste-oil USTs so as to avoid release of liquids trapped in the USTs.

On November 24, Power Engineering placed approximately 25 pounds of dry ice into each of the two waste-oil tanks to displace potential combustible gases. Prior to removal, the combustible gas concentrations in both tanks were measured at 0 percent of the lower explosive limit (LEL) using a combustible gas indicator (CGI) meter. Oxygen in the USTs was measured with the CGI at less than 5 percent in each tank.

The waste-oil USTs were removed under the observation of Ms. Jennifer Eberle of the ACDEH and Mr. Gary Collins of the Oakland Fire Department (OFD). After the USTs had been removed from the excavation with a backhoe, they were set on blocks and scraped with shovels for inspection. After inspection, the USTs were covered with polyethylene sheets and left on blocks in the basement; storage of the stabilized tanks in the basement was approved by the ACDEH and the OFD. The piping, which included about 300 feet of drain piping into the tanks from the drain inlet in the lift and sump area in addition to vent and evacuation piping, was removed on December 1, 1993.

The waste-oil USTs and their piping were removed from the Site on December 13, 1993, by Erickson Vacuum Services. The tanks and piping were manifested as hazardous waste. The manifest form is included in Appendix A.

3.4 Hydraulic Lift and Sump Removal

After the concrete overlying the lift and sump area had been removed, three hoists were encountered. A 7-foot hoist was within a concrete vault approximately 7 feet deep, 8 feet long, and 2 feet wide (Figure 4). The walls of the vault were approximately 4 inches thick. An 8-foot hoist (Figure 4) was approximately 8 feet away from the vault, and it was connected to the vault by a steel pipe approximately 1 foot below the slab grade. A 7-foot-6-inch hoist (Figure 4) was located adjacent to the concrete sump.

The vault also contained a small waste-oil reservoir (approximately 50 gallons in capacity) and approximately 2 feet of dark hydrocarbon liquid at the bottom.

The liquid in the vault was removed by Erickson on November 23, 1993. Water was sprayed into the vault to rinse the vault and removed by vacuum. These liquids were contained in the

same vacuum truck as the material evacuated from the waste-oil USTs.

The vault and hoists were removed on November 29, 1993, and set on polyethylene sheets near the excavation. Approximately 130 cubic yards of soils around the vault and hoists were removed and covered with polyethylene sheeting. The hoists and reservoir tank were removed from the Site by Erickson Vacuum Services on December 13, 1993, to Erickson's Richmond, California waste facility for cleaning and scrapping.

Upon removing soils adjacent to the concrete sump, the sump was found to be approximately 4 feet deep with walls about 1 foot thick. One 4-inch-diameter iron effluent pipe extended in a general southerly direction from the tank. This pipe went under the slab into the basement, where it drained into a sewer line.

The sump was nearly full of solid debris and thus it was not possible to remove the sump through evacuation. The sump was removed intact on November 29 and set on polyethylene sheets near the excavation. It was removed from the Site by Erickson Vacuum Services on December 13 as described above for the vault and hoists.

The ACDEH and OFD reported to Power Engineering that the agencies did not need to observe the vault, hoist, or sump removal. However, Mr. Thomas Peacock of the ACDEH requested the opportunity to observe collection of soil samples after these structures were removed.

3.5 Removal of Gasoline USTs and Appurtenant Piping

After removing the sidewalk and soils overlying the gasoline USTs to expose the tank tops, the excavation support system was installed. During the installation of the support system, it was found that the orientation of the USTs was not parallel to the sidewalk and street as had been originally thought, but oriented as shown in Figure 2. This orientation meant that the northmost H-beam in the support system had to be omitted, because it would have hit the south UST. This beam was omitted without consequence.

After placing approximately 50 pounds of dry ice in each UST, the gasoline USTs were removed on December 6, 1994. Mr. Thomas Peacock of the ACDEH and Mr. Larry James of the OFD were present to observe the removal.

After removing the USTs from the excavation, they were set on blocks briefly for inspection and then moved to the basement of the garage and covered with polyethylene sheeting.

Approximately 50 cubic yards of soil were removed from around the former USTs. This soil was stockpiled in the garage and covered with polyethylene sheeting. The gasoline USTs and associated piping were removed from the Site by Erickson on December 13. The four USTs were removed from the Site on the same truck under one manifest (included in Appendix A).

3.6 Air Monitoring

During the soil excavation and UST removal activities, Levine·Fricke monitored air quality in accordance with the HSP and addendum. Equipment used by Levine·Fricke included a PID, a field flame ionization detector (an FID), a combustible gas indicator with an oxygen meter, a carbon monoxide meter, benzene tubes, and a personal air monitor equipped with filter tubes for detection of polychlorinated biphenyls (PCBs). Air quality was monitored in the work area and as needed at the perimeter of the Site when there was reason to suspect that individuals off site could be exposed to VOCs associated with the work performed. Field logs of air monitoring results were kept by Levine·Fricke and are in the Levine·Fricke project files.

3.7 Soil Sampling

Soil samples were collected and analyzed in accordance with the UST closure permit approved by the ACDEH on November 10, 1993. Strict chain-of-custody sample handling procedures were followed by Levine·Fricke. Some additional samples were collected and additional analyses performed. The section below refers to sampling and analysis of in-place soils. Sampling and analysis of stockpiled soils was performed in accordance with requirements of the treatment and disposal facility, Port Costa Materials. As of the date of this report, soils excavated from the waste-oil tank area remain at the Site.

3.7.1 Collection of Samples in Waste-Oil UST Area

After the USTs had been removed from the excavation and some soils had been removed, soil samples were collected by Levine·Fricke under the observation of Ms. Jennifer Eberle of the ACDEH. One sample was collected under each of the fill pipes at the UST locations. Additionally, one sample was collected at the bottom of the excavation at the wall in the

approximate center of the sidewall (Figure 3). Soil samples were not collected below the former waste-oil drain line because such samples had already been collected and analyzed by RGA Environmental.

These samples were collected in clean brass tubes and screened for volatile petroleum hydrocarbons using the PID, and the tubes were immediately sealed by placing Teflon tape over the ends and plastic caps over the tape. The samples were labeled and placed in a chilled ice chest for delivery to the analytical laboratory.

3.7.2 Collection of Samples in Lift and Sump Area

After the lifts, sump, and vault and some soils had been removed, soil samples were collected by Levine·Fricke under the observation of Mr. Thomas Peacock of the ACDEH. The sampling locations were selected on the basis of observations of hydrocarbon-affected soils and agreement between the ACDEH and Levine·Fricke. Soil sampling locations are shown in Figure 3.

Soil samples were collected in clean brass tubes and clean glass jars and screened for volatile petroleum hydrocarbons using the PID, and the jars were immediately sealed by covering with Teflon tape and placing plastic caps over the tape. The samples were delivered to the laboratory as described above.

3.7.3 Collection of Samples in Gasoline UST Area

Levine·Fricke collected soil samples under each end of the former gasoline UST locations and under the former dispenser location under the observation of Mr. Peacock. The method of soil sample collection was similar to that described for the waste oil tank.

Additionally, after the excavation had been partially backfilled, Levine·Fricke collected samples from the excavation sidewalls to document soil quality in the shallower soils around the former UST locations.

Soil sampling locations are shown on Figure 2.

3.8 Excavation Backfilling and Resurfacing

After completion of the excavations, each of the excavations was backfilled with pea gravel by Power Engineering. The pea gravel was placed in lifts with a maximum depth of

approximately 2 feet and vibrated to densify using a concrete vibrating rod. The concrete spacer between the waste-oil USTs was abandoned in place.

In the lift and sump excavation and in the gasoline tank excavation, approximately 8 inches of aggregate base gravel was placed and compacted above the pea gravel. Compaction testing was performed by Levine·Fricke using a nuclear soil density gauge. Soil compaction test results are in Levine·Fricke's project files.

In the gasoline tank area, perforated piping and a utility box for future soil-vapor extraction were placed in accordance with the details shown on Sheet 2 of the plans (Appendix B). After removing water that infiltrated into the excavation from the gutter area, a 4-inch-diameter well was installed by Levine·Fricke and a licensed drilling subcontractor in the utility box as shown on Figure 2 and Plan Sheet 2 in Appendix B. The well was installed in accordance with state and local well regulations and permitted through Alameda County Zone 7 Flood Control and Water Conservation District on January 11, 1994.

Concrete was poured to resurface the excavation areas to match the existing thickness. Number 5 reinforcing bars were dowelled into the existing slabs in the lift and sump area and in the waste-oil tank area at a minimum thickness of 4 inches.

The existing curb and gutter were replaced along the street side of the gasoline UST excavation to provide a better seal from surface water into the former UST excavation.

3.9 Laboratory Analysis

Soil samples collected during the course of UST removal activities were submitted to American Environmental Network of Pleasant Hill, California (AEN). AEN is a State of California-certified laboratory.

3.9.1 Waste-Oil UST Area

AEN analyzed the samples collected from the waste-oil UST area for total petroleum hydrocarbons as gasoline (TPHg) using EPA Method 5030 GCFID, for benzene, toluene, ethylbenzene, and total xylenes (BTEX) using EPA Method 8020, and for oil and grease using Standard Methods (SM) 5520E and 5520F.

3.9.2 Hydraulic Lift and Sump Area

AEN analyzed the samples from the lift and sump area for TPHg using EPA Method 5030 GCFID, for BTEX using EPA Method 8020, and for oil and grease using SM 5520E and 5520F. Additionally, the sample collected below the former concrete sump location was analyzed for PCBs using EPA Method 8080 and for the California Code of Regulations 17 metals using the California Assessment Manual method.

3.9.3 Gasoline UST Area

AEN analyzed the four samples from below the gasoline USTs for TPHg using EPA Method 5030 GCFID, for BTEX using EPA Method 8020, for total lead using EPA Method 6010, and for organic lead using the California Department of Health Services method. The organic lead analysis detects tetramethyl lead as well as the gasoline additive tetraethyl lead.

In addition to the above quantitative analyses, the two samples from below the respective tank fill ports were submitted to Friedman & Bruya Analytical Chemists Laboratory in Seattle, Washington, for hydrocarbon fuel scan. Friedman & Bruya performs capillary gas chromatography on samples using a FID and electron capture detector to identify fuel product types based on the resulting chromatograph pattern.

Soil samples collected below the former piping and dispenser locations and from the excavation sidewalls were analyzed for TPHg and BTEX only.

4.0 FIELD OBSERVATIONS

4.1 Waste-Oil USTs, Piping, and Surrounding Soils

During inspection of the waste-oil USTs, some cracking along the seams at the end of each of the tanks was observed. The cracks were large enough to insert a knife blade. Some leakage of dark sludge and liquid was observed from both waste oil USTs. Product piping was observed to be in generally good condition, although the surface showed some rust discoloration.

There were no observations of significant surface soil discoloration. Soils encountered around the USTs and piping were gray-brown, extending to a depth of about 7 feet below basement slab grade (about 19 feet below sidewalk grade). The bottom of the USTs was about 8 feet below basement slab grade.

The soils below about 7 feet below the basement slab grade showed some blue-gray discoloration and had steady PID readings, indicating that they were affected by VOCs. The bottom of the excavation was extended to about 10 feet below the basement slab. Soils continued to have steady PID readings, particularly on the east side of the excavation. The soils at the base of the excavation were very moist, but no indications of free water were observed.

4.2 Hydraulic Lifts, Vault, and Sump and Surrounding Soils

The hydraulic lifts and their appurtenant piping appeared to be in generally good condition at the time of removal. The concrete vault, however, was oil-soaked at the base and surrounded by discolored soils. The discolored soils were blue-gray; PID readings indicated that they contained volatile petroleum hydrocarbons.

The concrete sump appeared intact, although the connection between the sump and the effluent pipe was loose at the time of removal. It is possible that this connection could have been damaged at the time of demolition of the concrete.

4.3 Gasoline UST, Piping, and Surrounding Soils

The gasoline USTs were covered almost completely with a tar paper wrap at the time of removal. This tar paper was not removed at the Site and thus only limited inspection was possible. One cut in the north tank was believed to have been made by Power Engineering in the process of loosening the USTs prior to removal. The south tank was dented; a Power Engineering representative stated that Power Engineering had made the dent in the process of loosening the USTs for removal. A union fitting on the product line from the south fitting was observed to be leaking (Power Engineering had placed water in the product lines in order to flush them).

Almost all the soils surrounding the gasoline USTs were discolored and blue-green, and there were detectable volatile petroleum hydrocarbons concentrations from about 2 feet below the ground surface to the bottom of the excavation (about 8 feet below ground surface. The discoloration appeared to be greater on the excavation wall along Harrison Street.

After the USTs were removed and the soil samples collected, it began raining. Cracks in the gutter were observed and substantial quantities of water were observed infiltrating along the Harrison Street wall of the excavation. The excavation was backfilled with pea gravel, and over a period

of a few days, the water collected in the excavation rose to a level of about 1 foot below sidewalk grade (just below the gutter level).

5.0 RESULTS

5.1 Soil Quality Results

Appendix C contains the laboratory reports for all soil quality results.

5.1.1 Waste-Oil USTs

Oil and grease results from samples collected around the former waste-oil USTs ranged from below minimum detection limits (MDLs) to as high as 19,000 parts per million (ppm). TPHg concentrations ranged from below MDLs (which were elevated due to interference with longer-chain hydrocarbons in two samples) to as high as 1,300 ppm. BTEX was detected at low concentrations or below MDLs. The most affected samples were those collected from the east wall at 8.5 feet below basement grade and from below the north tank at a depth of 10 feet below basement grade. The samples collected from the south and east walls indicated that remaining soils in those locations were only minimally affected by gasoline and oil-range hydrocarbons. A summary of past and current soil quality results is presented in Table 1. Only Levine·Fricke sampling locations are shown in Figures 2, 3, and 4. Locations of previous sampling by past consultants are shown on Figure 5.

5.1.2 Hydraulic Lift and Sump Area

Oil and grease results from the lift and sump area ranged from below MDLs to 17,000 ppm. TPH as gasoline ranged from below MDLs to 970 ppm. BTEX compounds were detected in this area as high as 24 ppm (xylenes) and 2.9 ppm (benzene). No PCBs were detected in the one sample collected (below the sump). The metals tested in the one sample (below the sump) indicated results within typical background ranges (Shacklette and Boergen 1984, Scott 1991) and well below the respective total threshold limit concentrations (TTLCs).

The samples that were most affected by both gasoline- and oil-range hydrocarbons were the samples collected below and around the 8-foot hoist and below the vault.

5.1.3 Gasoline UST and Piping Area

The soil samples collected from below the gasoline tests contained TPHg at concentrations ranging from below MDLs to 3,100 ppm. BTEX compounds were detected at concentrations from below MDLs to 400 ppm (xylenes) and 11 ppm (benzene). These three highest results were from the sample collected below the south end (the non-fill end) of the north UST. The one sample below the gasoline USTs that did not contain any TPHg or BTEX above MDLs was collected below the north end of the north UST.

Total lead was detected at 4 to 8 ppm. Organic lead was detected in only one sample, the one below the south end of the north tank.

The four sidewall samples and the two piping samples (one was below piping and the other was collected below the former dispenser location) did not contain detectable TPHg or BTEX.

5.2 Air Quality Sampling Results

Based on field and laboratory data collected, the potential airborne contaminants of concern were generally not detected or detected below action levels during the course of the project. When instruments indicated that action levels in the work area were being met or exceeded, the workers modified their personal protective equipment or stopped work until concentrations decreased to below action levels. Most of the site work described herein was performed in Level D personal protective equipment. On several occasions, air quality action levels were exceeded, which necessitated an upgrade to Level C equipment for workers who could be exposed to airborne contaminants above applicable action levels. When action levels were exceeded in the work area, perimeter monitoring was performed. Based on the results of perimeter air quality monitoring, action levels were not exceeded outside site boundaries.

During inspections by ACDEH representatives, no deviations from the approved site Health and Safety Plan and Addendum were brought to the attention of Levine·Fricke.

5.3 Soil Compaction Testing Results

Based on Levine·Fricke's observations and compaction testing, it is our opinion that the pea gravel and aggregate based gravel were placed and compacted in accordance with Levine·Fricke's recommendations.

6.0 SUMMARY

Four steel single-walled USTs, three hydraulic lifts, one vault, and one sump with their respective appurtenant piping were excavated and removed from the Site by Power under the observation of Levine·Fricke.

Additionally, approximately 240 cubic yards of hydrocarbon-affected soils were excavated around the former underground structures. At the time of this report, approximately 180 cubic yards of soils were transported to Port Costa Materials for treatment and disposal. Approximately 60 cubic yards of soils remain at the Site pending approval from Port Costa Materials, after which they are planned to be transported for treatment and disposal.

Soils affected with both gasoline-range and oil-range hydrocarbons remain in each of the three areas of the Site.

7.0 RECOMMENDATIONS

We recommend that fuel leak case closure be completed in accordance with applicable state and local regulations and agreements with the ACDEH Local Oversight Program (LOP) and the California Regional Water Quality Control Board (RWQCB).

Additionally, we recommend that the stockpiled soils currently at the Site be treated and disposed at the Port Costa Materials facility. We understand that, as of the date of this report, treatment of these soils is proceeding.

REFERENCES

Levine·Fricke. 1992. Addendum 1 to the RGA Environmental, Inc., May 8, 1992 Health and Safety Plan for the Harrison Street Garage Tank Closure Project, Oakland, California. August 31.

