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ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

July 20, 1995

LF 3186.95

Mr. Jim McKeehan, Trustee
Executive Defined Personnel Benefit Plan
6612 Owens Drive
Pleasanton, California 94588

Subject: Report of Results of Soil and Ground-Water Investigations and Remedial Activities Conducted at 6085 Scarlett Court, Dublin, California

Dear Mr. McKeehan:

Levine•Fricke is pleased to provide you with a copy of the subject report. This report summarizes remedial and investigative activities for petroleum-affected soil and ground water conducted at 6085 Scarlett Court in Dublin, California.

If you have any questions or comments, please feel free to call me or James Lutton, P.E.

Sincerely,

Michael J. Bombard, R.E.A.
Senior Project Geologist

Enclosure

cc: Ms. Eva Chu, ACDEH
Mr. John Loar, Blackhawk Properties

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RESULTS OF SOIL AND GROUND-WATER INVESTIGATIONS AND REMEDIAL ACTIVITIES 6085 SCARLETT COURT DUBLIN, CALIFORNIA

July 18, 1995
LF 3186.95

Prepared for
Executive Personnel Defined Benefit Plan
c/o Jim McKeehan, Trustee
6612 Owens Drive
Pleasanton, California 94588

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RESULTS OF SOIL AND GROUND-WATER INVESTIGATIONS AND REMEDIAL ACTIVITIES 6085 SCARLETT COURT DUBLIN, CALIFORNIA

1.0 INTRODUCTION

The following report has been prepared by Levine•Fricke, Inc. ("Levine•Fricke") at the request of Executive Defined Personnel Benefit Plan (EDPBP) to describe and document investigations and remedial activities conducted at 6085 Scarlett Court in Dublin, California ("the Site"; Figures 1 and 2).

1.1 Site Background

The Site is located at 6085 Scarlett Court in Dublin, California in an area of primarily light industrial development. The Site is bounded by Dublin Road to the north, Chabot Canal and Scarlett Court to the west, a vacant property to the South (formerly the Scotsman Corporation property), and a fenced storage facility to the east. The Site includes one single-story building. The Site was formerly owned by Aggregate Systems, Inc and was reportedly used for storage and distribution of rock, sand, and concrete (personal communication with Chuck LeMoine, former owner of the Site). Three 500- to 1,000-gallon underground storage tanks (USTs) and one dispenser island reportedly were used during Aggregate Systems' operations at the Site for storage of refined petroleum products for filling delivery trucks.

The Site is currently located in an industrial setting and is scheduled for development. Based on conversations with construction personnel at the Site, a building is slated for expansion into a warehouse for motorcycle parts. In addition, Scarlett Drive will be expanded to both sides of Chabot Canal. The street will consist of two one-way sections on either side of Chabot Canal and will run adjacent to the site building.

1.2 Geologic and Hydrogeologic Setting

The Site is located within the Coast Ranges geomorphic province in an area of Mesozoic age marine sedimentary rocks. These sedimentary rocks are comprised of moderate to well consolidated sandstone, shale, siltstone, conglomerate, and breccia (Geologic Map of California, 1977). Near surface sediments to depths of 20 feet below ground surface

(bgs) consist mainly of fine-grained sediments: clays, silty clays, and sandy clays. Silty sand intervals ranging from approximately 1 to 2 feet thick were encountered in some borings at depths below 16 feet bgs.

Ground water was encountered beneath the Site at depths of approximately 5 feet bgs. Based on data from the former Scotsman Corporation property located to the south of, and adjacent to the Site, the direction of ground-water flow is to the south to southwest.

1.3 Previous Investigations

Three USTs were removed from the Site during June 1990 by Clayton Environmental Consultants of Pleasanton, California, under the supervision of Alameda County Department of Environmental Health (ACDEH) personnel. During removal activities, numerous small holes were reportedly noted in the USTs and product staining was evident in soil within the tank excavation. Four soil samples and one ground-water sample were collected from the excavation. Results of laboratory analysis of these soil samples indicated that total petroleum hydrocarbons as gasoline (TPHg; up to 290 parts per million [ppm]) and benzene, toluene, ethylbenzene, and total xylenes (BTEX compounds; up to 23 ppm total xylenes) were present in the bottom of the excavation (no depth reported). TPHg (120 ppm) and BTEX compounds (up to 20 ppm total xylenes) also were reported present in a ground-water sample collected from within the excavation. After tank removal activities ceased, the excavation was allowed to stand open.

A single ground-water monitoring well (MW-1; Figure 3) was installed southwest of the excavation during November 1993 by H_20GEOL, Inc. of Livermore, California. Soil samples were collected during the drilling of the monitoring well boring and ground-water samples were collected after installation of the monitoring well. Results of laboratory analysis of soil samples indicated that TPHg (17 ppm) and BTEX compounds (up to 0.210 ppm ethylbenzene) were present in soil samples collected at a depth of 10 to 10.5 feet bgs. TPHg (91 ppm) and BTEX (up to 23 ppm benzene) were also present in ground-water samples collected from MW-1 on April 28, 1994.

During December 1994, heavy rains caused Chabot Canal to overflow its banks and spill over onto the Site. The site building was inundated with approximately 6 inches of flood water. This flooding also filled up the open excavation at the Site (see Section 4.1) and caused a cave-in along the southern edge of the excavation. The cave-in caused the excavation to assume the roughly elliptical shape as shown in Figure 2.

2.0 OBJECTIVES

The objective of the phase II investigations and phase III remedial activities were to remove petroleum-affected soil in the source area to reduce the threat to ground water associated with these soils.

3.0 PHASE II INVESTIGATIVE ACTIVITIES

During 1994 Levine•Fricke conducted Phase II investigative activities at the Site. The Phase II investigations were conducted to provide information to select a remedial action for petroleum hydrocarbon-affected soil and ground water beneath the Site. Phase II investigative activities were performed in accordance with the "Revised Proposal for Further Soil and Ground-Water Investigation, 6085 Scarlett Court, Dublin, California". This document, dated March 23, 1994, was prepared by Levine•Fricke at the request of EDPBP and was approved by Ms. Eva Chu of ACDEH in a letter dated July 8, 1994. A copy of the approval letter is contained in Appendix A. Each activity conducted at the Site is briefly summarized in the following sections. A detailed description of field procedures utilized during these activities is contained in Appendix B.