RGA Environmental, Inc. 1992. Site Safety Plan, Harrison Street Garage Tank Closure Project, Oakland, California. May 8.

Scott, C. M. 1991. Background Metals Concentration in Soils in Northern Santa Clara County, California. Unpublished Master's Thesis, University of San Francisco. December 7.

Shacklette, H. T., and Boerngen, J. T. 1984. Element Concentrations in Soils and Other Surficial Materials of the Conterminous United States. Geological Survey Professional Paper 1270. Washington, D.C., U.S. Government Printing Office.

TABLE 1
SOIL QUALITY RESULTS
HARRISON STREET GARAGE
1432 - 1434 HARRISON STREET, OAKLAND, CALIFORNIA
(all results in parts per million [ppm])

Sample ID	Date Collected	Consultant/ Laboratory	Depth (ft, bgs)	TPHg/ TVHg	Benzene	Toluene	Ethyl-benzene	Xylenes	TPHd	Kerosene	O&G	PCBs	CL-HCs	VOCs	Soluble Pb	Metals Pb	Hg	Ni	Se
Waste Oil Tank Area (Basement)																			
B6@9'	17-Sep-90	SCI/C&T	9	NA	<0.005	<0.005	<0.005	<0.005	<10	98	<50	0.009*	ND	NA	0.06	NA	NA	NA	NA
B6@9.5'	17-Sep-90	SCI/C&T	9.5	NA	NA	NA	NA	NA	<10	140	<50	NA	NA	NA	NA	NA	NA	NA	NA
B1-2'	16-Jan-92	RGA/CAL	2	27.3	<0.005	3	0.23	<0.005	55.7	NA	54.2	ND	ND	ND	NA	<2.2	50.7	21.9	15.3
B2-2'	16-Jan-92	RGA/CAL	2	<1	<0.005	0.1	<0.005	<0.005	1.5	NA	<20	ND	ND	ND	NA	<2.2	49.7	16.9	<7.5
B3-2'	16-Jan-92	RGA/CAL	2	1.6	<0.005	1.1	<0.005	<0.005	1.6	NA	<20	ND	ND	ND	NA	<2.2	54.2	33.6	17
B4-2'	16-Jan-92	RGA/CAL	2	1.9	<0.005	0.8	<0.005	<0.005	24.1	NA	54.8	ND	ND	ND	NA	<2.2	66.5	45.6	19.2
B5-2'	16-Jan-92	RGA/CAL	2	<1	<0.005	0.4	<0.005	<0.005	2.5	NA	50.9	ND	ND	ND	NA	<2.2	73	47.2	19.2
B6-2'	16-Jan-92	RGA/CAL	2	<1	<0.005	0.4	<0.005	<0.005	24.3	NA	<20	ND	ND	ND	NA	<2.2	66.7	41.4	16.9
B7-2'	16-Jan-92	RGA/CAL	2	2.6	<0.005	1.6	<0.005	<0.005	6.3	NA	221	ND	ND	(1)	NA	<2.2	74.2	36.3	18.9
B8-2'	16-Jan-92	RGA/CAL	2	<1	<0.005	0.04	<0.005	<0.005	2.9	NA	55.1	ND	ND	ND	NA	<2.2	52.9	30.8	15.3
B9-5'**	22-Jan-92	RGA/CAL	5	2.44	NA	<0.005	NA	NA	11.1	NA	NA	ND	NA	ND	NA	7.53	21.5	59.8	11.6
B10-8'**	22-Jan-92	RGA/CAL	8	<1	NA	<0.005	NA	NA	109	NA	NA	ND	NA	ND	NA	5.63	15.5	34.9	<7.5
E.WALL-8.5B (6)	24-Nov-93	LF/AEN	8.5	820	1.4	7.7	3.9	13	NA	NA	19000	NA	NA	NA	NA	NA	NA	NA	NA
S.WALL-9.5B (7)	24-Nov-93	LF/AEN	9.5	<0.2	0.005	0.022	<0.005	0.02	NA	NA	20	NA	NA	NA	NA	NA	NA	NA	NA
N.WALL-9B (8)	24-Nov-93	LF/AEN	9	<800	<0.05	0.52	1.8	3.4	NA	NA	180	NA	NA	NA	NA	NA	NA	NA	NA
W.WALL-9B	24-Nov-93	LF/AEN	9	<0.2	<0.005	<0.005	<0.005	<0.005	NA	NA	<10	NA	NA	NA	NA	NA	NA	NA	NA
N.TANK-10B (9)	24-Nov-93	LF/AEN	10	1300	1.5	2.7	5.9	10	NA	NA	14000	NA	NA	NA	NA	NA	NA	NA	NA
S.TANK-10B (10)	24-Nov-93	LF/AEN	10	<400	<0.2	<0.2	<0.2	<0.2	NA	NA	4800	NA	NA	NA	NA	NA	NA	NA	NA
Hydraulic Lift Area																			
B4@10'	17-Sep-90	SCI/C&T	10	NA	NA	NA	NA	NA	1700	<100	6300	NA	NA	NA	NA	NA	NA	NA	NA
B5@22.5'	17-Sep-90	SCI/C&T	22.5	110	0.024	0.21	0.069	1.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B13-5'	21-Jan-92	RGA/CAL	5	83.2	<0.005	0.068	1.23	<0.005	1.63	NA	NA	0.245	NA	ND	NA	17.4	45.4	46.1	21.9
B13-15'	21-Jan-92	RGA/CAL	15	135	NA	0.71	NA	8.85	<1	NA	NA	ND	NA	ND	NA	13.8	35.5	128.4	15.5
B14-5'	21-Jan-92	RGA/CAL	5	<1	<0.005	NA	NA	NA	<1	NA	NA	ND	NA	ND	NA	11.2	28.1	39.4	12.3
B14-15'	21-Jan-92	RGA/CAL	15	2.5	NA	NA	<0.005	NA	17.3	NA	NA	ND	NA	ND	NA	13.2	32.8	376.2	15.3
B15-5'	30-Jan-92	RGA/CAL	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	26.6	29.4	56.6	9.02
B15-15'	30-Jan-92	RGA/CAL	15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	16.7	33.2	72.3	15.5
B16-5'	30-Jan-92	RGA/CAL	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	14.3	44.9	60.3	15.2
B16-15'	30-Jan-92	RGA/CAL	15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	10.2	34.7	48.4	8.81
SUMP 5.5H (3)	29-Nov-93	LF/AEN	5.5	<0.2	<0.005	<0.005	<0.005	<0.005	NA	NA	<10	ND	NA	NA	NA	2	<0.06	50	<2
HOIST-1-8H	29-Nov-93	LF/AEN	8	<0.2	<0.005	<0.005	<0.005	<0.005	NA	NA	<10	NA	NA	NA	NA	NA	NA	NA	NA
HOIST 2-9.5WH (2)	29-Nov-93	LF/AEN	9.5	0.3	<0.005	<0.005	<0.005	<0.005	NA	NA	17000	NA	NA	NA	NA	NA	NA	NA	NA
HOIST 2-11.5H	29-Nov-93	LF/AEN	11.5	970	2.9	14	4.2	24	NA	NA	5100	NA	NA	NA	NA	NA	NA	NA	NA
HOIST 2-9EH	29-Nov-93	LF/AEN	9	<0.2	<0.005	<0.005	<0.005	<0.005	NA	NA	<10	NA	NA	NA	NA	NA	NA	NA	NA
E.VAULT-6.5H	29-Nov-93	LF/AEN	6.5	<0.2	<0.005	<0.005	<0.005	<0.005	NA	NA	<10	NA	NA	NA	NA	NA	NA	NA	NA
N. VAULT-7H (4)	29-Nov-93	LF/AEN	7	4.1	<0.005	<0.005	<0.005	23	NA	NA	1700	NA	NA	NA	NA	NA	NA	NA	NA
VAULT-BASE-9.5H (5)	29-Nov-93	LF/AEN	9.5	380	0.05	0.69	0.22	2	NA	NA	14000	NA	NA	NA	NA	NA	NA	NA	NA
Gasoline Tank Area																			
1@20.0'	25-Jul-90	SCI/C&T	20	6300	99	490	110	610	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2@18.5'	25-Jul-90	SCI/C&T	18.5	9300	98	900	190	1100	NA	NA	NA	NA	NA	NA	0.21	NA	NA	NA	NA
B7@13'	21-Sep-90	SCI/C&T	13	<1	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 1
SOIL QUALITY RESULTS
HARRISON STREET GARAGE
1432 - 1434 HARRISON STREET, OAKLAND, CALIFORNIA
(all results in parts per million [ppm])

Sample ID	Date Collected	Consultant/ Laboratory	Depth (ft, bgs)	TPHg/ TVHg	Benzene	Toluene	Ethyl-benzene	Xylenes	TPHd	Kerosene	O&G	PCBs	CL-HCs	VOCs	Soluble Pb	Metals Pb	Metals Hg	Metals Ni	Metals Se
B7@20'	21-Sep-90	SCI/C&T	20	2500	3.5	34	33	130	NA	NA	NA	NA	NA	NA	0.07	NA	NA	NA	NA
B8@22 1/2'	21-Sep-90	SCI/C&T	22.5	1200	2.3	38	18	89	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B17-5'	03-Feb-92	RGA/CAL	5	NA	NA	NA	NA	NA	NA	NA	39.1	ND	NA	ND	NA	10.4	3.56	329.2	6.24*
B19-5'	03-Feb-92	RGA/CAL	5	2.5	<0.005	<0.005	<0.005	0.01	28	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B20-5'	03-Feb-92	RGA/CAL	5	2.1	<0.005	0.03	<0.005	0.01	24	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B20-15'	03-Feb-92	RGA/CAL	15	2.5	<0.005	0.034	<0.005	<0.005	<1	NA	35.2	ND	NA	NA	NA	10.4	2.48	224.8	<7.5
B21-5'	05-Feb-92	RGA/CAL	5	2.1	<0.005	0.02	<0.005	0.01	16.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B21-10'	05-Feb-92	RGA/CAL	10	1.9	<0.005	0.021	<0.005	0.026	15.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B21-15'	05-Feb-92	RGA/CAL	15	2	<0.005	0.03	<0.005	<0.005	22.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B22-5'	05-Feb-92	RGA/CAL	5	42.3	<0.005	0.113	<0.005	2.13	670	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B22-10'	05-Feb-92	RGA/CAL	10	1540	0.987	11.7	1.67	2.88	175	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B23-5'	05-Feb-92	RGA/CAL	5	2.5	<0.005	0.027	<0.005	<0.005	26	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B23-10'	05-Feb-92	RGA/CAL	10	3.3	<0.005	0.034	<0.005	<0.005	<1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LFSB1-4.0	22-May-93	LF/AEN	4	0.5	<0.005	0.01	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LFSB1-14.0	22-May-93	LF/AEN	14	<0.2	0.020	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LFSB1-24.5	22-May-93	LF/AEN	24.5	8800	210	980	160	750	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LFSB2-9.5	22-May-93	LF/AEN	9.5	<0.2	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LFSB2-19.5	22-May-93	LF/AEN	19.5	1000	<0.2	9.4	16	68	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LFSB2-24.5	22-May-93	LF/AEN	24.5	6100	91	320	120	410	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S.TANK-8FG	06-Dec-93	LF/AEN	8	1500	0.87	43	34	240	NA	NA	NA	NA	NA	NA	<0.5#	4	NA	NA	NA
S.TANK-8G	06-Dec-93	LF/AEN	8	43	0.006	0.088	0.25	1.8	NA	NA	NA	NA	NA	NA	<0.5#	4	NA	NA	NA
N.TANK-7.5G	06-Dec-93	LF/AEN	7.5	3100	11	190	64	400	NA	NA	NA	NA	NA	NA	1.9#	8	NA	NA	NA
N.TANK-8.5FG	06-Dec-93	LF/AEN	8.5	<0.2	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	<0.5#	4	NA	NA	NA
E.WALL-3G	15-Dec-93	LF/AEN	3	<0.2	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S.WALL-3G	15-Dec-93	LF/AEN	3	<0.2	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N.WALL-3G	16-Dec-93	LF/AEN	3	<0.2	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
W.WALL-3-N	29-Dec-93	LF/AEN	3	<0.2	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
W.WALL-3-S	29-Dec-93	LF/AEN	3	0.5	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PJ-2G	07-Dec-93	LF/AEN	2	<0.2	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DSP-2G	07-Dec-93	LF/AEN	2	<0.2	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Data entered by MEK/12-Jan-94. Data proofed by CdH QA/QC by JDS

NOTES TO TABLE 1

Consultants:

SCI = Subsurface Consultants Incorporated, Oakland, California
RGA = RGA Environmental Consulting, Emeryville, California
L-F = Levine-Fricke Incorporated, Emeryville, California

Analytical Laboratories:

C&T = Curtis & Tompkins Limited, Berkeley, California
CAL = Carter Analytical Laboratory, Campbell, California
AEN = American Environmental Network, Pleasant Hill, California

Analyses/Methods:

TPHg/TVHg = Total Petroleum/Volatile Hydrocarbons as Gasoline. C&T used a DOHS method, CAL did not specify the method used, and AEN used EPA Modified Method 8015.
Benzene, Toluene, Ethylbenzene, and Xylenes = C&T and AEN used EPA Method 8020. CAL did not specify the method used.
TPHd = Total Petroleum Hydrocarbons as Diesel. C&T used a DOHS method and CAL did not specify the method used.
Kerosene = C&T used a DOHS method.
O&G = Oil and Grease. C&T used Standard Method 5520 E,F and CAL used EPA Method 413.1 or 413.2.
PCBs = Polychlorinated Biphenyls. The total result is listed in the table. C&T and CAL used EPA Method 8080 for PCBs.
CL-HCs = Chlorinated Hydrocarbons (Halogenated Volatile Organics). C&T and CAL used EPA Method 8010.
VOCs = Volatile Organic Compounds. C&T and CAL used EPA Method 8240.
Soluble Pb = Soluble Lead. C&T used EPA Method 7420.
Pb = Lead. CAL used EPA Method 6010.
Hg = Mercury. CAL used EPA Method 6010.
Ni = Nickel. CAL used EPA Method 6010.
Se = Selenium. CAL used EPA Method 6010.

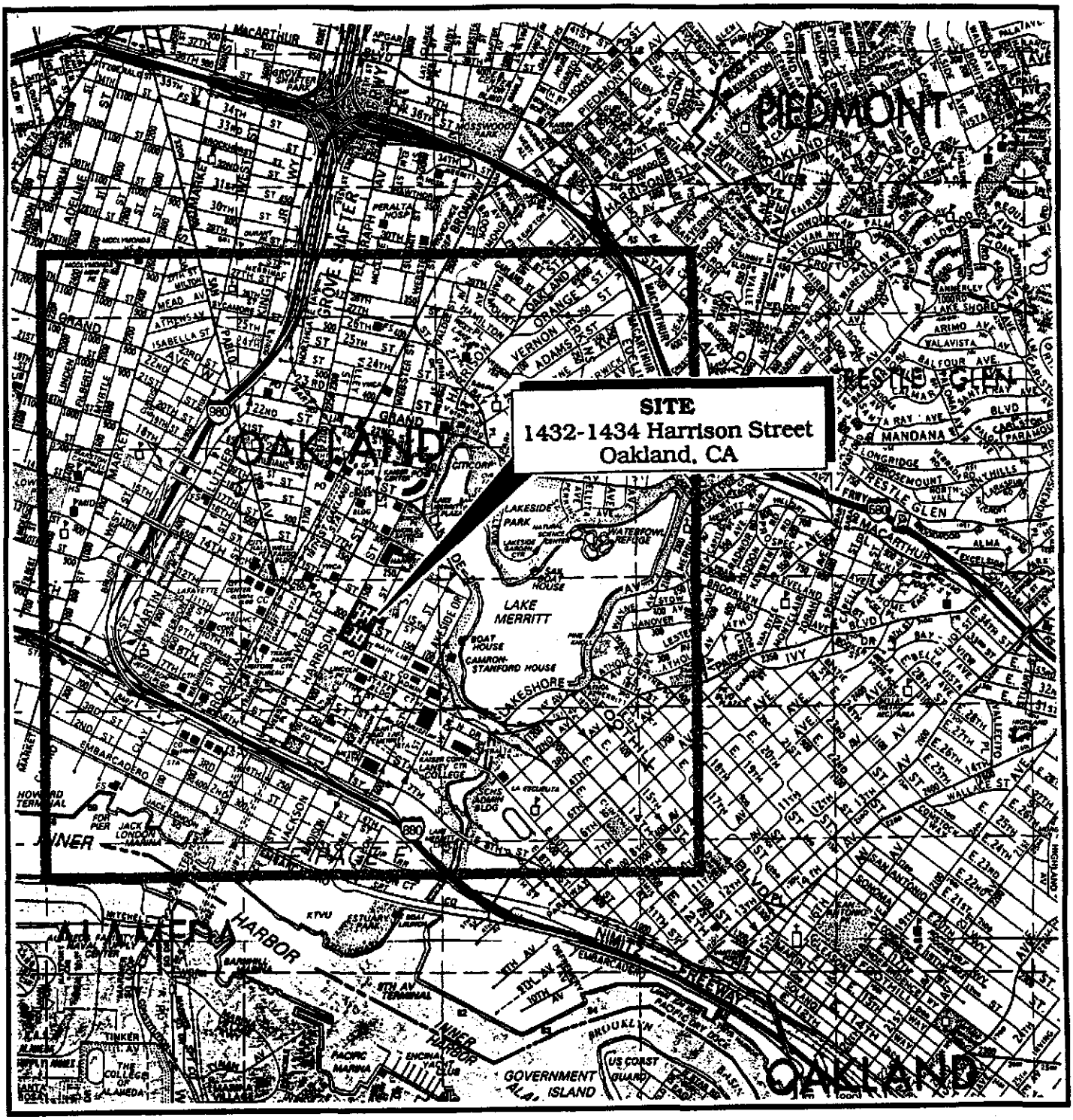
NA = Not analyzed
ND = Not detected

* Reported concentration is lower than the detection limit
** Samples may have exceeded holding time prior to analysis (except for metals)
\# Concentrations reported are Organic Lead by DHS Method.

(1) Toluene detected at 0.17 ppm.
(2) Hydrocarbons detected at 17,000 ppm.
(3) Arsenic detected at 2 ppm, barium at 61 ppm, beryllium at 0.2 ppm, cadmium at 0.1 ppm, cobalt at 8.1 ppm, chromium at 49 ppm, copper at 17 ppm, vanadium at 32 ppm, and zinc at 33 ppm.
(4) Hydrocarbons detected at 1,500 ppm.
(5) Hydrocarbons detected at 14,000 ppm.
(6) Hydrocarbons detected at 17,000 ppm.
(7) Hydrocarbons detected at 10 ppm.
(8) Hydrocarbons detected at 170 ppm.
(9) Hydrocarbons detected at 13,000 ppm.
(10) Hydrocarbons detected at 4,200 ppm.

The EPA Method 8020 benzene, toluene, ethylbenzene, and xylene results listed in this table were analyzed seperately from the VOC EPA 8240 analysis.
If benzene, toluene, ethylbenzene, or xylenes were detected by the EPA 8240 analysis, they are listed under the VOC heading.

This table presents soil-quality data obtained from environmental assessments at the Harrison Garage site in Oakland, California.
Included are data obtained by SCI, RGA, and Levine-Fricke.



MAP SOURCE:
Thomas Bros. Map
Alameda and Contra Costa Counties
EDITION 1992

N

0 1/2 1 MILE

Figure 1: SITE VICINITY MAP

Project No. 2680.22

LEVINE•FRICKE
ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

2680.02SAS11OCT93RYL

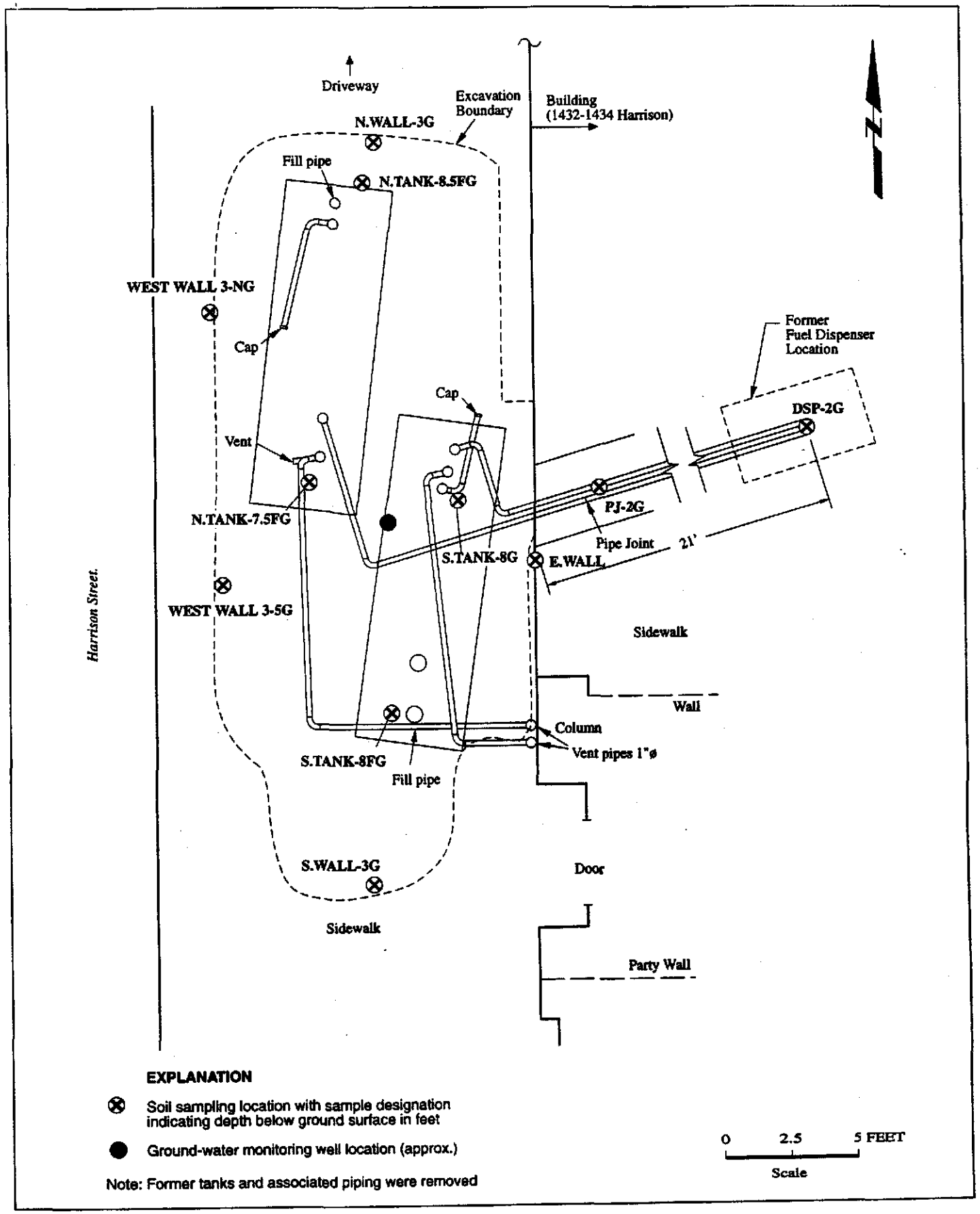


Figure 2 : PLAN SHOWING FORMER GASOLINE TANKS AND SOIL SAMPLE LOCATIONS

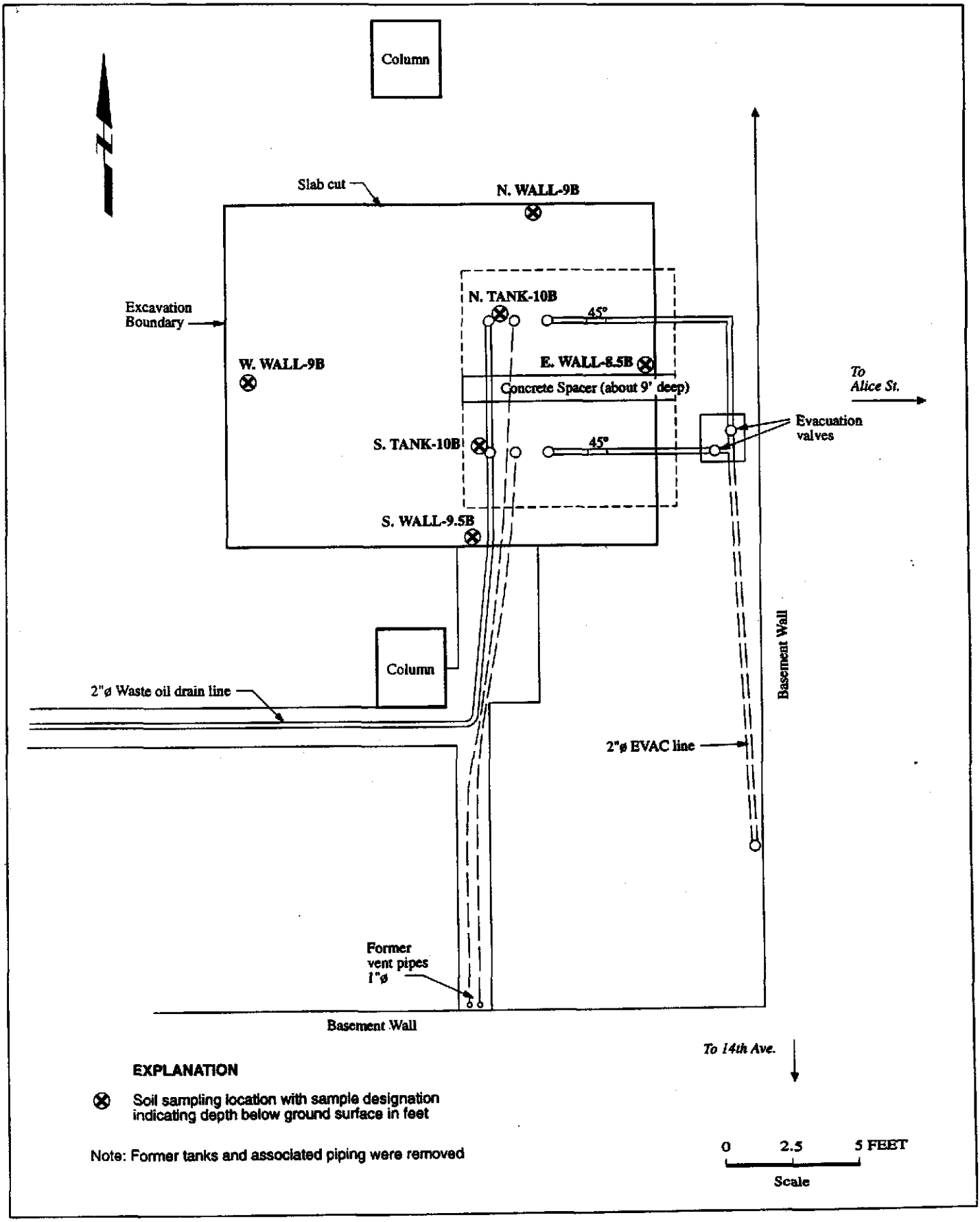


Figure 3 : PLAN SHOWING FORMER WASTE OIL TANKS AND SOIL SAMPLING LOCATIONS

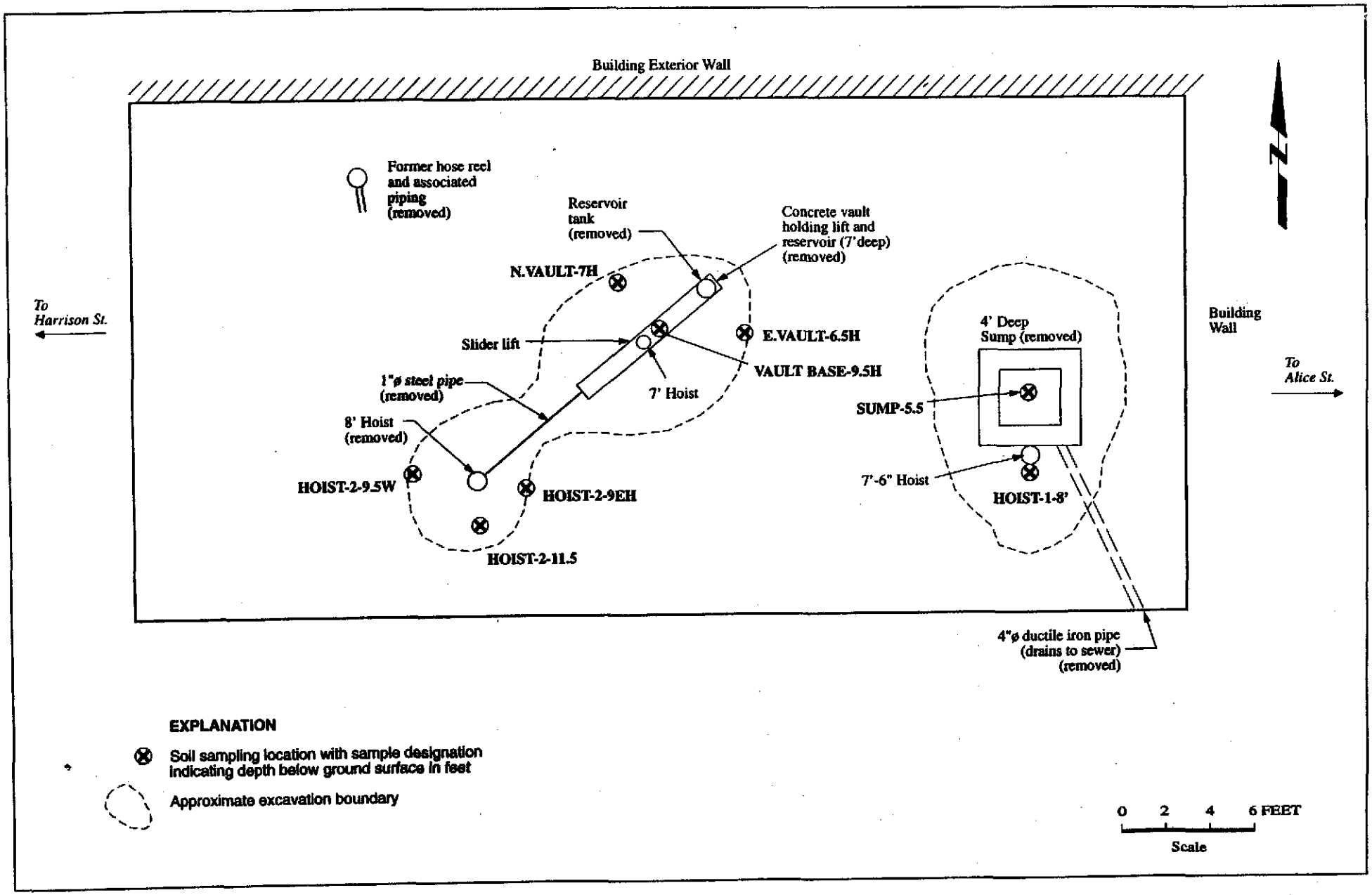


Figure 4 : PLAN SHOWING FORMER LIFTS AND SUMP AND SOIL SAMPLE LOCATIONS

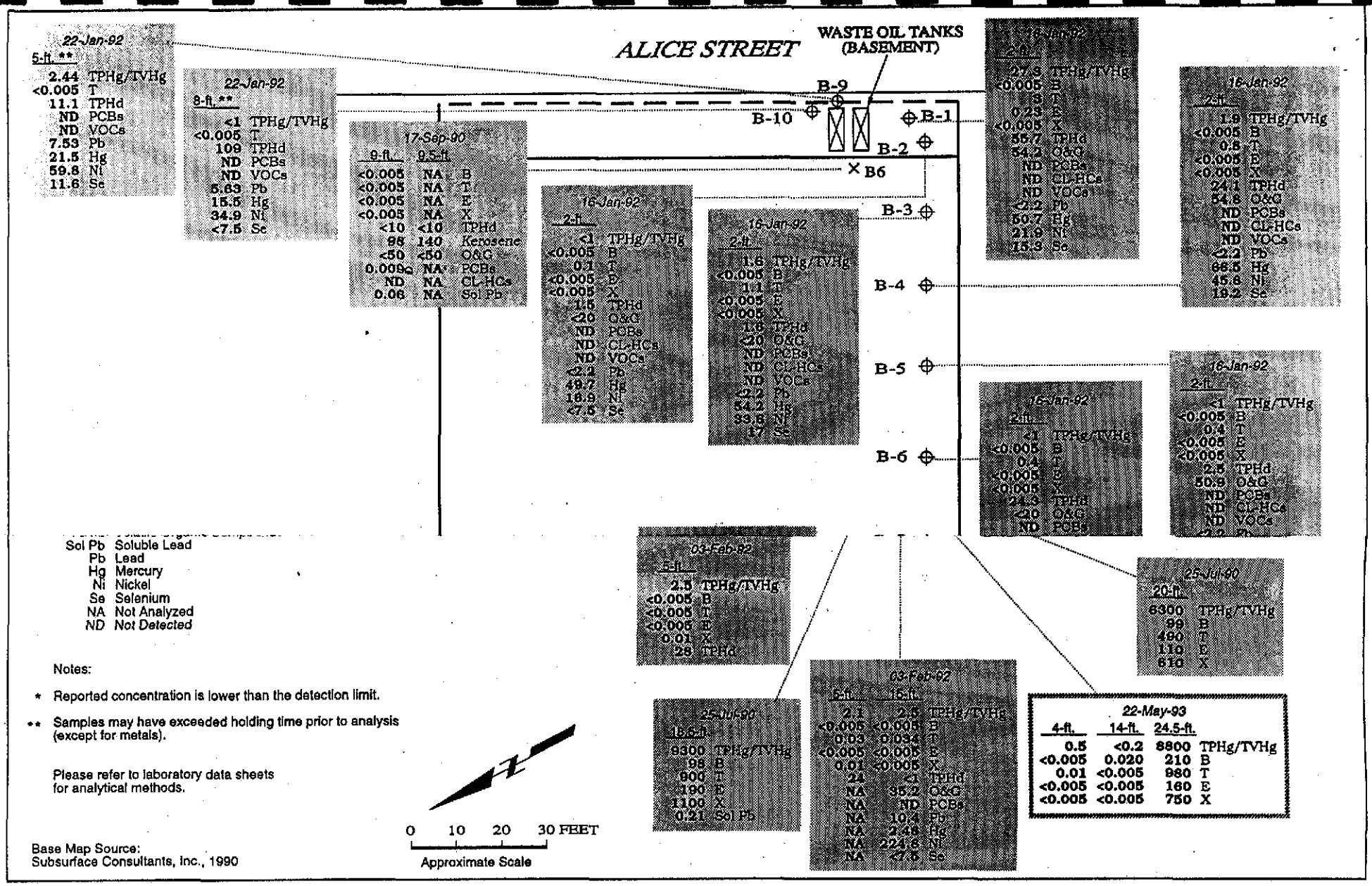


Figure 5 : SITE PLAN SHOWING SOIL BORING LOCATIONS AND TPHg/TVHg, BTEX, TPHd, O&G, PCBs, CL-HCs, VOCs, Pb, Hg, Ni, Se ANALYTICAL RESULTS AT THE HARRISON STREET GARAGE IN OAKLAND, CALIFORNIA, MAY, 1993

Project No. 2680.23

LEVINE•FRICKE
ENGINEERS, HYDROGEOLOGISTS, & APPLIED SCIENTISTS

APPENDIX A

UST MANIFEST FORM

State of California—Environmental Protection Agency
Form Approved OMB No. 2050–0039 (Expires 9-30-94)
Please print or type. *Form designed for use on elite (12-pitch) typewriter.*

See Instructions on back of page 6.