3.1 Soil-Gas/Ground-Water Survey

A limited soil-gas/ground-water survey was conducted by Tracer Research Corporation (Tracer) of Tucson, Arizona under the supervision of Levine•Fricke personnel during May 1994. Soil-gas/ground-water sampling was conducted to evaluate the possible presence of total volatile hydrocarbons (TVHC) and BTEX compounds in soil and ground water at eight locations at the Site (Figure 3). Soil-gas samples were collected from each location at depths of between 4 and 5 feet bgs. An effort was made at each location to collect a grab ground-water sample at depths of 6 to 7.5 feet bgs. Ground-water samples were collected at locations SG-1 and SG-4 (Figure 3), attempts at collecting a ground-water sample from the other locations were not successful. Collected soil-gas and ground-water samples were analyzed at the Site for BTEX compounds using Tracer's gas chromatograph/flame ionization detector (GC/FID) equipment.

3.2 Hand-Auger Soil and Ground-Water Sampling

Levine•Fricke personnel installed five soil borings (HA-1 through HA-5; Figure 3) during May 1994, to assess the concentrations of petroleum hydrocarbons in near-surface soil near the tank excavations. During advancement, a photoionization detector (PID) was used to quantitatively assess the presence of petroleum hydrocarbons at one-foot depth intervals. Soil samples also were collected at 2.5 and 5 feet bgs at each location. Table 1 summarizes PID measurements at the Site.

At locations where ground-water samples could not be collected during the soil-gas/ground-water survey, hand-auger borings were advanced to depths of approximately 10 feet bgs and allowed to stand open. If sufficient ground water entered the open borehole (SG-7 and SG-8; Figure 3), a water sample was collected.

Collected soil and ground-water samples were prepared for transport to the analytical laboratory as described in Appendix C. Selected soil and ground-water samples were submitted to American Environmental Network, Inc. (AEN; a state-certified laboratory) for analysis for TPHg using EPA Method 5030/8015, TPH as diesel (TPHd) using EPA Method 3510/8015 and for BTEX compounds using EPA Method 8020 under strict chain-of-custody protocol.

4.0 RESULTS OF PHASE II INVESTIGATIONS

Results of laboratory analysis of soil-gas, soil, and ground-water samples collected during Phase II investigations are presented on Figures 4, 5, and 6 and are summarized below. Laboratory data sheets for collected Phase II samples are included in Appendix C.

4.1 Soil-Gas Survey Analytical Results

TVHC were reported at locations SG-2 (0.0005 milligrams per liter [mg/l] of air) and SG-3 (0.002 mg/l of air) at a depth of 5 feet bgs. TVHC were not present above analytical detection limits at locations SG-1 and SG-4 through SG-8. BTEX compounds were not present above analytical detection limits in borings SG-1 through SG-8 (Figure 4).

4.2 Soil Analytical Results

TPHg, TPHd, and BTEX compounds were not present above analytical detection limits at depths of 2.5 and 5 feet bgs in soil samples collected from locations HA-1 through HA-5 (Figure 5).

4.3 Ground-Water Analytical Results

Ground-water samples collected from locations SG-1 and SG-4 were analyzed by Tracer Research on site. Ground-water samples collected at locations SG-7 and SG-8 were analyzed by AEN. Results of analysis indicated that 0.030 ppm TVHC were detected in samples collected at location SG-1. BTEX compounds were not present above analytical detection limits in any of the collected ground-water samples. TVHC, TPHg, and TPHd were not present above analytical detection limits in ground-water samples collected from SG-4, SG-7, and SG-8 (Figure 6).

5.0 PHASE III REMEDIAL AND INVESTIGATIVE ACTIVITIES

Following evaluation of data acquired during Phase II investigations, a remedial strategy was designed for petroleum hydrocarbon-affected soil and ground water at the Site. Based on the soil types, depth to ground water and other factors, source abatement by excavation of affected soil in the vicinity of the former USTs was chosen as the most cost-effective remedial option.

The following sections describe Phase III remedial activities conducted at the Site. Phase III activities were conducted in accordance with the "Work Plan for Further Soil and Ground-Water Investigation, 6085 Scarlett Court, Dublin, California". This document, dated January 3, 1995, was prepared by Levine•Fricke for EDPBP and was approved by Ms. Eva Chu of ACDEH in a letter dated January 10, 1995. A copy of the approval letter is contained in Appendix A. A detailed description of field methods used in performing field activities at the Site is included in Appendix B.

5.1 Remedial Excavation and Soil Sampling

Based on analytical results from the soil-gas/ground-water survey and hand-auger soil and ground-water sampling, excavation of petroleum hydrocarbon-affected soil was selected for remediation at the Site. During July 1994, Levine•Fricke personnel supervised the excavation of approximately 1,000 cubic yards of petroleum-affected soil and approximately 400 cubic yards of clean overburden. A PID was used to qualitatively assess the presence of petroleum hydrocarbons and to determine when to stop excavation activities. The clean overburden soils (above 8 feet bgs) were segregated and stockpiled to the northeast of the excavation. Petroleum-affected soils were stockpiled on the asphalt parking lot located to the south of the on-site metal building.

Excavation activities were stopped when PID measurements and visual observations indicated the majority of petroleum-affected soil had been removed or that the integrity of

nearby structures (e.g., Chabot Canal or the site building) might be adversely impacted. Soil was excavated to a depth of approximately 20 feet bgs in a roughly oval excavation measuring approximately 60 feet across (Figure 2). After excavation activities had stopped, soil samples were collected from the sidewalls of the excavation at locations and depths selected by Ms. Eva Chu of the ACDEH (Figure 7) and the approximate excavation boundaries were measured in the field by Levine•Fricke personnel. A copy of Ms. Chu's inspection form is included in Appendix D. Field procedures used in soil sampling and collection are detailed in Appendix B.

During excavation activities, petroleum hydrocarbon-affected soil in the vicinity of monitoring well MW-1 was removed, forcing its destruction. The monitoring well was destroyed under permit from the Alameda County Zone 7 Flood Control Agency. A copy of the well destruction permit is included in Appendix E.

5.2 Excavation Water Removal, Sampling and Disposal

During excavation activities, no ground water was observed in the excavation until a depth of 16 feet bgs was reached. With time, the water level stabilized in the open excavation at approximately 8 feet bgs. As a remedial measure, water was pumped out of the open excavation and into the sanitary sewer under permit from the Dublin San Ramon Services District (DSRSD). A copy of the permit from DSRSD is included in Appendix F. Approximately 150,000 gallons of water were pumped into the sanitary sewer between November 11, 1994 and December 2, 1994. Table 2 summarizes water discharge data and Figure 8 presents a diagram showing the schematic of water discharge equipment layout.

Ground-water samples were collected from the excavation on October 26, November 18 and 29, 1994. Field procedures used in collecting ground-water samples are detailed in Appendix B. The water sampling activities were conducted in accordance with DSRSD procedures. Collected ground-water samples were analyzed for TPHg using EPA Method 5030/8015 and BTEX compounds using EPA Method 8020.