Department of Toxic Substances Contr
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. / Manifest Document No.: CAD995188498 / 31423
2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

A. State Manifest Document Number: 93132287

3. Generator's Name and Mailing Address: Mr [illegible] & Ms. Barbara J. Barsuk, C/o Mr. Mark Barsuk 1626 Vallejo St. San Francisco, CA

4. Generator's Phone (415) 922-4740

5. Transporter 1 Company Name: Erickson Inc.
6. US EPA ID Number: CAD009466392

C. State Transporter's ID: 402961
D. Transporter's Phone: 510-235-1393

7. Transporter 2 Company Name:
8. US EPA ID Number:

E. State Transporter's ID:
F. Transporter's Phone:

9. Designated Facility Name and Site Address:
Erickson, Inc.
255 Parr Blvd.
Richmond, Ca. 94801

10. US EPA ID Number: CAD009466392

G. State Facility's ID:
H. Facility's Phone: (510) 235-1393

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste Number
a. Waste Empty Storage Tank NON-RCRA Hazardous Waste Solid.	008	TP	4100	P	State: 512 EPA/Other: NONE
b.					State: EPA/Other:
c.					State: EPA/Other:
d.					State: EPA/Other:

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above: a. b. c. d.

15. Special Handling Instructions and Additional Information

Keep away from sources of ignition. Always wear hardhats when working around U.G.S.T.'s 24 Hr. Contact Name Michael Sunday Phone 415-907-0182 (pager)

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable federal, state and international laws.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
[illegible]	[signature]	12	13	[illegible]

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
John Douglass	[signature]	12	13	93

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year

GENERATOR / TRANSPORTER / FACILITY

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA, CALL 1-800-852-7550

DO NOT WRITE BELOW THIS LINE.

DTSC 8022A (7/92)
EPA 8700—22

APPENDIX C

SOIL QUALITY LABORATORY REPORTS

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Andrew John Friedman
James E. Bruya, Ph.D.
(206) 285-8282

3008-B 16th Avenue West
Seattle, WA 98119
FAX: (206) 283-5044

February 9, 1994

John Sturman, Project Leader
Levine-Fricke, Inc.
1900 Powell Street, 12th Floor
Emeryville, CA 94608

Dear Mr. Sturman:

Enclosed is a duplicate copy of the results from the testing of material submitted on December 8, 1993 from Project 2680.30, Harrison St. Garage. The original report was sent to Kathleen Isaacson.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

Kelley Wilt

Kelley Wilt
Chemist

KW/dp

Enclosures

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

DUPLICATE COPY

Date of Report: December 13, 1993
Date Received: December 8, 1993
Project: 2680.30, Harrison St. Garage
Date Samples Extracted: December 8, 1993
Date Extracts Analyzed: December 8, 1993

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR FINGERPRINT CHARACTERIZATION BY CAPILLARY GAS CHROMATOGRAPHY USING A FLAME IONIZATION DETECTOR (FID) AND ELECTRON CAPTURE DETECTOR (ECD)

Sample #	GC Characterization
N. Tank	The GC trace using the flame ionization detector (FID) showed an absence of volatile and semi-volatile compounds. The detection limit for this analysis is 20, 50 and 100 ppm for gasoline, diesel and motor oil, respectively. The large peaks seen near 23 and 25 minutes on the GC/FID trace are *p*-terphenyl and pentacosane respectively, added as a quality assurance check for this GC analysis.
S. Tank	The GC trace using the flame ionization detector (FID) showed the presence of low boiling compounds. The patterns displayed by these peaks are indicative of gasoline. The low boiling compounds appeared as a ragged pattern of peaks eluting from *n*-C_5 to *n*-C_{13} showing a maximum near *n*-C_7. The GC/FID trace showed the presence of peaks that appeared to be indicative of low levels of benzene, toluene, ethylbenzene, the xylenes and C_3-benzenes. These compounds are characteristic of the constituents commonly found in gasoline. The low boiling product appears to have undergone degradation by evaporative processes. The large peaks seen near 23 and 25 minutes on the GC/FID trace are *p*-terphenyl and pentacosane respectively, added as a quality assurance check for this GC analysis.

C:\HPCHEM\1\DATA\12-08-93\014F0901.D

Sample: N.Tank

Project: Harrison St Garage

Levine-Fricke

December 8. 1993

GC/FID

9000

8000

7000

6000

0

10

20

30

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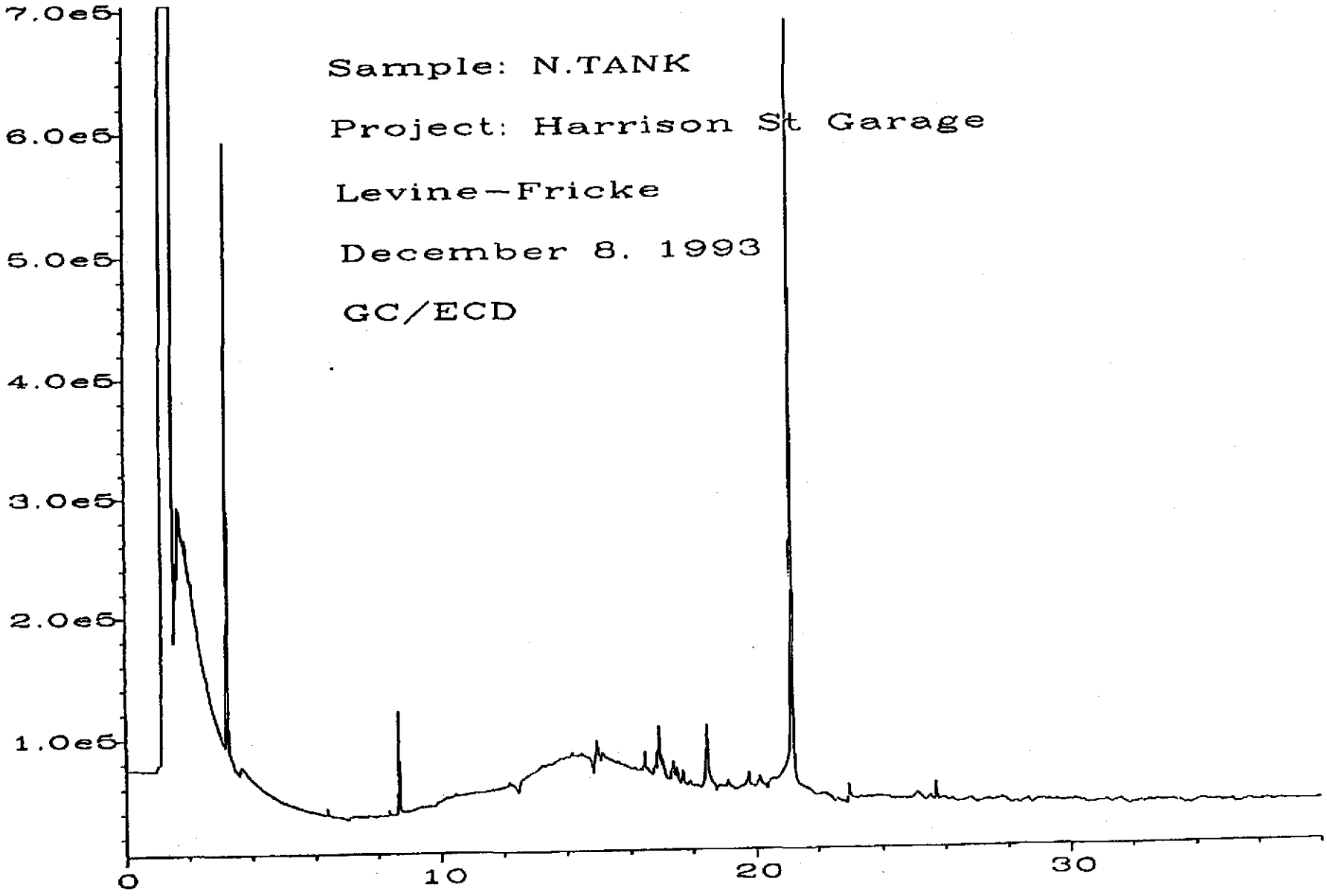

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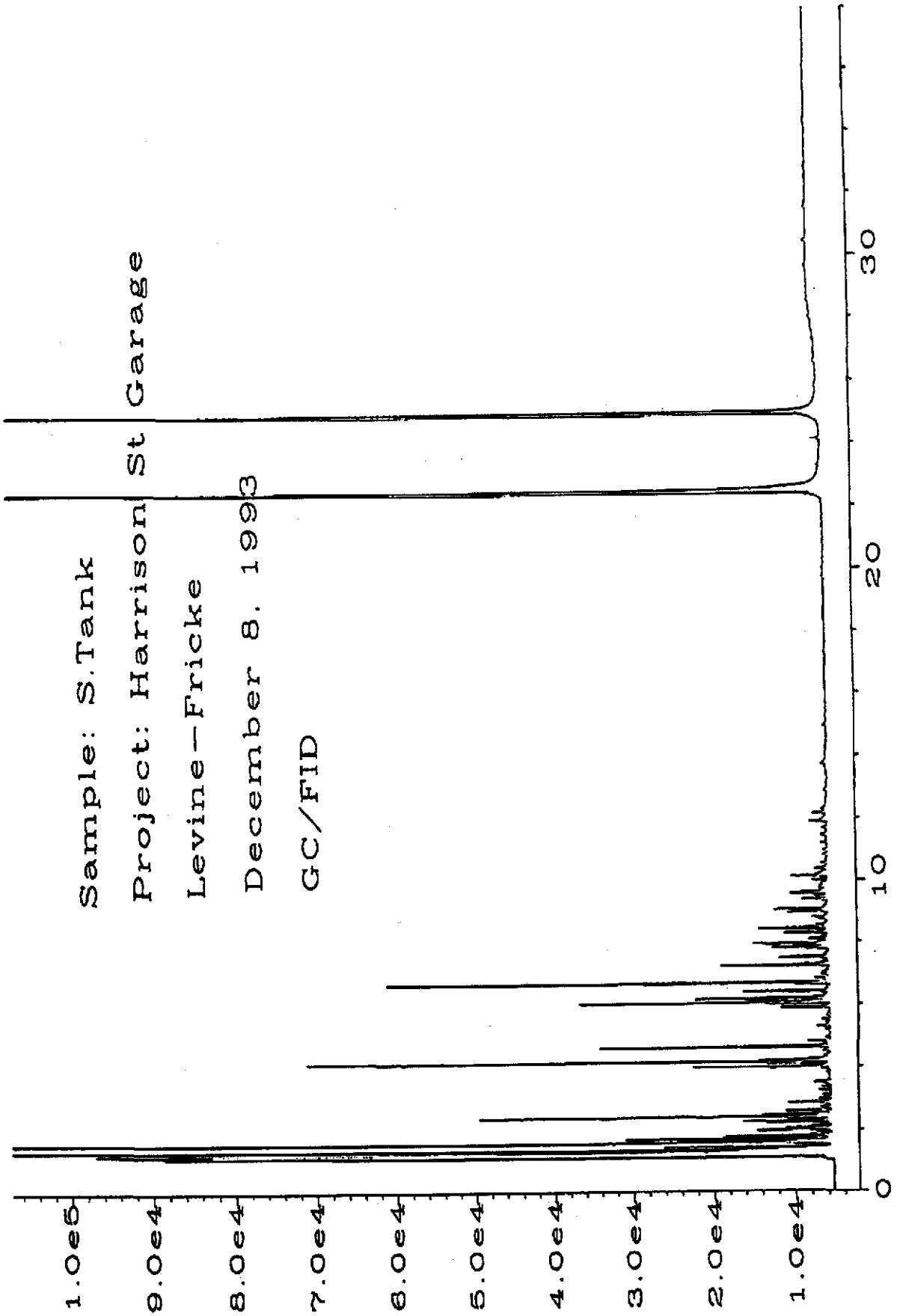

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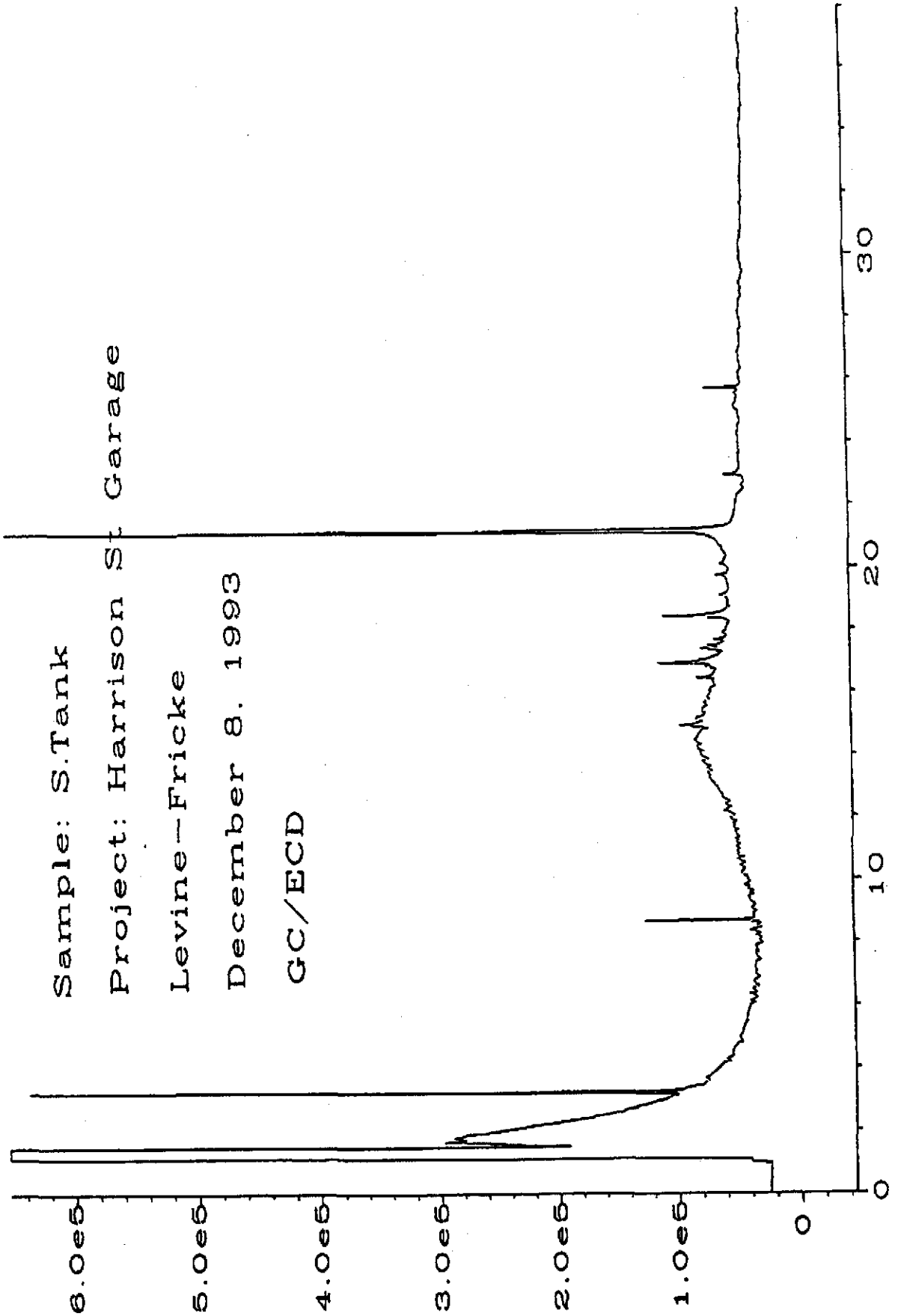


CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 2680.30	Field Logbook No.:	Date: 6 Dec 1993	Serial No.: [illegible] № 12678
Project Name: Harrison St. Garage	Project Location: Oakland, CA		
Sampler (Signature):			Samplers: T. [illegible]

SAMPLES / ANALYSES

SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	EPA 601	EPA 624	[illegible]				HOLD	RUSH	REMARKS
[illegible]	[illegible]	[illegible]	45[illegible]	1	[illegible]			/						
[illegible]		1500	45[illegible]					/						

RELINQUISHED BY: (Signature) [illegible]	DATE [illegible]	TIME	RECEIVED BY: (Signature) [illegible]	DATE [illegible]	TIME [illegible]
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT:	DATE	TIME	LAB COMMENTS:		

Sample Collector: LEVINE-FRICKE
1900 Powell Street, 12th Floor
Emeryville, California 94608
(510) 652-4500

Analytical Laboratory: [illegible] WA (206) 285-8282

FORM NO. 86/COC/ARF

Shipping Copy (White) Lab Copy (Green) File Copy (Yellow) Field Copy (Pink)

American Environmental Network

Certificate of Analysis

DOHS Certification: 1172 AIHA Accreditation: 94523-001

LEVINE-FRICKE
1900 POWELL ST., 12TH FLOOR
EMERYVILLE, CA 94608

ATTN: JOHN STURMAN

CLIENT PROJ. ID: 2680.30
C.O.C. SERIAL NO: 12613
PROJ. NAME: HARRISON ST. GARAGE

REPORT DATE: 12/17/93

DATE SAMPLED: 11/29/93

DATE RECEIVED: 11/30/93

AEN JOB NO: 9311299

PROJECT SUMMARY:

On November 30, 1993, this laboratory received four (4) soil samples.