5.3 Post Excavation Soil and Ground-Water Sampling

Laboratory analysis results for soil samples collected from the sidewalls of the excavation indicated that petroleum-affected soil at approximately 15 feet bgs (i.e., near the water table of the excavation) was left in place. In order to better define the lateral and vertical distribution of the affected soil, a soil sampling program was proposed using the Geoprobe System. Vironex, Inc. of Foster City, California conducted soil sampling activities under Levine•Fricke supervision on January 25, 1995. The Geoprobe soil sampling system collects soil samples continuously for lithologic logging and laboratory

analysis using a hydraulically pushed sampling system. In areas where samples cannot be pushed, a hydraulic hammer is used to drive the sampler. Geoprobe soil borings were advanced in four locations (GP-1 through GP-4; Figure 2). Lithologic logs of Geoprobe soil borings GP-1 through GP-4 are included in Appendix H.

Soil samples were collected for analysis for TPHg using EPA Method 5030/8015, TPHd using EPA Method 3550/8015, and BTEX compounds using EPA Method 8020. Samples were also collected in 1-inch diameter by 6-inch long brass tubes for analysis for total organic carbon (TOC), bulk density and moisture content.

At locations GP-1 and GP-2, a ground-water sample was also collected. Collected ground-water samples were analyzed for TPHg using EPA Method 5030/8015, TPHd using EPA Method 3510/8015, and BTEX compounds using EPA Method 8020.

5.4 Stockpile Soil Sampling

Soil samples were collected from the overburden stockpile on July 29, 1994 from four locations (OB-1 through OB-4; Figure 3).

As presented in the January 3, 1995 Work Plan, statistical analysis of soil data was conducted to determine the appropriate number of soil samples to be collected from the excavation stockpile. Soil samples were collected from the excavation stockpile on January 30, 1995. Samples were collected from 22 randomly assigned locations within a sampling grid containing 50 roughly equal-sized squares (Figure 9). Collected soil samples were submitted to AEN for analysis for TPHg using EPA Method 5030/8015, TPHd using EPA Method 3550/8015, and BTEX compounds using EPA Method 8020.

the description of the statistical methods used to verify stockpile soil sampling are included in Appendix G.

5.5 Monitoring Well Drilling, Installation, Development, and Sampling

A single monitoring well (MW-1R; Figure 2) was drilled on January 30, 1995 at the Site by Gregg Drilling and Testing, Inc. of Pacheco, California, under the supervision of Levine•Fricke personnel. The location for this monitoring well was discussed with and approved by Ms. Eva Chu of ACDEH at the Site on July 29, 1994. The monitoring well was drilled to a total depth of 20 feet bgs and finished with a flush-to-grade traffic-rated vault. Specific field procedures used in the drilling and installation of monitoring well MW-1R are included in Appendix B. The lithologic and well construction log for monitoring well MW-1R is included in Appendix H.

Monitoring well MW-1R was developed and sampled on February 1, 1995 by Levine•Fricke personnel. The well was developed in order to remove fine-grained sediment from the vicinity of the borehole and to provide better hydraulic communication with the surrounding sediments. After development activities ceased, ground-water samples were collected from the well. Collected ground-water samples were submitted to AEN for analysis for TPHg using EPA Method 5030/8015, TPHd using EPA Method 3510/8015, and BTEX compounds using EPA Method 8020.

Before sampling the monitoring well, the depth to ground water was measured to the nearest 0.01 foot using an electronic water-level probe. As requested by the ACDEH, Levine•Fricke personnel attempted to include monitoring wells located at the former Scotsman property in the water level measurements, however, these wells were destroyed during early 1994.

5.6 Site Surveying

The Site was surveyed on February 1, 1995 by Kier and Wright Civil Engineers and Surveyors, Inc. of Pleasanton California. Monitoring well MW-1R was surveyed to the nearest 0.01 foot in elevation and tied to a benchmark located at the intersection of Scarlett Drive and Dublin Boulevard and another benchmark located approximately 606 feet East of the first on Dublin Boulevard.

The Site was also surveyed horizontally to the nearest 0.1 foot to fix the current locations of MW-1R, the excavation boundaries, and other site features with respect to the aforementioned survey monuments. A copy of the surveyor's report is included in Appendix I.

6.0 RESULTS OF PHASE III INVESTIGATIONS

Laboratory analysis results for collected Geoprobe soil and ground-water samples, stockpile soil samples and monitoring well ground-water samples are summarized in Table 3 and discussed below. Laboratory data sheets for collected samples are included in Appendix C.

6.1 Geoprobe Soil Samples

Results of laboratory analysis of soil samples collected using Geoprobe equipment are summarized on Table 3 and presented on Figure 10. The highest concentrations of TPHg (350 ppm), TPHd (590 ppm), and BTEX compounds (up to 12 ppm total xylenes) were detected at a depth of 20 feet at location GP-2. TPHg (6.0 ppm), TPHd (17 ppm), and

BTEX compounds (up to 0.21 ppm benzene) were also detected at a depth of 15 feet from boring GP-2. Lower concentrations of TPHg (5.2 ppm) and BTEX compounds (up to 0.019 ppm total xylenes) were also detected at a depth of 14 feet, and low concentrations of TPHg (1.4 ppm) were detected at a depth of 10 feet at location GP-3. TPHg, TPHd, and BTEX were not present above laboratory detection limits in soil samples collected from locations GP-1 and GP-4.

6.2 Stockpile Soil Samples

TPHg, TPHd, and BTEX compounds were not present above laboratory detection limits for soil samples OB-1 through OB-4, collected from the overburden stockpile (Figure 7).

Laboratory analysis results for the affected stockpile soil samples are presented in Table 3. TPHg and TPHd were present in all 22 collected soil samples. The highest concentration of TPHg (440 ppm) was detected in the soil sample collected from grid 27 (sample SS-27). The highest concentration of TPHd (110 ppm) was detected in the sample collected from grid 8 (SS-8). BTEX compounds were present above analytical detection limits in samples collected from grids 3, 12, 17, 18, 26, 27, 31, and 33. The highest concentrations of BTEX compounds (up to 14 ppm total xylenes) were detected in sample SS-26, collected from grid 26. Benzene was present above analytical detection limits only in sample SS-26 (0.71 ppm).

6.3 Ground-Water Samples

Analytical results for ground-water samples collected on January 25 and February 1, 1995 are summarized in Table 3 and presented on Figure 11. Ground-water samples were collected from Geoprobe soil sampling locations GP-1 and GP-2 on January 25, 1995 and from monitoring well MW-1R on February 1, 1995. Results of analysis for collected ground-water samples indicated that the highest concentrations of TPHg (52 ppm), TPHd (10 ppm), and BTEX compounds (up to 5.9 ppm total xylenes) were detected in samples collected from Geoprobe location GP-2. Lower concentrations of TPHg (2.4 ppm), TPHd (0.2 ppm), and BTEX compounds (up to 0.012 ppm benzene) were detected in samples collected from monitoring well MW-1R. Low concentrations of TPHg (0.1 ppm) and benzene (0.001 ppm) were present in samples collected from location GP-1. TPHd and toluene, ethylbenzene, and total xylenes were not present above analytical detection limits in ground-water samples collected from GP-1.

7.0 GROUND-WATER THREAT ESTIMATE

Computer modeling was conducted to evaluate the threat to ground water associated with petroleum-affected soil left in place after completion of the remedial excavation. A regulatory cleanup goal of 10 ppb benzene was set for shallow ground water a the Site by the ACDEH (personal communication: James Lutton of Levine•Fricke and Ms. Eva Chu of ACDEH). Data from computer modeling was used to help assess whether remaining petroleum-affected soil at the Site would likely result in concentrations of benzene in shallow ground water greater than the regulatory cleanup level.

7.1 Modeling Procedures

The analytical transient three-dimensional model AT123D was used for this evaluation. AT123D was developed for the U.S. EPA in 1981 and was designed to estimate the transport of dissolved chemicals in ground water and examine the effects of advection, dispersion, chemical adsorption, and chemical dispersion. Benzene was used as the indicator chemical for this evaluation because benzene is generally the most toxic and mobile component of gasoline, and because the cleanup goal for shallow ground water was set for benzene.

AT123D requires input data that are grouped in the following three classes:

Aquifer Property Data. (including the porosity, hydraulic conductivity, fraction of organic carbon, bulk density, hydraulic gradient and lateral, longitudinal and vertical dispersivity). Bulk density, fraction of organic carbon, and porosity were measure from soil samples collected at the Site; other input parameters were obtained from the literature.

Chemical Property Data for Benzene. (including its solubility, Henry's Law coefficient, soil/water distribution, and half-life in soil/water environments). This information was obtained from the literature.

Source Area and Initial Mass of Benzene in the Aquifer. The source area and initial mass of benzene in the aquifer was based on laboratory analysis results for soil samples collected during the Phase II and Phase III investigations. Based on the results of the Phase III investigation, a 50' X 50' X 10' volume of soil was used to represent the source area. Based on the results of the sidewall sampling conducted as part of the Phase II investigation, a benzene concentration of 6.1 ppm was assigned to the simulated source area. Given that the highest concentration of benzene detected in soil samples collected during the Phase III investigation was 0.300 ppm (GP-2 and 20 feet bgs), use of the 6.1

arithmetic mean
max benzene left in place is 13 ppm!

see Fig 7

ppm benzene concentration from the Phase II data was conservative (i.e., resulted in higher calculated ground water concentrations).

A summary of input data used for this evaluation is provided in Table 4. — missing

7.2 Results of Modeling

This section summarizes the results of computer modeling using AT123D and the input parameters described above. A complete presentation of modeling results, including computer output files, can be submitted if requested.

Concentrations of benzene in ground water were calculated at the edge of the simulated source area and at 13, 25, and 40 feet downgradient of the simulated source area. The 25-foot point was simulated to represent ground-water quality at monitoring well 1R, located approximately 25 feet downgradient of the remedial excavation boundary. At each of these distances, concentrations of benzene were calculated at 3, 10 and 20 feet below the surface of the water table.

In general and as expected, simulated concentrations of benzene decreased away from the source area, and decreased with depth below the water table surface. A peak concentration of benzene of 0.022 ppb was calculated 25 feet downgradient of the source area at a depth of 3 feet below the water table at simulated year 5. These modeling data indicate that the petroleum-affected soil left in place at the Site likely will not result in concentrations of benzene in shallow ground water at MW-1R greater than the regulatory cleanup goal of 10 ppb. Initial sampling of MW-1R is at 12ppb benzene.

8.0 SUMMARY AND DISCUSSION

8.1 Summary of Remedial and Investigative Activities

During 1994, the following investigative and remedial activities were conducted at the Site:

- a soil/gas ground-water survey
- sampling of soil using hand auger soil sampling equipment
- excavation of approximately 1,000 cubic yards of petroleum-hydrocarbon affected soil using a backhoe and stockpiling excavated soil on site

- statistical analysis of soil concentrations to determine the appropriate number of samples to be collected from the affected soil stockpile
- sampling of soil and ground water using Geoprobe sampling equipment
- removal of approximately 150,000 gallons of water from the open excavation and disposing of the water into the sanitary sewer under permit from the DSRSD
- aeration of stockpiled soil at the Site
- collection of soil samples from the affected soil stockpile
- drilling, installing, developing, sampling, and surveying one monitoring well (MW-1R) at the Site
- conducting a risk assessment using computer modeling.

8.2 Discussion

8.2.1 Geologic and Hydrogeologic Conditions at the Site

Near surface sediments to depths of 20 feet bgs consist mainly of fine-grained sediments: clays, silty clays, and sandy clays. Silty sand intervals ranging from approximately 1 to 2 feet thick were encountered in some borings at depths below 16 feet bgs.

Ground water was encountered beneath the Site in monitoring well MW-1R at depths of approximately 5 feet bgs. Based on data from the former Scotsman Corporation property located to the south of, and adjacent to the Site, the direction of ground-water flow is to the south to southwest.

Drinking water in the site vicinity is supplied by DSRSD. DSRSD obtains its water from surface-water sources operated by the Alameda County Zone 7 water agency. Mr. Emil Kattan of DSRSD indicated that "99.9 percent" of the businesses and residences in Dublin were supplied with drinking water. He also indicated that wells operated by DSRSD for irrigation purposes are up to 500 feet deep (personal communication with Michael Bombard of Levine•Fricke on June 1, 1994). These data indicate that shallow ground water beneath the Site is not likely used as a drinking water source.

8.2.2 Results of Post-Excavation Soil Samples

The results of field investigative activities indicate that the majority of the petroleum hydrocarbon-affected soil has been removed from the vicinity of the former USTs at the Site and that the lateral extent of petroleum-affected soil remaining in place has been generally defined.

Laboratory analysis data for soil samples collected during this investigation indicate that petroleum hydrocarbon-affected soil remains in the vicinity of Chabot Canal and along the south and north boundaries of the excavation. The highest concentrations of TPHg (up to 590 ppm), TPHd (up to 350 ppm), and BTEX compounds (up to 12 ppm total xylenes) in soils left in place were reported in a sample collected at a depth of 20 feet from Geoprobe soil boring GP-2, located between the western edge of the excavation and Chabot Canal. Lower residual concentrations of TPHg (up to 5.2 ppm) and BTEX compounds (up to 0.19 ppm total xylenes) were reported in a soil sample collected at a depth of 14 feet from boring GP-3. TPHg, TPHd, and BTEX compounds were not present in samples collected from locations GP-1 and GP-4.