Client requested samples be analyzed for organic and inorganic parameters. Sample identification, methodologies, results and dates analyzed are summarized on the following pages.

All laboratory quality control parameters were found to be within established limits. Batch QC data is included at the end of this report.

If you have any questions, please contact Client Services at (510) 930-9090.

Larry Klein
General Manager

Results FAXed 12/09/93

LEVINE-FRICKE

SAMPLE ID: HOIST 2-11.5H
AEN LAB NO: 9311299-01
AEN WORK ORDER: 9311299
CLIENT PROJ. ID: 2680.30

DATE SAMPLED: 11/29/93
DATE RECEIVED: 11/30/93
REPORT DATE: 12/17/93

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs (Soil)	EPA 8020				
Benzene	71-43-2	2,900 *	5	ug/Kg	12/09/93
Toluene	108-88-3	14,000 *	5	ug/Kg	12/09/93
Ethylbenzene	100-41-4	4,200 *	5	ug/Kg	12/09/93
Xylenes, Total	1330-20-7	24,000 *	5	ug/Kg	12/09/93
Purgeable HCs as Gasoline	5030/GCFID	970 *	0.2	mg/Kg	12/10/93
#Soil Extrn for TOG/HCs	SM 5520EF	-		Extrn Date	12/06/93
Hydrocarbons	SM 5520F	4,800 *	10	mg/kg	12/07/93
Total Oil and Grease	SM 5520E	5,100 *	10	mg/Kg	12/07/93

Result for gasoline contains hydrocarbons in the diesel/kerosene range.

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: HOIST 2-9.5WH
AEN LAB NO: 9311299-02
AEN WORK ORDER: 9311299
CLIENT PROJ. ID: 2680.30

DATE SAMPLED: 11/29/93
DATE RECEIVED: 11/30/93
REPORT DATE: 12/17/93

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs (Soil)	EPA 8020				
Benzene	71-43-2	ND	5	ug/Kg	12/08/93
Toluene	108-88-3	ND	5	ug/Kg	12/08/93
Ethylbenzene	100-41-4	ND	5	ug/Kg	12/08/93
Xylenes, Total	1330-20-7	ND	5	ug/Kg	12/08/93
Purgeable HCs as Gasoline	5030/GCFID	0.3 *	0.2	mg/Kg	12/08/93
#Soil Extrn for TOG/HCs	SM 5520EF	-		Extrn Date	12/06/93
Hydrocarbons	SM 5520F	17.000 *	10	mg/kg	12/07/93
Total Oil and Grease	SM 5520E	17.000 *	10	mg/Kg	12/07/93

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: HOIST 2-9EH
AEN LAB NO: 9311299-03
AEN WORK ORDER: 9311299
CLIENT PROJ. ID: 2680.30

DATE SAMPLED: 11/29/93
DATE RECEIVED: 11/30/93
REPORT DATE: 12/17/93

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs (Soil)	EPA 8020				
Benzene	71-43-2	ND	5	ug/Kg	12/08/93
Toluene	108-88-3	ND	5	ug/Kg	12/08/93
Ethylbenzene	100-41-4	ND	5	ug/Kg	12/08/93
Xylenes, Total	1330-20-7	ND	5	ug/Kg	12/08/93
Purgeable HCs as Gasoline	5030/GCFID	ND	0.2	mg/Kg	12/08/93
#Soil Extrn for TOG/HCs	SM 5520EF	-		Extrn Date	12/06/93
Hydrocarbons	SM 5520F	ND	10	mg/kg	12/07/93
Total Oil and Grease	SM 5520E	ND	10	mg/Kg	12/07/93

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: SUMP 5.5H
AEN LAB NO: 9311299-04
AEN WORK ORDER: 9311299
CLIENT PROJ. ID: 2680.30

DATE SAMPLED: 11/29/93
DATE RECEIVED: 11/30/93
REPORT DATE: 12/17/93

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs (Soil)	EPA 8020				
Benzene	71-43-2	ND	5	ug/Kg	12/08/93
Toluene	108-88-3	ND	5	ug/Kg	12/08/93
Ethylbenzene	100-41-4	ND	5	ug/Kg	12/08/93
Xylenes, Total	1330-20-7	ND	5	ug/Kg	12/08/93
Purgeable HCs as Gasoline	5030/GCFID	ND	0.2	mg/Kg	12/08/93
#Soil Extrn for TOG/HCs	SM 5520EF	-		Extrn Date	12/06/93
Hydrocarbons	SM 5520F	ND	10	mg/kg	12/07/93
Total Oil and Grease	SM 5520E	ND	10	mg/Kg	12/07/93
#Extraction for Pest/PCBs	EPA 3550	-		Extrn Date	12/03/93
Polychlorinated Biphenyls	EPA 8080				
Aroclor 1016	12674-11-2	ND	0.05	mg/Kg	12/04/93
Aroclor 1221	11104-28-2	ND	0.05	mg/Kg	12/04/93
Aroclor 1232	11141-16-5	ND	0.05	mg/Kg	12/04/93
Aroclor 1242	53469-21-9	ND	0.05	mg/Kg	12/04/93
Aroclor 1248	12672-29-6	ND	0.05	mg/Kg	12/04/93
Aroclor 1254	11097-69-1	ND	0.05	mg/Kg	12/04/93
Aroclor 1260	11096-82-5	ND	0.05	mg/Kg	12/04/93
#Digestion, soil		-		Prep Date	12/02/93
CCR 17 Metals in Soil					
Ag Silver	EPA 6010	ND	0.1	mg/Kg	12/02/93
As Arsenic	EPA 7060	2 *	1	mg/Kg	12/02/93
Ba Barium	EPA 6010	61 *	3	mg/Kg	12/02/93
Be Beryllium	EPA 6010	0.2 *	0.1	mg/Kg	12/02/93
Cd Cadmium	EPA 6010	0.1 *	0.1	mg/Kg	12/02/93
Co Cobalt	EPA 6010	8.1 *	0.3	mg/Kg	12/02/93
Cr Chromium	EPA 6010	49 *	1	mg/Kg	12/02/93
Cu Copper	EPA 6010	17 *	0.5	mg/Kg	12/02/93
Hg Mercury	EPA 7471	ND	0.06	mg/Kg	12/03/93
Mo Molybdenum	EPA 6010	ND	0.3	mg/Kg	12/02/93
Ni Nickel	EPA 6010	50 *	1	mg/Kg	12/02/93
Pb Lead	EPA 6010	2 *	1	mg/Kg	12/02/93
Sb Antimony	EPA 6010	ND	1	mg/Kg	12/02/93
Se Selenium	EPA 7740	ND	2	mg/Kg	12/02/93
Tl Thallium	EPA 6010	ND	1	mg/Kg	12/02/93

LEVINE-FRICKE

SAMPLE ID: SUMP 5.5H
AEN LAB NO: 9311299-04
AEN WORK ORDER: 9311299
CLIENT PROJ. ID: 2680.30

DATE SAMPLED: 11/29/93
DATE RECEIVED: 11/30/93
REPORT DATE: 12/17/93

ANALYTE		METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
V	Vanadium	EPA 6010	32 *	1	mg/Kg	12/02/93
Zn	Zinc	EPA 6010	33 *	1	mg/Kg	12/02/93

ND = Not detected
* = Indicates value above reporting limit

QUALITY CONTROL DATA

DATE EXTRACTED: 12/06/93
DATE ANALYZED: 12/07/93
CLIENT PROJ. ID: 2680.30

AEN JOB NO: 9311299
SAMPLE SPIKED: 9311299-04A
INSTRUMENT: IR

IR DETERMINATION FOR OIL & GREASE/HYDROCARBONS
SPIKE RECOVERY SUMMARY
(SOIL MATRIX)

ANALYTE	MS Conc. (mg/kg)	Average Percent Recovery	RPD
Oil	221	95	2

CURRENT QC LIMITS (Revised 10/25/93)

Analyte	Percent Recovery	RPD
Oil	(70-118)	18

RPD = Relative Percent Difference

Daily method blanks for all associated analytical runs showed no contamination over the reporting limit.

QUALITY CONTROL DATA

CLIENT PROJ. ID: 2680.30

AEN JOB NO: 9311299

INSTRUMENT: H

SURROGATE STANDARD RECOVERY SUMMARY
METHOD: EPA 8020, 5030 GCFID
(SOIL MATRIX)

Date Analyzed	SAMPLE IDENTIFICATION		SURROGATE RECOVERY (PERCENT)
	Client Id.	Lab Id.	Fluorobenzene
12/09/93	HOIST 2-11.5 H	01A	91
12/08/93	HOIST 2-9.5 WH	02A	94
12/08/93	HOIST 2-9 EH	03A	90
12/08/93	SUMP 5.5 H	04A	90

CURRENT QC LIMITS

ANALYTE	PERCENT RECOVERY
Fluorobenzene	(70-115)

QUALITY CONTROL DATA

DATE ANALYZED: 12/08/93
SAMPLE SPIKED: 9311286-03A
CLIENT PROJ. ID: 2680.30

AEN JOB NO: 9311299
INSTRUMENT: H

MATRIX SPIKE RECOVERY SUMMARY
METHOD: EPA 8020, 5030 GCFID
(SOIL MATRIX)

ANALYTE	Spike Conc. (ug/kg)	Average Percent Recovery	RPD
Benzene	16.6	99	1
Toluene	65.6	98	2
Hydrocarbons as Gasoline	1000	96	3

CURRENT QC LIMITS (Revised 05/14/92)

Analyte	Percent Recovery	RPD
Benzene	(79-125)	10
Toluene	(84-117)	10
Gasoline	(54-124)	15

RPD = Relative Percent Difference

Daily method blanks for all associated analytical runs showed no contamination over the reporting limit.

QUALITY CONTROL DATA

DATE EXTRACTED: 12/03/93

AEN JOB NO: 9311299

CLIENT PROJ. ID: 2680.30

INSTRUMENT: B

SURROGATE STANDARD RECOVERY SUMMARY
METHOD: EPA 8080 (PCBS)
(SOIL MATRIX)

SAMPLE IDENTIFICATION			SURROGATE RECOVERY (PERCENT)
Date Analyzed	Sample Id.	Lab Id.	2,4,5,6-Tetrachloro-meta-xylene
12/04/93	SUMP 5.5 H	04	108

CURRENT QC LIMITS

ANALYTE	PERCENT RECOVERY
2,4,5,6-Tetrachloro-meta-xylene	(59-115)

QUALITY CONTROL DATA

DATE EXTRACTED: 12/03/93
DATE ANALYZED: 12/04/93
CLIENT PROJ. ID: 2680.30

AEN JOB NO: 9311299
SAMPLE SPIKED: 9311299-04A
INSTRUMENT: B

METHOD SPIKE RECOVERY SUMMARY
METHOD: EPA 8080
(SOIL MATRIX)

ANALYTE	Spike Conc. (ug/kg)	Average Percent Recovery	RPD
A1260	133	117	4

CURRENT QC LIMITS (Revised 08/15/91)

Analyte	Percent Recovery	RPD
A1260	(34-134)	25

RPD = Relative Percent Difference

Daily method blanks for all associated analytical runs showed no contamination over the reporting limit.

QUALITY CONTROL DATA

MATRIX: SOIL

CLIENT PROJ. ID: 2680.30

AEN JOB NO: 9311299
SAMPLE SPIKED: SAND
DIGESTION DATE: 12/02/93

METHOD SPIKE RECOVERY SUMMARY

COMPOUND	INST./ METHOD	TRUE VALUE (mg/kg)	AVERAGE % REC.	RPD	QC CONTROL LIMITS % REC. LIMIT	RPD LIMIT
Ag, Silver	ICP/6010	10	68	4	50-150	20
As, Arsenic	4000/7060	20	99	9	79-122	10
Ba, Barium	ICP/6010	200	115	2	75-125	20
Be, Beryllium	ICP/6010	5.0	111	4	75-125	20
Cd, Cadmium	ICP/6010	10	116	3	75-125	20
Cr, Chromium	ICP/6010	50	119	1	75-125	20
Co, Cobalt	ICP/6010	50	122	2	75-125	20
Cu, Copper	ICP/6010	50	120	2	75-125	20
Hg, Mercury	Hg/7470	0.4	102	2	75-125	20
Mo, Molybdenum	ICP/6010	50	118	2	75-125	20
Ni, Nickel	ICP/6010	50	117	3	75-125	20
Pb, Lead	4000/7421	50	120	3	75-125	20
Sb, Antimony	ICP/6010	50	114	3	75-125	20
Se, Selenium	4000/7740	40	100	4	73-126	14
Tl, Thallium	ICP/6010	200	111	3	75-125	20
V, Vanadium	ICP/6010	50	120	2	75-125	20
Zn, Zinc	ICP/6010	50	116	3	75-125	20

RPD = Relative Percent Difference

Reagent method blank showed no contamination

*** END OF REPORT ***

R-515

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

9311299

Project No.: 2680.30	Field Logbook No.:	Date: 11/30/93	Serial No.: Nº 12613
Project Name: Harrison St. Garage	Project Location: Oakland CA		
Sampler (Signature): John Sturman			Samplers: J. Sturman

SAMPLES						ANALYSES									
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 601	EPA 624	5520 D&F	TPH/BTXE	CAM 17 metals	EPA 8080 PCBs	HOLD	RUSH	REMARKS
HOIST 2-11.5H	11/29/93	10:20	01A	1	SOIL			X	X					
HOIST 2-9.5W4	"	10:45	02A	"	"			X	X					
HOIST 2-9E4	"	11:10	03A	"	"			X	X					
SUMP 5.5H	"	12:50	04AB	2	"			X	X	X	X			

RELINQUISHED BY: (Signature) Matthew Cloud	DATE 11/30/93	TIME 1630	RECEIVED BY: (Signature) Ron Stallup	DATE 11/30/93	TIME 430
RELINQUISHED BY: (Signature) Ron Stallup	DATE 11/30/93	TIME 530	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature) Denise Harrington	DATE 11/30/93	TIME 1730
METHOD OF SHIPMENT:	DATE	TIME	LAB COMMENTS:		

Sample Collector:
LEVINE-FRICKE
1900 Powell Street, 12th Floor
Emeryville, California 94608
(510) 652-4500

Analytical Laboratory:
AEN
Pleasant Hill CA
attn: Denise Harrington
510-930-9090

Shipping Copy (White) Lab Copy (Green) File Copy (Yellow) Field Copy (Pink)

FORM NO. 86/COC/ARF

American Environmental Network

Certificate of Analysis

DOHS Certification: 1172

AIHA Accreditation: 94523-001

LEVINE-FRICKE
1900 POWELL ST., 12TH FLOOR
EMERYVILLE, CA 94608

ATTN: JOHN STURMAN

CLIENT PROJ. ID: 2680.30
C.O.C. SERIAL NO: 10888
PROJ. NAME: HARRISON ST. GARAGE

REPORT DATE: 12/16/93

DATE SAMPLED: 11/29/93

DATE RECEIVED: 11/30/93

AEN JOB NO: 9311286

PROJECT SUMMARY:

On November 30, 1993, this laboratory received four (4) soil samples and two sets of florisil tubes and filters in cassette samples.

Client requested samples be analyzed for organic parameters. Sample identification, methodologies, results and dates analyzed are summarized on the following pages.

All laboratory quality control parameters were found to be within established limits. Batch QC data is included at the end of this report.

If you have any questions, please contact Client Services at (510) 930-9090.