8.2.3 Results of Post-Excavation Ground-Water Samples

The highest concentrations of TPHg (10 ppm), TPHd (52 ppm), and BTEX compounds (up to 5.9 ppm total xylenes) were reported in ground-water samples collected from boring GP-2. Lower concentrations of TPHg (0.2 ppm), TPHd (2.4 ppm), and BTEX compounds (up to 0.012 ppm benzene) and trace concentrations of TPHg (0.1 ppm) and benzene (0.001 ppm) were reported in ground-water samples collected from monitoring well MW-1R and boring GP-2, respectively.

8.2.4 Results of Ground-Water Modeling

As presented in Section 7.2, simulated concentrations of benzene decreased away from the source area, and decreased with depth below the water table surface. A peak concentration of benzene of 0.022 ppb was calculated 25 feet downgradient of the source area at a depth of 3 feet below the water table at simulated year 5. These modeling data indicate that the petroleum-affected soil left in place at the Site likely will not result in concentrations of benzene in shallow ground water at MW-1R greater than the regulatory cleanup goal of 10 ppb.

8.2.5 Intended Use of the Site

The Site is currently located in an industrial setting and is scheduled for development. A building is slated for expansion into a warehouse for motorcycle parts and Scarlett Drive will be expanded to both sides of Chabot Canal. The warehouse will be built over a concrete foundation, which will inhibit surface water infiltration. The street will consist of two one-way sections on either side of Chabot Canal and will run adjacent to the site building. Due to street expansion, the area of remaining affected soil will be capped by paving with asphalt, also reducing possible surface-water infiltration in this area.

9.0 CONCLUSIONS

The objective of the further investigations and remedial activities was to remove petroleum-affected soil in the source area to reduce the threat to ground water associated with that soil.

Based on results of modeling, petroleum-affected soil remaining in the source area does not appear to pose a likely threat to ground water above the regulatory concentration. Further, the capping of the area of affected soil during road-widening and building construction activities will limit surface-water infiltration, further reducing the threat to ground water posed by petroleum-affected soil remaining at the Site.

10.0 RECOMMENDATIONS

Further investigations and remedial activities conducted at the Site have substantially fulfilled the objective stated in Section 2.0. Further recommended remedial activities are listed below.

- Petroleum-affected stockpiled soils at the Site will require further aeration and sampling. We recommend that the petroleum-affected stockpiled soils be turned on a two week basis for two months, then resampled at a rate of one soil sample per 100 cubic yards. If, after further sampling, concentrations of TPHg are below 100 ppm and benzene concentrations are below analytical detection limits, the stockpiled soils should be placed in the excavation.

- Further monitoring of well MW-1R is recommended on a semiannual basis (sample quarterly) for a period of two years. If the benzene concentrations detected in MW-1R decrease or remain stable, closure is recommended for the Site.

TABLE 1

SUMMARY OF PHOTOIONIZATION DECTECTOR (PID) DATA
6085 SCARLETT COURT
DUBLIN, CALIFORNIA
(Concentrations expressed in ppm)

BORING NUMBER	PID MEASUREMENTS											
	1'	2'	3'	4'	5'	8'	10'	12'	15'	16'	17.5'	20'
Hand Auger Borings												
HA-1	2.6	1.6	3.4	3.6	3.2	NS	NS	NS	NS	NS	NS	NS
HA-2B	8.4	10.4	11.2	11.5	11.2	NS	NS	NS	NS	NS	NS	NS
HA-3	2.0	2.1	3.0	3.2	3.4	NS	NS	NS	NS	NS	NS	NS
HA-4	3.8	6.5	4.7	6.3	5.4	NS	NS	NS	NS	NS	NS	NS
HA-5	7.4	8.2	12.5	13.3	14	NS	NS	NS	NS	NS	NS	NS
Geoprobe Soil Borings												
GP-1	NS	NS	NS	25.9	NS	30.5	NS	5.2	NS	4.8	NS	9.8
GP-2	NS	NS	NS	NS	3.9	NS	6.1	NS	354	NS	NS	1608
GP-3	NS	NS	NS	3.0	NS	4.0	NS	44.6	NS	5.1	NS	6.3
GP-4	NS	NS	NS	NS	3.4	NS	3.9	NS	4.8	NS	NS	3.3
Monitoring Well Boring												
MW-1R	NS	NS	NS	NS	0.0	NS	0.0	NS	0.1	NS	2.4	2.0

NOTES:
NS : Not Sampled

TABLE 2
WATER DISCHARGE SCHEDULE
6085 SCARLETT COURT
DUBLIN, CALIFORNIA
LF 3186.94-10

Date	Day	Time	Status	Flow (gpm)	Quantity (gallons)	Total (gallons)
11-Nov-94	Friday	06:40	ON	10		
14-Nov-94	Monday	17:00	OFF		49,400	49,400
15-Nov-94	Tuesday	11:15	ON	10		
16-Nov-94	Wednesday	19:00	OFF		19,050	68,450
17-Nov-94	Thursday	07:00	ON	10		
17-Nov-94	Thursday	19:00	OFF		7,200	75,650
18-Nov-94	Friday	07:00	ON	10		
18-Nov-94	Friday	19:00	OFF		7,200	82,850
21-Nov-94	Monday	07:00	ON	10		
23-Nov-94	Wednesday	18:30	OFF		35,700	118,550
29-Nov-94	Tuesday	13:30	ON	10		
30-Nov-94	Wednesday	18:30	OFF		17,400	135,950
01-Dec-94	Thursday	06:30	ON	10		
02-Dec-94	Friday	06:00	OFF		14,100	150,050

TABLE 3

SUMMARY OF SOIL AND WATER-QUALITY DATA
6085 SCARLETT COURT
DUBLIN, CALIFORNIA
(Concentrations expressed in ppm)

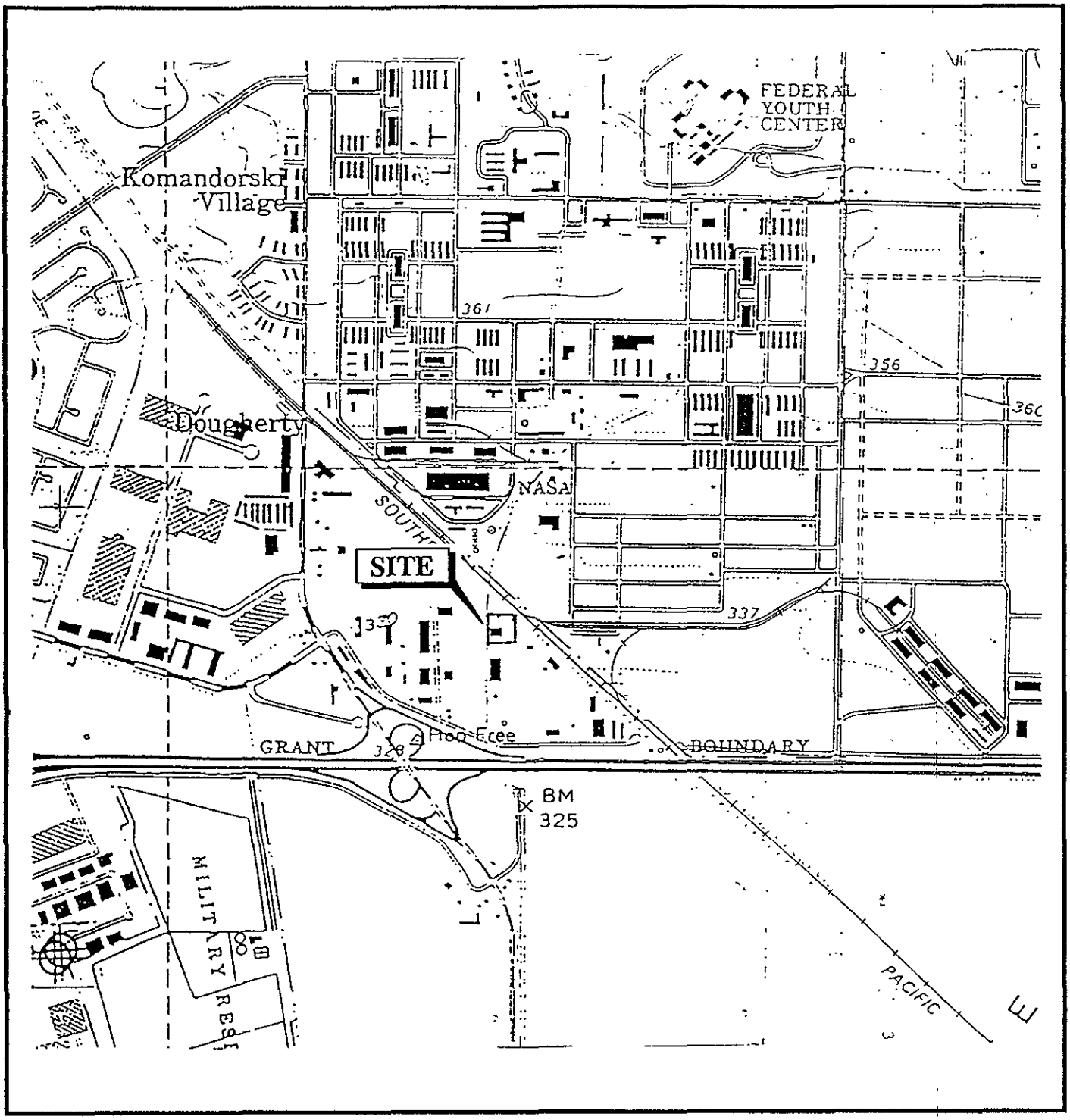
Sample No.	Date Sampled	Depth (feet, bgs)	Total Petroleum Hydrocarbons		Benzene	Toluene	Ethyl-benzene	Total Xylenes
			Gasoline	Diesel				
STOCKPILE SOIL SAMPLES								
SS-1	30-Jan-95	N/A	0.7	92	< 0.005	< 0.005	< 0.005	< 0.005
SS-3	30-Jan-95	N/A	5.2	54	< 0.005	0.013	< 0.005	0.005
SS-4	30-Jan-95	N/A	0.6	100	< 0.03	< 0.03	< 0.03	< 0.03
SS-6	30-Jan-95	N/A	2.2	22	< 0.005	< 0.005	< 0.005	< 0.005
SS-8	30-Jan-95	N/A	0.9	110	< 0.005	< 0.005	< 0.005	< 0.005
SS-9	30-Jan-95	N/A	0.5	98	< 0.005	< 0.005	< 0.005	< 0.005
SS-10	30-Jan-95	N/A	2.9	100	< 0.03	< 0.03	< 0.03	< 0.03
SS-12	30-Jan-95	N/A	7.3	46	< 0.005	0.007	< 0.005	0.007
SS-17	30-Jan-95	N/A	40	41	< 0.03	0.091	0.09	0.94
SS-18	30-Jan-95	N/A	47	64	< 0.01	0.038	< 0.01	0.064
SS-20	30-Jan-95	N/A	3.5	59	< 0.005	< 0.005	< 0.005	< 0.005
SS-23	30-Jan-95	N/A	1.7	45	< 0.005	< 0.005	< 0.005	< 0.005
SS-26	30-Jan-95	N/A	290	83	0.71	1.9	3.5	14
SS-27	30-Jan-95	N/A	440	84	< 0.05	1.1	0.45	2.7
SS-29	30-Jan-95	N/A	4.2	71	< 0.005	< 0.005	< 0.005	< 0.005
SS-31	30-Jan-95	N/A	56	100	< 0.01	0.14	< 0.01	0.091
SS-32	30-Jan-95	N/A	0.5	59	< 0.005	< 0.005	< 0.005	< 0.005
SS-33	30-Jan-95	N/A	19	58	< 0.005	< 0.005	< 0.005	0.05
SS-37	30-Jan-95	N/A	3.7	74	< 0.005	< 0.005	< 0.005	< 0.005
SS-38	30-Jan-95	N/A	2.2	29	< 0.005	< 0.005	< 0.005	< 0.005
SS-40	30-Jan-95	N/A	3.5	210	< 0.005	< 0.005	< 0.005	< 0.005
SS-42	30-Jan-95	N/A	0.8	74	< 0.005	< 0.005	< 0.005	< 0.02
SOIL SAMPLES								
GP-1-10	25-Jan-95	10	< 0.2	< 1.0	< 0.005	< 0.005	< 0.005	< 0.005
GP-1-20	25-Jan-95	20	< 0.2	< 1.0	< 0.005	< 0.005	< 0.005	< 0.005
GP-2-15	25-Jan-95	15	6.0	17	0.21	0.009	0.075	< 0.005
GP-2-20	25-Jan-95	20	350	590	0.3	1.2	3.4	12.0
GP-3-10	25-Jan-95	10	1.4	< 1.0	< 0.005	< 0.005	< 0.005	< 0.005
GP-3-14	25-Jan-95	14	5.2	< 1.0	0.006	0.009	0.059	0.19
GP-4-15	25-Jan-95	15	< 0.2	< 1.0	< 0.005	< 0.005	< 0.005	< 0.005
GP-4-20	25-Jan-95	20	< 0.2	< 1.0	< 0.005	< 0.005	< 0.005	< 0.005