COPY

Larry Klein
General Manager

Results FAXed 12/10/93

RECEIVED
DEC 21
LEVINE-FRICKE

LEVINE-FRICKE

SAMPLE ID: N.VAULT-7H
AEN LAB NO: 9311286-01
AEN WORK ORDER: 9311286
CLIENT PROJ. ID: 2680.30

DATE SAMPLED: 11/29/93
DATE RECEIVED: 11/30/93
REPORT DATE: 12/16/93

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs (Soil)	EPA 8020				
Benzene	71-43-2	ND	5	ug/Kg	12/07/93
Toluene	108-88-3	ND	5	ug/Kg	12/07/93
Ethylbenzene	100-41-4	ND	5	ug/Kg	12/07/93
Xylenes, Total	1330-20-7	23 *	5	ug/Kg	12/07/93
Purgeable HCs as Gasoline	5030/GCFID	4.1 *	0.2	mg/Kg	12/07/93
#Soil Extrn for TOG/HCs	SM 5520EF	-		Extrn Date	12/06/93
Hydrocarbons	SM 5520F	1,500 *	10	mg/kg	12/07/93
Total Oil and Grease	SM 5520E	1,700 *	10	mg/Kg	12/07/93

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: VAULT-BASE-9.5H
AEN LAB NO: 9311286-02
AEN WORK ORDER: 9311286
CLIENT PROJ. ID: 2680.30

DATE SAMPLED: 11/29/93
DATE RECEIVED: 11/30/93
REPORT DATE: 12/16/93

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs (Soil)	EPA 8020				
Benzene	71-43-2	50 *	5	ug/Kg	12/07/93
Toluene	108-88-3	690 *	5	ug/Kg	12/07/93
Ethylbenzene	100-41-4	220 *	5	ug/Kg	12/07/93
Xylenes, Total	1330-20-7	2,000 *	5	ug/Kg	12/07/93
Purgeable HCs as Gasoline	5030/GCFID	380 *	0.2	mg/Kg	12/09/93
#Soil Extrn for TOG/HCs	SM 5520EF	-		Extrn Date	12/06/93
Hydrocarbons	SM 5520F	14,000 *	10	mg/kg	12/07/93
Total Oil and Grease	SM 5520E	14,000 *	10	mg/Kg	12/07/93

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: E.VAULT-6.5H
AEN LAB NO: 9311286-03
AEN WORK ORDER: 9311286
CLIENT PROJ. ID: 2680.30

DATE SAMPLED: 11/29/93
DATE RECEIVED: 11/30/93
REPORT DATE: 12/16/93

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs (Soil)	EPA 8020				
Benzene	71-43-2	ND	5	ug/Kg	12/07/93
Toluene	108-88-3	ND	5	ug/Kg	12/07/93
Ethylbenzene	100-41-4	ND	5	ug/Kg	12/07/93
Xylenes, Total	1330-20-7	ND	5	ug/Kg	12/07/93
Purgeable HCs as Gasoline	5030/GCFID	ND	0.2	mg/Kg	12/07/93
#Soil Extrn for TOG/HCs	SM 5520EF	-		Extrn Date	12/06/93
Hydrocarbons	SM 5520F	ND	10	mg/kg	12/07/93
Total Oil and Grease	SM 5520E	ND	10	mg/Kg	12/07/93

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: HOIST-1-8H
AEN LAB NO: 9311286-04
AEN WORK ORDER: 9311286
CLIENT PROJ. ID: 2680.30

DATE SAMPLED: 11/29/93
DATE RECEIVED: 11/30/93
REPORT DATE: 12/16/93

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs (Soil)	EPA 8020				
Benzene	71-43-2	ND	5	ug/Kg	12/07/93
Toluene	108-88-3	ND	5	ug/Kg	12/07/93
Ethylbenzene	100-41-4	ND	5	ug/Kg	12/07/93
Xylenes, Total	1330-20-7	ND	5	ug/Kg	12/07/93
Purgeable HCs as Gasoline	5030/GCFID	ND	0.2	mg/Kg	12/07/93
#Soil Extrn for TOG/HCs	SM 5520EF	-		Extrn Date	12/06/93
Hydrocarbons	SM 5520F	ND	10	mg/kg	12/07/93
Total Oil and Grease	SM 5520E	ND	10	mg/Kg	12/07/93

ND = Not detected
* = Indicates value above reporting limit

QUALITY CONTROL DATA

DATE EXTRACTED: 12/06/93
DATE ANALYZED: 12/07/93
CLIENT PROJ. ID: 2680.30

AEN JOB NO: 9311286
SAMPLE SPIKED: 9311299-04
INSTRUMENT: IR

IR DETERMINATION FOR OIL & GREASE/HYDROCARBONS
SPIKE RECOVERY SUMMARY
(SOIL MATRIX)

ANALYTE	MS Conc. (mg/kg)	Average Percent Recovery	RPD
Oil	221	95	2

CURRENT QC LIMITS (Revised 10/25/93)

Analyte	Percent Recovery	RPD
Oil	(70-118)	18

RPD = Relative Percent Difference

Daily method blanks for all associated analytical runs showed no contamination over the reporting limit.

QUALITY CONTROL DATA

CLIENT PROJ. ID: 2680.30

AEN JOB NO: 9311286

INSTRUMENT: H

SURROGATE STANDARD RECOVERY SUMMARY
METHOD: EPA 8020, 5030 GCFID
(SOIL MATRIX)

Date Analyzed	SAMPLE IDENTIFICATION Client Id.	Lab Id.	SURROGATE RECOVERY (PERCENT) Fluorobenzene
12/07/93	N. VALUT-7H	01	102
12/07/93	VAULT-BASE-95H	02	97
12/07/93	E. VALUT-6.5H	03	91
12/07/93	HOIST-1-8H	04	91

CURRENT QC LIMITS

ANALYTE	PERCENT RECOVERY
Fluorobenzene	(70-115)

QUALITY CONTROL DATA

DATE ANALYZED: 12/08/93
SAMPLE SPIKED: 9311286-03
CLIENT PROJ. ID: 2680.30

AEN JOB NO: 9311286
INSTRUMENT: H

MATRIX SPIKE RECOVERY SUMMARY
METHOD: EPA 8020, 5030 GCFID
(SOIL MATRIX)

ANALYTE	Spike Conc. (ug/kg)	Average Percent Recovery	RPD
Benzene	16.6	99	1
Toluene	65.6	98	2
Hydrocarbons as Gasoline	1000	96	3

CURRENT QC LIMITS (Revised 05/14/92)

Analyte	Percent Recovery	RPD
Benzene	(79-125)	10
Toluene	(84-117)	10
Gasoline	(54-124)	15

RPD = Relative Percent Difference

Daily method blanks for all associated analytical runs showed no contamination over the reporting limit.

*** END OF REPORT ***

R-7, S-N 9311286

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 2680.30	Field Logbook No.:	Date: 11/29/93	Serial No.: 10888
Project Name: Harrison St. Garage	Project Location: Oakland, CA		
Sampler (Signature): [signature]			Samplers: J. Sherman

SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 601	EPA 624	Oil&Grease 5520 D+F	TPHg/BTEX	5503		HOLD	RUSH	REMARKS
N.VAULT-7H	11/29/93		01 A	1	SOIL			X	X					
VAULT-BASE-9.5H			02 A	↓	"			X	X					
E.VAULT-6.5H			03 A		"			X	X					
HOIST-1-8H			04 A		"			X	X					12/08/93 Per Susan Shu
27-1			05A		AIR FILTER					X				Air Volume: 67.32 Liters
27-2			05A		"					X				↓
27-3			06A		"					X				0 (BLANK)
27-4			06A	↓	"					X				↓

	DATE	TIME		DATE	TIME
RELINQUISHED BY: (Signature) Matthew Cloud	11/30/93	11:15	RECEIVED BY: (Signature) [signature]	11/30/93	11:15
RELINQUISHED BY: (Signature) [signature]	11/30/93	12:00	RECEIVED BY: (Signature) Lori L Pruitt	11/30/93	12:00
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT:	DATE	TIME	LAB COMMENTS:		

Sample Collector: LEVINE-FRICKE
1900 Powell Street, 12th Floor
Emeryville, Ca 94608
(415) 652-4500

Analytical Laboratory: AEN
Pleasant Hill, CA
510-930-9090
attn: Denise Harrington

Shipping Copy (White) Lab Copy (Green) File Copy (Yellow) Field Copy (Pink) FORM NO. 86/COC/ARF

American Environmental Network

Certificate of Analysis

DOHS Certification: 1172 AIHA Accreditation: 94523-001

LEVINE-FRICKE
1900 POWELL ST., 12TH FLOOR
EMERYVILLE, CA 94608

ATTN: JOHN STURMAN

CLIENT PROJ. ID: 2680.30
C.O.C. SERIAL NO: 11075
PROJ. NAME: HARRISON ST. GARAGE

REPORT DATE: 12/16/93

DATE SAMPLED: 11/24/93
DATE RECEIVED: 11/24/93

ADDITIONAL ANALYSIS
REQUESTED: 12/02/93

AEN JOB NO: 9311268

PROJECT SUMMARY:

On November 24, 1993, this laboratory received eleven (11) soil samples.

Client requested samples be analyzed for inorganic and organic parameters. On December 2, 1993, client requested additional analysis on sample SP-C1 for California Waste extraction test and the extract be analyzed for Lead. Sample identification, methodologies, results and dates analyzed are summarized on the following pages.

Lead recovery for matrix spike and matrix spike duplicate on sample SP-C1 was outside laboratory control limits. This appears to be a matrix effect as the laboratory control sample (spiked sand) recoveries for Lead were within laboratory quality control limits.

All other laboratory quality control parameters were found to be within established limits. Batch QC data is included at the end of this report.

If you have any questions, please contact Client Services at (510) 930-9090.

Larry Klein
General Manager

COPY

RECEIVED
DEC 2
LEVINE-F

Results FAXed 12/01-08/93

LEVINE-FRICKE

SAMPLE ID: E.WALL-8.5B
AEN LAB NO: 9311268-01A
AEN WORK ORDER: 9311268
CLIENT PROJ. ID: 2680.30

DATE SAMPLED: 11/24/93
DATE RECEIVED: 11/24/93
REPORT DATE: 12/16/93

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs (Soil)	EPA 8020				
Benzene	71-43-2	1400 *	5	ug/Kg	12/02/93
Toluene	108-88-3	7700 *	5	ug/Kg	12/02/93
Ethylbenzene	100-41-4	3900 *	5	ug/Kg	12/02/93
Xylenes, Total	1330-20-7	13000 *	5	ug/Kg	12/02/93
Purgeable HCs as Gasoline	5030/GCFID	820 *	0.2	mg/Kg	12/02/93
#Soil Extrn for TOG/HCs	SM 5520EF	-		Extrn Date	11/29/93
Hydrocarbons	SM 5520F	17000 *	10	mg/kg	11/30/93
Total Oil and Grease	SM 5520E	19000 *	10	mg/Kg	11/30/93

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: S.WALL-9.5B
AEN LAB NO: 9311268-02A
AEN WORK ORDER: 9311268
CLIENT PROJ. ID: 2680.30

DATE SAMPLED: 11/24/93
DATE RECEIVED: 11/24/93
REPORT DATE: 12/16/93

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs (Soil)	EPA 8020				
Benzene	71-43-2	5 *	5	ug/Kg	12/02/93
Toluene	108-88-3	22 *	5	ug/Kg	12/02/93
Ethylbenzene	100-41-4	ND	5	ug/Kg	12/02/93
Xylenes, Total	1330-20-7	20 *	5	ug/Kg	12/02/93
Purgeable HCs as Gasoline	5030/GCFID	ND	0.2	mg/Kg	12/02/93
#Soil Extrn for TOG/HCs	SM 5520EF	-		Extrn Date	11/29/93
Hydrocarbons	SM 5520F	10 *	10	mg/kg	11/30/93
Total Oil and Grease	SM 5520E	20 *	10	mg/Kg	11/30/93

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: N.WALL-9B
AEN LAB NO: 9311268-03A
AEN WORK ORDER: 9311268
CLIENT PROJ. ID: 2680.30

DATE SAMPLED: 11/24/93
DATE RECEIVED: 11/24/93
REPORT DATE: 12/16/93

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs (Soil)	EPA 8020				
Benzene	71-43-2	ND	50	ug/Kg	12/04/93
Toluene	108-88-3	520 *	5	ug/Kg	12/01/93
Ethylbenzene	100-41-4	1800 *	5	ug/Kg	12/01/93
Xylenes, Total	1330-20-7	3400 *	5	ug/Kg	12/01/93
Purgeable HCs as Gasoline	5030/GCFID	ND	800	mg/Kg	12/01/93
#Soil Extrn for TOG/HCs	SM 5520EF	-		Extrn Date	11/29/93
Hydrocarbons	SM 5520F	170 *	10	mg/kg	11/30/93
Total Oil and Grease	SM 5520E	180 *	10	mg/Kg	11/30/93

Reporting limit elevated for gasoline due to hydrocarbon interference in the diesel/kerosene range.

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: W.WALL-9B
AEN LAB NO: 9311268-04A
AEN WORK ORDER: 9311268
CLIENT PROJ. ID: 2680.30

DATE SAMPLED: 11/24/93
DATE RECEIVED: 11/24/93
REPORT DATE: 12/16/93

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs (Soil)	EPA 8020				
Benzene	71-43-2	ND	5	ug/Kg	12/01/93
Toluene	108-88-3	ND	5	ug/Kg	12/01/93
Ethylbenzene	100-41-4	ND	5	ug/Kg	12/01/93
Xylenes, Total	1330-20-7	ND	5	ug/Kg	12/01/93
Purgeable HCs as Gasoline	5030/GCFID	ND	0.2	mg/Kg	12/01/93
#Soil Extrn for TOG/HCs	SM 5520EF	-		Extrn Date	11/29/93
Hydrocarbons	SM 5520F	ND	10	mg/kg	11/30/93
Total Oil and Grease	SM 5520E	ND	10	mg/Kg	11/30/93

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: N.TANK-10B
AEN LAB NO: 9311268-05A
AEN WORK ORDER: 9311268
CLIENT PROJ. ID: 2680.30

DATE SAMPLED: 11/24/93
DATE RECEIVED: 11/24/93
REPORT DATE: 12/16/93

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs (Soil)	EPA 8020				
Benzene	71-43-2	1500 *	5	ug/Kg	12/02/93
Toluene	108-88-3	2700 *	5	ug/Kg	12/02/93
Ethylbenzene	100-41-4	5900 *	5	ug/Kg	12/02/93
Xylenes, Total	1330-20-7	10000 *	5	ug/Kg	12/02/93
Purgeable HCs as Gasoline	5030/GCFID	1300 *	0.2	mg/Kg	12/02/93
#Soil Extrn for TOG/HCs	SM 5520EF	-		Extrn Date	11/29/93
Hydrocarbons	SM 5520F	13000 *	10	mg/kg	11/30/93
Total Oil and Grease	SM 5520E	14000 *	10	mg/Kg	11/30/93

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: S.TANK-10B
AEN LAB NO: 9311268-06A
AEN WORK ORDER: 9311268
CLIENT PROJ. ID: 2680.30

DATE SAMPLED: 11/24/93
DATE RECEIVED: 11/24/93
REPORT DATE: 12/16/93

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs (Soil)	EPA 8020				
Benzene	71-43-2	ND	200	ug/Kg	12/02/93
Toluene	108-88-3	ND	200	ug/Kg	12/02/93
Ethylbenzene	100-41-4	ND	200	ug/Kg	12/02/93
Xylenes, Total	1330-20-7	ND	200	ug/Kg	12/02/93
Purgeable HCs as Gasoline	5030/GCFID	ND	400	mg/Kg	12/02/93
#Soil Extrn for TOG/HCs	SM 5520EF	-		Extrn Date	11/29/93
Hydrocarbons	SM 5520F	4200 *	10	mg/kg	11/30/93
Total Oil and Grease	SM 5520E	4800 *	10	mg/Kg	11/30/93

Reporting limit elevated for gasoline due to hydrocarbon interference in the diesel/kerosene range.

ND = Not detected
* = Indicates value above reporting limit

QUALITY CONTROL DATA

DATE EXTRACTED: 11/24/93
DATE ANALYZED: 11/29/93
CLIENT PROJ. ID: 2680.30

AEN JOB NO: 9311268
SAMPLE SPIKED: 9310338-27A
INSTRUMENT: IR

IR DETERMINATION FOR OIL & GREASE/HYDROCARBONS
SPIKE RECOVERY SUMMARY
(SOIL MATRIX)

ANALYTE	MS Conc. (mg/kg)	Average Percent Recovery	RPD
Oil	207	91	10

CURRENT QC LIMITS (Revised 10/25/93)

Analyte	Percent Recovery	RPD
Oil	(70-118)	18

RPD = Relative Percent Difference

Daily method blanks for all associated analytical runs showed no contamination over the reporting limit.

QUALITY CONTROL DATA

DATE EXTRACTED: 11/29/93
DATE ANALYZED: 11/30/93
CLIENT PROJ. ID: 2680.30

AEN JOB NO: 9311268
SAMPLE SPIKED: 9311268-02A
INSTRUMENT: IR

IR DETERMINATION FOR OIL & GREASE/HYDROCARBONS
SPIKE RECOVERY SUMMARY
(SOIL MATRIX)

ANALYTE	MS Conc. (mg/kg)	Average Percent Recovery	RPD
Oil	212	96	<1

CURRENT QC LIMITS (Revised 10/25/93)

Analyte	Percent Recovery	RPD
Oil	(70-118)	18

RPD = Relative Percent Difference

Daily method blanks for all associated analytical runs showed no contamination over the reporting limit.

QUALITY CONTROL DATA

CLIENT PROJ. ID: 2680.30

AEN JOB NO: 9311268

INSTRUMENT: H

SURROGATE STANDARD RECOVERY SUMMARY
METHOD: EPA 8020, 5030 GCFID
(SOIL MATRIX)

Date Analyzed	SAMPLE IDENTIFICATION Client Id.	Lab Id.	SURROGATE RECOVERY (PERCENT) Fluorobenzene
12/02/93	E. WALL-8.5B	01A	94
12/02/93	S. WALL-9.5B	02A	94
12/01/93	N. WALL-9B	03A	86
12/01/93	W. WALL-9B	04A	95
12/02/93	N. TANK-10B	05A	93
12/02/93	S. TANK-10B	06A	93
12/04/93	SP-A	07A	92
12/04/93	SP-B	08A	92
11/30/93	SP-C1	09A	100
11/30/93	SP-C2	10A	102

CURRENT QC LIMITS

ANALYTE	PERCENT RECOVERY
Fluorobenzene	(70-115)

QUALITY CONTROL DATA

DATE ANALYZED: 11/30/93
SAMPLE SPIKED: 9311207-01A
CLIENT PROJ. ID: 2680.30

AEN JOB NO: 9311268
INSTRUMENT: H

METHOD SPIKE RECOVERY SUMMARY
METHOD: EPA 8020, 5030 GCFID
(SOIL MATRIX)

ANALYTE	Spike Conc. (ug/kg)	Average Percent Recovery	RPD
Benzene	15.9	103	10
Toluene	62.2	104	10
Hydrocarbons as Gasoline	1000	99	4

CURRENT QC LIMITS (Revised 05/14/92)

Analyte	Percent Recovery	RPD
Benzene	(79-125)	10
Toluene	(84-117)	10
Gasoline	(54-124)	15

RPD = Relative Percent Difference

Daily method blanks for all associated analytical runs showed no contamination over the reporting limit.

QUALITY CONTROL DATA

DATE ANALYZED: 12/01/93
SAMPLE SPIKED: LCS
CLIENT PROJ. ID: 2680.30

AEN JOB NO: 9311268
INSTRUMENT: H

METHOD SPIKE RECOVERY SUMMARY
METHOD: EPA 8020, 5030 GCFID
(SOIL MATRIX)

ANALYTE	Spike Conc. (ug/kg)	Average Percent Recovery	RPD
Benzene	16.1	100	6
Toluene	66.3	101	5
Hydrocarbons as Gasoline	1000	102	4

CURRENT QC LIMITS (Revised 05/14/92)

Analyte	Percent Recovery	RPD
Benzene	(79-125)	10
Toluene	(84-117)	10
Gasoline	(54-124)	15

RPD = Relative Percent Difference
LCS = Laboratory Control Sample

QUALITY CONTROL DATA

MATRIX: SOIL

CLIENT PROJ. ID: 2680.30

AEN JOB NO: 9311268
SAMPLE SPIKED: SAND
DIGESTION DATE: 12/02/93

METHOD BLANK AND SPIKE RECOVERY SUMMARY

COMPOUND	INST./ METHOD	SAND BLANK RESULT (mg/kg)	TRUE VALUE	AVERAGE % REC.	RPD	QC CONTROL LIMITS % REC. LIMIT	QC CONTROL LIMITS RPD LIMIT
Ag, Silver	ICP/6010	ND	10	68	4	50-150	20
As, Arsenic	4000/7060	ND	20	99	9	90-115	12
Ba, Barium	ICP/6010	ND	200	115	2	75-125	20
Be, Beryllium	ICP/6010	ND	5	111	1	75-125	20
Cd, Cadmium	ICP/6010	ND	10	116	3	75-125	20
Co, Cobalt	ICP/6010	ND	50	122	2	75-125	20
Cr, Chromium	ICP/6010	ND	50	119	1	75-125	20
Cu, Copper	ICP/6010	ND	50	120	2	75-125	20
Hg, Mercury	Hg/7471	ND	0.4	102	2	75-125	20
Mo, Molybdenum	ICP/6010	ND	50	118	2	75-125	20
Ni, Nickel	ICP/6010	ND	50	117	3	75-125	20
Pb, Lead	ICP/6010	ND	50	120	3	75-125	20
Sb, Antimony	ICP/6010	ND	50	114	3	75-125	20
Se, Selenium	4000/7740	ND	40	100	4	73-126	14
Tl, Thallium	ICP/6010	ND	200	111	3	75-125	20
V, Vanadium	ICP/6010	ND	50	120	2	75-125	20
Zn, Zinc	ICP/6010	ND	50	116	3	75-125	20

RPD = Relative Percent Difference
ND = Not Detected

Reagent method blank showed no contamination

*** END OF REPORT ***

K-1,5-M

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

9311268

Project No.: 2680.30 | Field Logbook No.: | Date: 11/24/93 | Serial No.: 11075

Project Name: Harrison St. Garage | Project Location: Oakland, CA

Sampler (Signature): John Sturman

Samplers: J. Sturman

SAMPLES						ANALYSES								
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 601	EPA 624	5520 D&F	TPH/BTEX SW8015/8020	CAM 17 metals	STLC/TCLP	HOLD	RUSH	REMARKS
E. WALL-5B	11/24/93		01A	1	SOIL			X	X					12/02 - Per J. Sturman plc. add STLC - Pb to sample SP-C1 on a 3 day T&T. MP
S. WALL-5B			02A	1	"			X	X					
N. WALL-9B			03A	1	"			X	X					
W. WALL-9B	"		04AB	2	"			X	X					
N. TANK-10B	"		05AB	2	"			X	X					
E. TANK-10B	"		06AB	2	"			X	X	PNA's				
SP-A1	"		07A	1	"			X	X	-				
SP-B	"		08A	1	"			X	X					
SP-C1	"		09A	1	"			X	X	X	✓	*		Per John Sturman 11/29.
SP-C2	"		10A	1	"			X	X			*		Organics due 11/30; CAM-17 due 12/1. - DSH
SP-A2	"		11A	1	"			MTBE		X				

RELINQUISHED BY: (Signature) John Sturman	DATE 11/24/93	TIME 17:00	RECEIVED BY: (Signature) Ron Stallcup	DATE 11/24/93	TIME 1700
RELINQUISHED BY: (Signature) Ron Stallcup	DATE 11/24/93	TIME 5:45	RECEIVED BY: (Signature) Gina Gillespie	DATE 11-24-93	TIME 1745
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT:	DATE	TIME	LAB COMMENTS:		

Sample Collector:
LEVINE-FRICKE
1900 Powell Street, 12th Floor
Emeryville, Ca 94608
(415) 652-4500

Analytical Laboratory: AEN Laboratories
Pleasant Hill, CA
(510) 930-9090

Shipping Copy (White) Lab Copy (Green) File Copy (Yellow) Field Copy (Pink)

FORM NO. RC/000/ARF

American Environmental Network

DOHS Certification: 1172

CERTIFICATE OF ANALYSIS

COPY

LEVINE-FRICKE
1900 POWELL ST., 12TH FLOOR
EMERYVILLE, CA 94608

ATTN: JOHN STURMAN

CLIENT PROJ. ID: 2680.30
C.O.C. SERIAL NO: 12914
PROJ. NAME: HARRISON ST. GARAGE

REPORT DATE: 01/11/94

DATE SAMPLED: 12/29/93

DATE RECEIVED: 12/30/93

AEN JOB NO: 9312310

PROJECT SUMMARY:

On December 30, 1993, this laboratory received two (2) soil samples.

Client requested samples be analyzed for Purgeable Hydrocarbons as Gasoline, Benzene, Toluene, Ethylbenzene and Total Xylenes by EPA Methods 8020, 5030 GCFID. Sample identification, results and dates analyzed are summarized on the following pages.

All laboratory quality control parameters were found to be within established limits. Batch QC data is included at the end of this report.

If you have any questions, please contact Client Services at (510) 930-9090.

RECEIVED
JAN 17
LEVINE-FRICKE

Larry Klein
General Manager

Results FAXed 01/07/94

LEVINE-FRICKE

SAMPLE ID: WEST WALL-3-N
AEN LAB NO: 9312310-01
AEN WORK ORDER: 9312310
CLIENT PROJ. ID: 2680.30

DATE SAMPLED: 12/29/93
DATE RECEIVED: 12/30/93
REPORT DATE: 01/11/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	**EPA 8020**				
Benzene	71-43-2	ND	5	ug/Kg	01/05/94
Toluene	108-88-3	ND	5	ug/Kg	01/05/94
Ethylbenzene	100-41-4	ND	5	ug/Kg	01/05/94
Xylenes, Total	1330-20-7	ND	5	ug/Kg	01/05/94
Purgeable HCs as Gasoline	5030/GCFID	ND	0.2	mg/Kg	01/05/94

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: WEST WALL-3-S
AEN LAB NO: 9312310-02
AEN WORK ORDER: 9312310
CLIENT PROJ. ID: 2680.30

DATE SAMPLED: 12/29/93
DATE RECEIVED: 12/30/93
REPORT DATE: 01/11/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	**EPA 8020**				
Benzene	71-43-2	ND	5	ug/Kg	01/05/94
Toluene	108-88-3	ND	5	ug/Kg	01/05/94
Ethylbenzene	100-41-4	ND	5	ug/Kg	01/05/94
Xylenes, Total	1330-20-7	ND	5	ug/Kg	01/05/94
Purgeable HCs as Gasoline	5030/GCFID	0.5 *	0.2	mg/Kg	01/05/94

ND = Not detected
* = Indicates value above reporting limit

QUALITY CONTROL DATA

CLIENT PROJ. ID: 2680.30

AEN JOB NO: 9312310

INSTRUMENT: H

SURROGATE STANDARD RECOVERY SUMMARY
METHOD: EPA 8020, 5030 GCFID
(SOIL MATRIX)

Date Analyzed	SAMPLE IDENTIFICATION Client Id.	Lab Id.	SURROGATE RECOVERY (PERCENT) Fluorobenzene
01/05/94	WEST WALL-3-N	01	100
01/05/94	WEST WALL-3-S	02	102

CURRENT QC LIMITS

ANALYTE	PERCENT RECOVERY
Fluorobenzene	(70-115)

QUALITY CONTROL DATA

DATE ANALYZED: 01/05/94
SAMPLE SPIKED: 9312310-01
CLIENT PROJ. ID: 2680.30

AEN JOB NO: 9312310
INSTRUMENT: H

MATRIX SPIKE RECOVERY SUMMARY
METHOD: EPA 8020, 5030 GCFID
(SOIL MATRIX)

ANALYTE	Spike Conc. (ug/kg)	Average Percent Recovery	RPD
Benzene	18.8	99	7
Toluene	72.7	101	8
Hydrocarbons as Gasoline	1000	101	8

CURRENT QC LIMITS (Revised 05/14/92)

Analyte	Percent Recovery	RPD
Benzene	(79-125)	10
Toluene	(84-117)	10
Gasoline	(54-124)	15

RPD = Relative Percent Difference

Daily method blanks for all associated analytical runs showed no contamination over the reporting limit.

*** END OF REPORT ***

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

9312310

Project No.: 2680.30	Field Logbook No.:	Date: 12/29/93	Serial No.: № 12914
Project Name: HARRISON ST. GARAGE	Project Location: OAKLAND		
Sampler (Signature): Stuart Connell			Samplers: Stuart Connell

SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 601	EPA 624	TPH gasoline and BTEX	Mod EPA 8015			HOLD	RUSH	REMARKS
WEST WALL-3-N	12/29/93		01A	1	SOIL			X	X					Normal TAT
WEST WALL-3-S	12/29/93		02A	1	SOIL			X	X					

	DATE	TIME		DATE	TIME
RELINQUISHED BY: (Signature) Stuart Connell	12/29/93	4:30	RECEIVED BY: (Signature) [signature]	12/29/93	11:15
RELINQUISHED BY: (Signature) [signature]	12/30/93	12:10	RECEIVED BY: (Signature) Gina Gillespie	12-30-93	12:10
RELINQUISHED BY: (Signature)			RECEIVED BY: (Signature)		
METHOD OF SHIPMENT:			LAB COMMENTS:		

Sample Collector: LEVINE-FRICKE 1900 Powell Street, 12th Floor Emeryville, California 94608 (510) 652-4500	Analytical Laboratory: A.E.N. Lab Pleasant Hill 510-930-9090 Attention: Robin Byers

Shipping Copy (White) Lab Copy (Green) File Copy (Yellow) Field Copy (Pink) FORM NO. 86/COC/ARF

American Environmental Network

DOHS Certification: 1172

CERTIFICATE OF ANALYSIS

LEVINE-FRICKE
1900 POWELL ST., 12TH FLOOR
EMERYVILLE, CA 94608

ATTN: JOHN STURMAN

CLIENT PROJ. ID: 2680.30
C.O.C. SERIAL NO: 10950
PROJ. NAME: HARRISON STREET GARAGE

REPORT DATE: 12/22/93

DATE SAMPLED: 12/07/93

DATE RECEIVED: 12/08/93

AEN JOB NO: 9312102

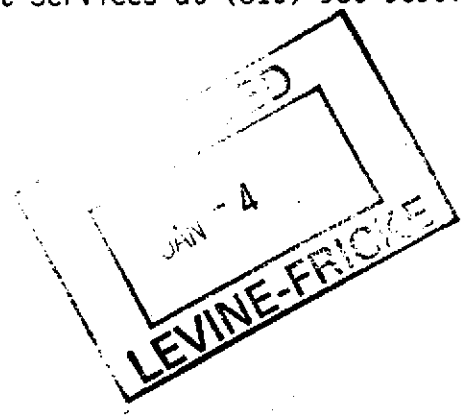
PROJECT SUMMARY:

On December 8, 1993, this laboratory received two (2) soil samples.

Client requested the samples be analyzed for Purgeable Hydrocarbons as Gasoline, Benzene, Toluene, Ethylbenzene and Total Zylenes by EPA Methods 8020, 5030 GCFID. Sample identification, results and dates analyzed are summarized on the following pages.

All laboratory quality control parameters were found to be within established limits. Batch QC data is included at the end of this report.

If you have any questions, please contact Client Services at (510) 930-9090.



Larry Klein
General Manager

Results FAXed 12/20/93

LEVINE-FRICKE

SAMPLE ID: PJ-2G
AEN LAB NO: 9312102-01
AEN WORK ORDER: 9312102
CLIENT PROJ. ID: 2680.30

DATE SAMPLED: 12/07/93
DATE RECEIVED: 12/08/93
REPORT DATE: 12/22/93

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs (Soil)	**EPA 8020**				
Benzene	71-43-2	ND	5	ug/Kg	12/18/93
Toluene	108-88-3	ND	5	ug/Kg	12/18/93
Ethylbenzene	100-41-4	ND	5	ug/Kg	12/18/93
Xylenes, Total	1330-20-7	ND	5	ug/Kg	12/18/93
Purgeable HCs as Gasoline	5030/GCFID	ND	0.2	mg/Kg	12/18/93

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: DSP-2G
AEN LAB NO: 9312102-02
AEN WORK ORDER: 9312102
CLIENT PROJ. ID: 2680.30

DATE SAMPLED: 12/07/93
DATE RECEIVED: 12/08/93
REPORT DATE: 12/22/93

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs (Soil)	**EPA 8020**				
Benzene	71-43-2	ND	5	ug/Kg	12/18/93
Toluene	108-88-3	ND	5	ug/Kg	12/18/93
Ethylbenzene	100-41-4	ND	5	ug/Kg	12/18/93
Xylenes, Total	1330-20-7	ND	5	ug/Kg	12/18/93
Purgeable HCs as Gasoline	5030/GCFID	ND	0.2	mg/Kg	12/18/93

ND = Not detected
* = Indicates value above reporting limit

QUALITY CONTROL DATA

CLIENT PROJ. ID: 2680.30

AEN JOB NO: 9312102

INSTRUMENT: H

SURROGATE STANDARD RECOVERY SUMMARY
METHOD: EPA 8020, 5030 GCFID
(SOIL MATRIX)

Date Analyzed	SAMPLE IDENTIFICATION Client Id.	Lab Id.	SURROGATE RECOVERY (PERCENT) Fluorobenzene
12/18/93	PJ-2G	01	95
12/18/93	DSP-2G	02	97

CURRENT QC LIMITS

ANALYTE	PERCENT RECOVERY
Fluorobenzene	(70-115)

QUALITY CONTROL DATA

DATE ANALYZED: 12/20/93
SAMPLE SPIKED: 9312102-02A
CLIENT PROJ. ID: 2680.30

AEN JOB NO: 9312102
INSTRUMENT: H

MATRIX SPIKE RECOVERY SUMMARY
METHOD: EPA 8020, 5030 GCFID
(SOIL MATRIX)

ANALYTE	Spike Conc. (ug/kg)	Average Percent Recovery	RPD
Benzene	15.3	98	4
Toluene	63.5	96	6
Hydrocarbons as Gasoline	1000	84	4

CURRENT QC LIMITS (Revised 05/14/92)

Analyte	Percent Recovery	RPD
Benzene	(81-115)	10
Toluene	(85-112)	9
Gasoline	(72-119)	12

RPD = Relative Percent Difference

Daily method blanks for all associated analytical runs showed no contamination over the reporting limit.

*** END OF REPORT ***

R-7, 5-B

9312102

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 2680.30	Field Logbook No.:	Date: 12/7/93	Serial No.: 10950
Project Name: Harrison Street Garage	Project Location: Oakland, CA		
Sampler (Signature): John Sturman			Samplers: J. Sturman

SAMPLES						ANALYSES								
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 601	EPA 624	TPHg/BTEX					HOLD	RUSH	REMARKS
PJ-2G	12/7/93	13:45	01A	1	SOIL			X							
PSP-2G	12/7/93	13:55	02A	1	SOIL			X							

RELINQUISHED BY: (Signature) Stuart Counsell	DATE 12/7/93	TIME 5:00pm	RECEIVED BY: (Signature) Ron Stallings	DATE 12/8/93	TIME 1145
RELINQUISHED BY: (Signature) Ron Stallings	DATE 12/8/93	TIME 3:00	RECEIVED BY: (Signature) Gina Gillespie	DATE 12-8-93	TIME 1500
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT:	DATE	TIME	LAB COMMENTS:		

Sample Collector:
LEVINE-FRICKE
1900 Powell Street, 12th Floor
Emeryville, Ca 94608
(415) 652-4500

Analytical Laboratory: AEN Labs
Pleasant Hill, CA
attn: Roxy Sigva 510-930-9090

Shipping (White) Lab Copy (Green) File Copy (Yellow) Id Copy (Pink)

FORM : 86/COC/ARF

American Environmental Network

DOHS Certification: 1172

CERTIFICATE OF ANALYSIS

LEVINE-FRICKE
1900 POWELL ST., 12TH FLOOR
EMERYVILLE, CA 94608

ATTN: JOHN STURMAN

CLIENT PROJ. ID: 2680.30
C.O.C. SERIAL NO: 12673
PROJ. NAME: HARRISON ST. GARAGE

REPORT DATE: 01/04/94

DATE SAMPLED: 12/15-16/93

DATE RECEIVED: 12/16/93

AEN JOB NO: 9312196

PROJECT SUMMARY:

On December 16, 1993, this laboratory received three (3) soil samples.

Client requested samples be analyzed for Purgeable Hydrocarbons as Gasoline, Benzene, Toluene, Ethylbenzene and Total Xylenes by EPA Methods 8020, 5030 GCFID. Sample identification, results and dates analyzed are summarized on the following pages.

All laboratory quality control parameters were found to be within established limits. Batch QC data is included at the end of this report.

If you have any questions, please contact Client Services at (510) 930-9090.

Larry Klein
General Manager

JAN - 7

Results FAXed 12/28/93

LEVINE-FRICKE

SAMPLE ID: EAST WALL-3G
AEN LAB NO: 9312196-01
AEN WORK ORDER: 9312196
CLIENT PROJ. ID: 2680.30

DATE SAMPLED: 12/15/93
DATE RECEIVED: 12/16/93
REPORT DATE: 01/04/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	**EPA 8020**				
Benzene	71-43-2	ND	5	ug/Kg	12/21/93
Toluene	108-88-3	ND	5	ug/Kg	12/21/93
Ethylbenzene	100-41-4	ND	5	ug/Kg	12/21/93
Xylenes, Total	1330-20-7	ND	5	ug/Kg	12/21/93
Purgeable HCs as Gasoline	5030/GCFID	ND	0.2	mg/Kg	12/21/93

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: SOUTH WALL-3G
AEN LAB NO: 9312196-02
AEN WORK ORDER: 9312196
CLIENT PROJ. ID: 2680.30

DATE SAMPLED: 12/15/93
DATE RECEIVED: 12/16/93
REPORT DATE: 01/04/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	**EPA 8020**				
Benzene	71-43-2	ND	5	ug/Kg	12/20/93
Toluene	108-88-3	ND	5	ug/Kg	12/20/93
Ethylbenzene	100-41-4	ND	5	ug/Kg	12/20/93
Xylenes, Total	1330-20-7	ND	5	ug/Kg	12/20/93
Purgeable HCs as Gasoline	5030/GCFID	ND	0.2	mg/Kg	12/20/93

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: NORTH WALL-3G
AEN LAB NO: 9312196-03
AEN WORK ORDER: 9312196
CLIENT PROJ. ID: 2680.30

DATE SAMPLED: 12/16/93
DATE RECEIVED: 12/16/93
REPORT DATE: 01/04/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	**EPA 8020**				
Benzene	71-43-2	ND	5	ug/Kg	12/21/93
Toluene	108-88-3	ND	5	ug/Kg	12/21/93
Ethylbenzene	100-41-4	ND	5	ug/Kg	12/21/93
Xylenes, Total	1330-20-7	ND	5	ug/Kg	12/21/93
Purgeable HCs as Gasoline	5030/GCFID	ND	0.2	mg/Kg	12/21/93

ND = Not detected
* = Indicates value above reporting limit

QUALITY CONTROL DATA

CLIENT PROJ. ID: 2680.30

AEN JOB NO: 9312196

INSTRUMENT: H

SURROGATE STANDARD RECOVERY SUMMARY
METHOD: EPA 8020, 5030 GCFID
(SOIL MATRIX)

Date Analyzed	SAMPLE IDENTIFICATION Client Id.	Lab Id.	SURROGATE RECOVERY (PERCENT) Fluorobenzene
12/21/93	EAST WALL-3G	01	92
12/20/93	SOUTH WALL-3G	02	96
12/21/93	NORTH WALL-3G	03	94

CURRENT QC LIMITS

ANALYTE	PERCENT RECOVERY
Fluorobenzene	(70-115)

QUALITY CONTROL DATA

DATE ANALYZED: 12/22/93
SAMPLE SPIKED: 9312196-03
CLIENT PROJ. ID: 2680.30

AEN JOB NO: 9312196
INSTRUMENT: H

MATRIX SPIKE RECOVERY SUMMARY
METHOD: EPA 8020, 5030 GCFID
(SOIL MATRIX)

ANALYTE	Spike Conc. (ug/kg)	Average Percent Recovery	RPD
Benzene	17.8	86	5
Toluene	69.8	93	5
Hydrocarbons as Gasoline	1000	99	6

CURRENT QC LIMITS (Revised 05/14/92)

Analyte	Percent Recovery	RPD
Benzene	(79-125)	10
Toluene	(84-117)	10
Gasoline	(54-124)	15

RPD = Relative Percent Difference

Daily method blanks for all associated analytical runs showed no contamination over the reporting limit.

*** END OF REPORT ***

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

R-4, S-D

9312196

Project No.: 2680, 30	Field Logbook No.:	Date: 16 Dec 1993	Serial No.:
Project Name: Harrison St. Garage	Project Location: Oakland, CA		Nº 12673
Sampler (Signature): Stuart Connell			Samplers: SRC

SAMPLES						ANALYSES								
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 601	EPA 624	EPA 6015 8015 TPH/BTEX				HOLD	RUSH	REMARKS
EAST WALL-3.G	12/15/93		01A	1	SOIL			X						
SOUTH WALL-3G	"		02A	"	"			X						DATA TO JOHN STURMAN
NORTH WALL-3	12/16/93		03A	"	"			X						

RELINQUISHED BY: (Signature) Stuart Connell	DATE 12/16	TIME 11:15	RECEIVED BY: (Signature)	DATE 12/16/93	TIME 12:30
RELINQUISHED BY: (Signature)	DATE 12/16	TIME 17:55	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature) Denise Harrington	DATE 12/17/93	TIME 1255
METHOD OF SHIPMENT:	DATE	TIME	LAB COMMENTS:		

Sample Collector:
LEVINE-FRICKE
1900 Powell Street, 12th Floor
Emeryville, California 94608
(510) 652-4500

Analytical Laboratory: AEN Laboratories
Pleasant Hill, CA
attn: Robin Byars 510-930-9090

Shipping Copy (White) Lab Copy (Green) File Copy (Yellow) Field Copy (Pink)

FORM NO. 86/COC/ARF

American Environmental Network

DOHS Certification: 1172

CERTIFICATE OF ANALYSIS

LEVINE-FRICKE
1900 POWELL ST., 12TH FLOOR
EMERYVILLE, CA 94608

ATTN: JOHN STURMAN

CLIENT PROJ. ID: 2680.30
C.O.C. SERIAL NO: 12677
PROJ. NAME: HARRISON ST. GARAGE

REPORT DATE: 12/27/93

DATE SAMPLED: 12/06/93

DATE RECEIVED: 12/07/93

AEN JOB NO: 9312074

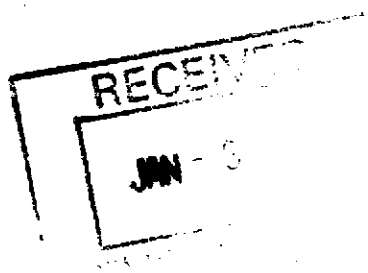
PROJECT SUMMARY:

On December 7, 1993, this laboratory received four (4) soil samples.

Client requested samples be analyzed for inorganic and organic parameters. Sample identification, methodologies, results and dates analyzed are summarized on the following pages.

All laboratory quality control parameters were found to be within established limits. Batch QC data is included at the end of this report.

If you have any questions, please contact Client Services at (510) 930-9090.



Larry Klein
General Manager

Results FAXed 12/20/93

LEVINE-FRICKE

SAMPLE ID: S.TANK-8FG
AEN LAB NO: 9312074-01
AEN WORK ORDER: 9312074
CLIENT PROJ. ID: 2680.30

DATE SAMPLED: 12/06/93
DATE RECEIVED: 12/07/93
REPORT DATE: 12/27/93

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Organo Lead in Soil	DOHS-LUFT	ND	0.5	mg/kg	12/08/93
BTEX & Gasoline HCs (Soil)	EPA 8020				
Benzene	71-43-2	870 *	5	ug/Kg	12/16/93
Toluene	108-88-3	43,000 *	5	ug/Kg	12/17/93
Ethylbenzene	100-41-4	34,000 *	5	ug/Kg	12/17/93
Xylenes, Total	1330-20-7	240,000 *	5	ug/Kg	12/17/93
Purgeable HCs as Gasoline	5030/GCFID	1,500 *	0.2	mg/Kg	12/17/93
Lead	EPA 7420	4 *	3	mg/kg	12/14/93
#Digestion - soil		-		Prep Date	12/13/93

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: S.TANK-8G
AEN LAB NO: 9312074-02
AEN WORK ORDER: 9312074
CLIENT PROJ. ID: 2680.30

DATE SAMPLED: 12/06/93
DATE RECEIVED: 12/07/93
REPORT DATE: 12/27/93

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Organo Lead in Soil	DOHS-LUFT	ND	0.5	mg/kg	12/08/93
BTEX & Gasoline HCs (Soil)	EPA 8020				
Benzene	71-43-2	6 *	5	ug/Kg	12/16/93
Toluene	108-88-3	88 *	5	ug/Kg	12/17/93
Ethylbenzene	100-41-4	250 *	5	ug/Kg	12/17/93
Xylenes, Total	1330-20-7	1,800 *	5	ug/Kg	12/17/93
Purgeable HCs as Gasoline	5030/GCFID	43 *	0.2	mg/Kg	12/17/93
Lead	EPA 7420	4 *	3	mg/kg	12/14/93
#Digestion - soil		-		Prep Date	12/13/93

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: N.TANK-7.5G
AEN LAB NO: 9312074-03
AEN WORK ORDER: 9312074
CLIENT PROJ. ID: 2680.30

DATE SAMPLED: 12/06/93
DATE RECEIVED: 12/07/93
REPORT DATE: 12/27/93

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Organo Lead in Soil	DOHS-LUFT	1.9 *	0.5	mg/kg	12/08/93
BTEX & Gasoline HCs (Soil)	EPA 8020				
Benzene	71-43-2	11.000 *	5	ug/Kg	12/16/93
Toluene	108-88-3	190.000 *	5	ug/Kg	12/16/93
Ethylbenzene	100-41-4	64.000 *	5	ug/Kg	12/16/93
Xylenes, Total	1330-20-7	400.000 *	5	ug/Kg	12/16/93
Purgeable HCs as Gasoline	5030/GCFID	3.100 *	0.2	mg/Kg	12/16/93
Lead	EPA 7420	8 *	3	mg/kg	12/14/93
#Digestion - soil		-		Prep Date	12/13/93

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: N.TANK-8.5FG
AEN LAB NO: 9312074-04
AEN WORK ORDER: 9312074
CLIENT PROJ. ID: 2680.30

DATE SAMPLED: 12/06/93
DATE RECEIVED: 12/07/93
REPORT DATE: 12/27/93

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Organo Lead in Soil	DOHS-LUFT	ND	0.5	mg/kg	12/08/93
BTEX & Gasoline HCs (Soil)	EPA 8020				
Benzene	71-43-2	ND	5	ug/Kg	12/16/93
Toluene	108-88-3	ND	5	ug/Kg	12/16/93
Ethylbenzene	100-41-4	ND	5	ug/Kg	12/16/93
Xylenes, Total	1330-20-7	ND	5	ug/Kg	12/16/93
Purgeable HCs as Gasoline	5030/GCFID	ND	0.2	mg/Kg	12/16/93
Lead	EPA 7420	4 *	3	mg/kg	12/14/93
#Digestion - soil		-		Prep Date	12/13/93

ND = Not detected
* = Indicates value above reporting limit

QUALITY CONTROL DATA

CLIENT PROJ. ID: 2680.30

AEN JOB NO: 9312074

INSTRUMENT: H

SURROGATE STANDARD RECOVERY SUMMARY
METHOD: EPA 8020, 5030 GCFID
(SOIL MATRIX)

Date Analyzed	SAMPLE IDENTIFICATION Client Id.	Lab Id.	SURROGATE RECOVERY (PERCENT) Fluorobenzene
12/17/93	S.TANK-8FG	01	95
12/17/93	S.TANK-8G	02	94
12/16/93	N.TANK-7.5G	03	94
12/16/93	N.TANK-8.5FG	04	94

CURRENT QC LIMITS

ANALYTE	PERCENT RECOVERY
Fluorobenzene	(70-115)

QUALITY CONTROL DATA

DATE ANALYZED: 12/20/93
SAMPLE SPIKED: 9312138-02
CLIENT PROJ. ID: 2680.30

AEN JOB NO: 9312074
INSTRUMENT: H

MATRIX SPIKE RECOVERY SUMMARY
METHOD: EPA 8020, 5030 GCFID
(SOIL MATRIX)

ANALYTE	Spike Conc. (ug/kg)	Average Percent Recovery	RPD
Benzene	15.2	99	3
Toluene	61.3	102	9
Hydrocarbons as Gasoline	1000	83	12

CURRENT QC LIMITS (Revised 05/14/92)

Analyte	Percent Recovery	RPD
Benzene	(79-125)	10
Toluene	(84-117)	10
Gasoline	(54-124)	15

RPD = Relative Percent Difference

Daily method blanks for all associated analytical runs showed no contamination over the reporting limit.

QUALITY CONTROL DATA

MATRIX: SOIL

AEN JOB NO: 9312074

CLIENT PROJ. ID: 2680.30

DIGESTION DATE: 12/13/93

MATRIX SPIKE RECOVERY SUMMARY

COMPOUND	INST./ METHOD	SAMPLE SPIKED	SAMPLE RESULT (mg/kg)	SPIKE ADDED (mg/kg)	AVERAGE % REC.	RPD	QC CONTROL LIMITS % REC. LIMIT	QC CONTROL LIMITS RPD LIMIT
Pb, Lead	V22/7420	9312074-04	3.7	100	96	6	72-122	13
Organo Lead	V22/DHS	9312074-01	ND	5	99	3	50-132	22

SAMPLE SPIKED: SAND

METHOD BLANK AND SPIKE RECOVERY SUMMARY

COMPOUND	INST./ METHOD	SAND BLANK RESULT (mg/kg)	TRUE VALUE (mg/kg)	AVERAGE % REC.	RPD	QC CONTROL LIMITS % REC. LIMIT	QC CONTROL LIMITS RPD LIMIT
Pb, Lead	ICP/7420	ND	100	93	4	75-125	20

RPD = Relative Percent Difference
ND = Not Detected

Reagent method blank showed no contamination

*** END OF REPORT ***

CHAIN OF CUSTODY / ANALYSES REQUEST FORM 93120 74

Project No.: 2680,30	Field Logbook No.:	Date: 6 Dec 1993	Serial No.:
Project Name: Harrison St. Garage	Project Location: Oakland, CA		Nº 12677
Sampler (Signature): John Stein			Samplers: J. Stein

SAMPLES						ANALYSES								
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 601	EPA 624	TPHg/BTEX	TOTAL Pb	Organic Pb		HOLD	RUSH	REMARKS
S.TANK-8FG	12/6/93	15:00	01A	1	SOIL			X	X	X				
S.TANK-8G	"	15:10	02A	1	SOIL			X	X	X				
N.TANK-7.5G	"	15:30	03A	1	SOIL			X	X	X				
N.TANK8.5FG	"	15:35	04A	1	SOIL			X	X	X				

RELINQUISHED BY: (Signature) Matthew Cloud	DATE 12/7/93	TIME 0915	RECEIVED BY: (Signature) Ron Stallard	DATE 12/7/93	TIME 915
RELINQUISHED BY: (Signature) Ron Stallard	DATE 12/7/93	TIME 1045	RECEIVED BY: (Signature) Lai L. Pruitt	DATE 12-7-93	TIME 1045
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT:	DATE	TIME	LAB COMMENTS:		

Sample Collector: LEVINE-FRICKE
1900 Powell Street, 12th Floor
Emeryville, California 94608
(510) 652-4500

Analytical Laboratory: AEN Labs
Pleasant Hill, CA
attn: Robin Byars 510-930-9090

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