TABLE 3

SUMMARY OF SOIL AND WATER-QUALITY DATA
6085 SCARLETT COURT
DUBLIN, CALIFORNIA
(Concentrations expressed in ppm)

Sample No.	Date Sampled	Depth (feet, bgs)	Total Petroleum Hydrocarbons		Benzene	Toluene	Ethyl-benzene	Total Xylenes
			Gasoline	Diesel				
GROUND-WATER SAMPLES								
GP-1	25-Jan-95	N/A	0.1	< 0.05	0.001	< 0.0005	< 0.0005	< 0.002
GP-2	25-Jan-95	N/A	52	10	4.8	2.8	2.2	5.9
MW-1R	01-Feb-95	N/A	2.4	0.2	0.012	< 0.0005	0.004	< 0.0005

Notes:
All samples analyzed by American Environmental Network, Inc. of Pleasant Hill, California
N/A : Not Applicable



MAP SOURCE:
H_2OGEOL
Base from U.S.G.S. Dublin, California
7.5' Quadrangle

Figure 1 : SITE LOCATION

Project No. 3186
6085 Scarlett Court, Dublin, California

LEVINE•FRICKE
ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

021694.MJB.JSC

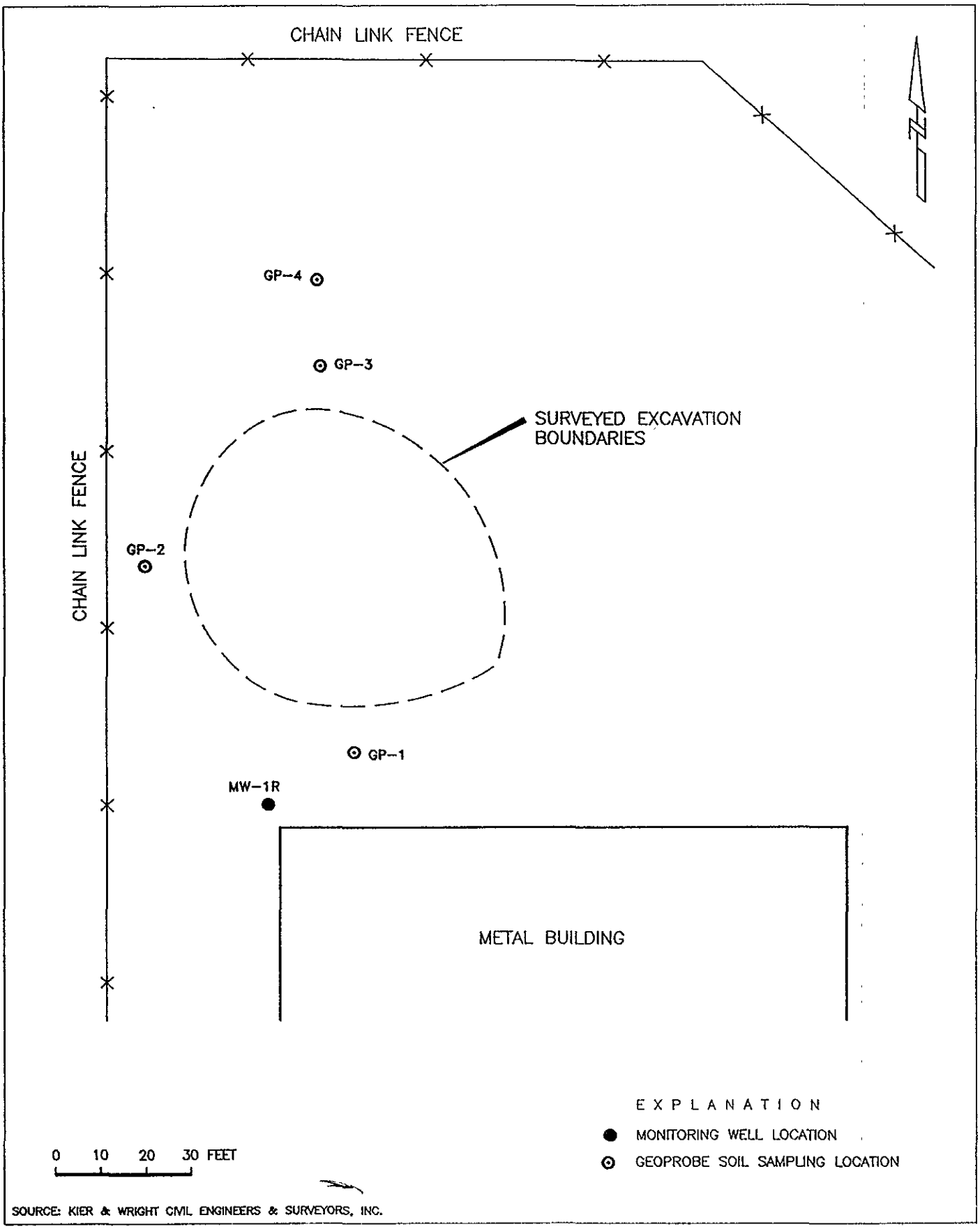


Figure 2 : SITE PLAN

Project No. 3186.95
6085 Scarlett Court, Dublin

LEVINE•FRICKE
ENGINEERS, HYDROGEOLOGISTS, & APPLIED SCIENTISTS

3186BASE.MJB:JSC 022295

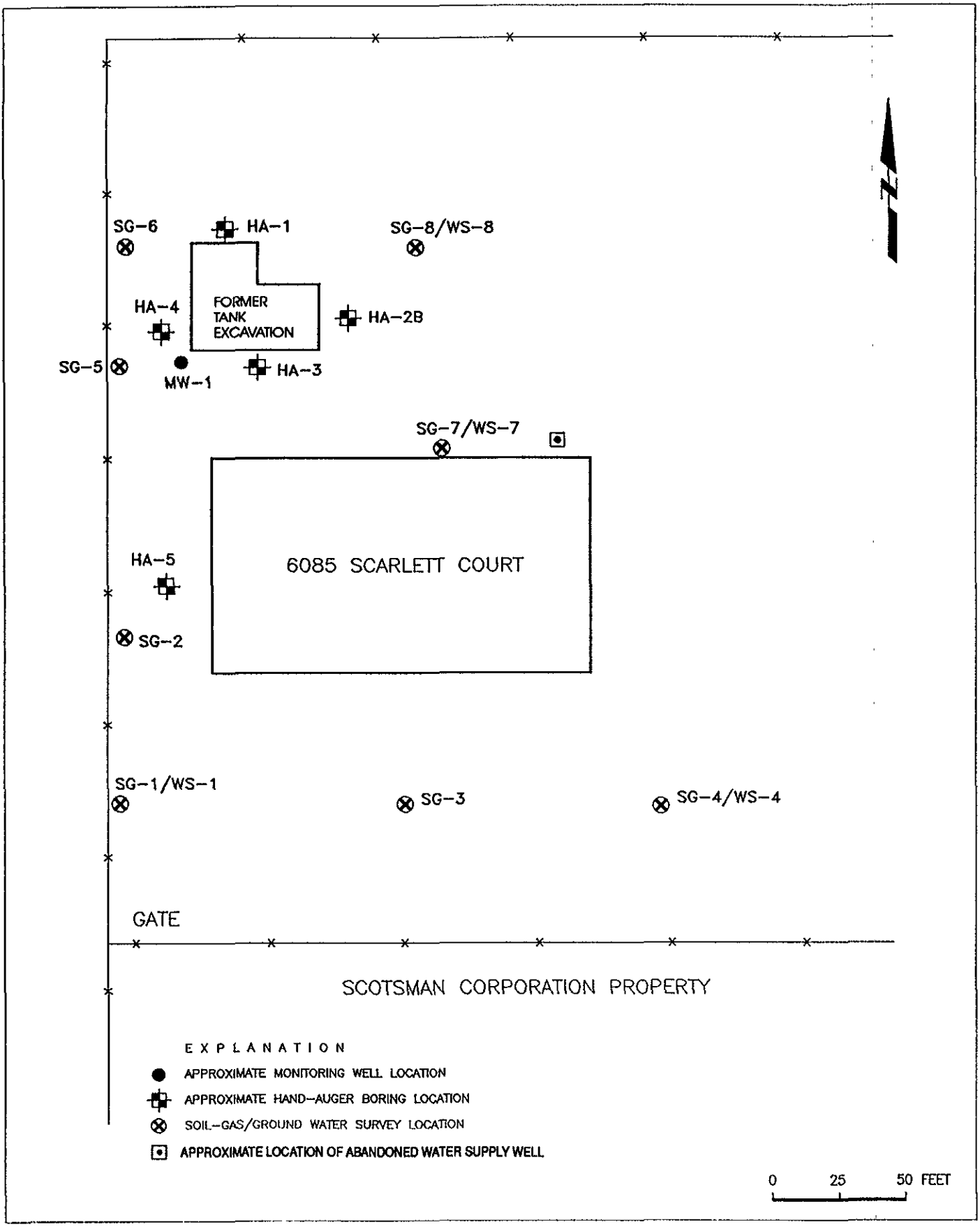


Figure 3 : SITE PLAN SHOWING INITIAL EXCAVATION BOUNDARIES, SOIL-GAS/GROUND-WATER, AND SOIL SAMPLING LOCATIONS

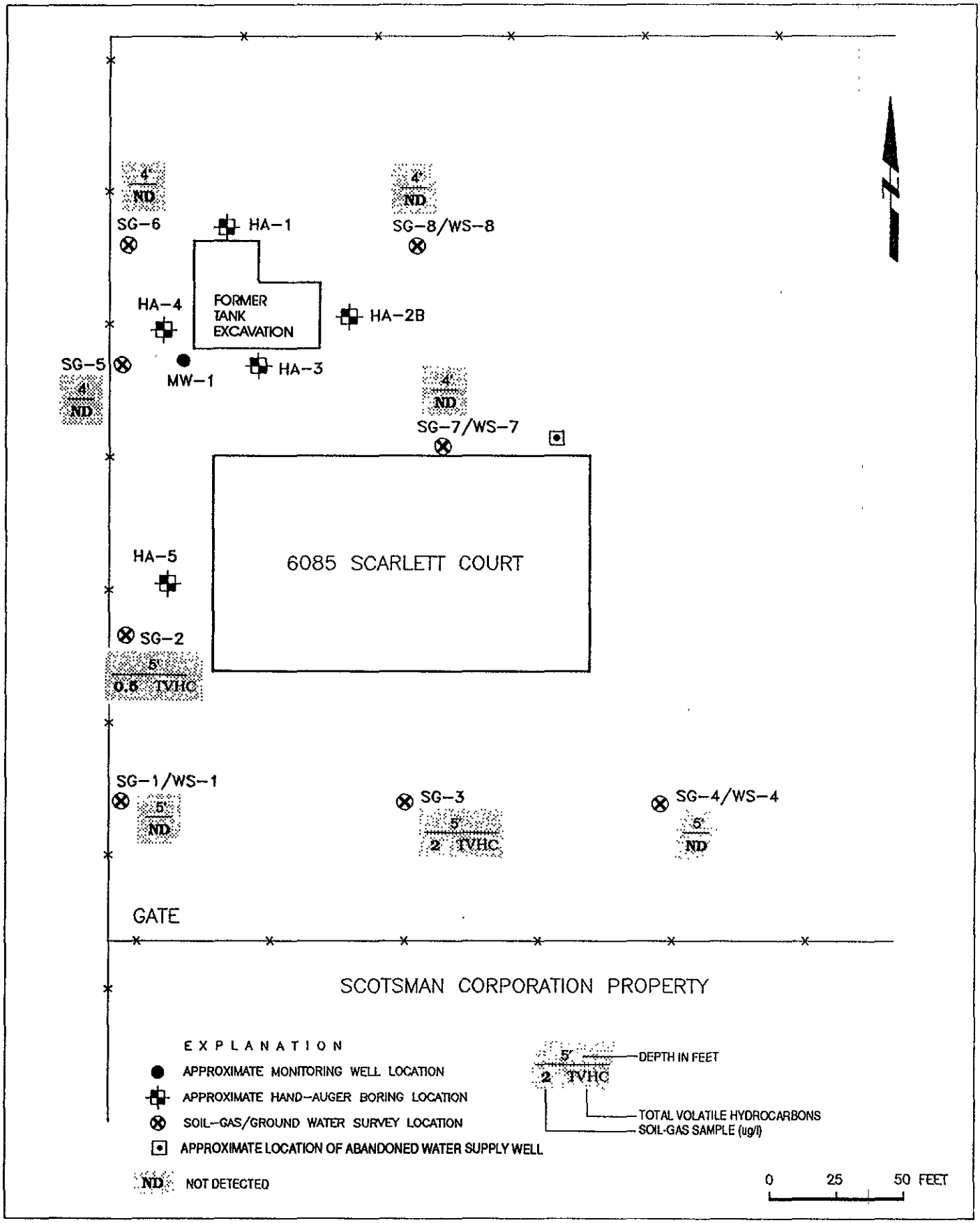


Figure 4 : RESULTS OF SOIL-GAS ANALYSES, MAY 1994

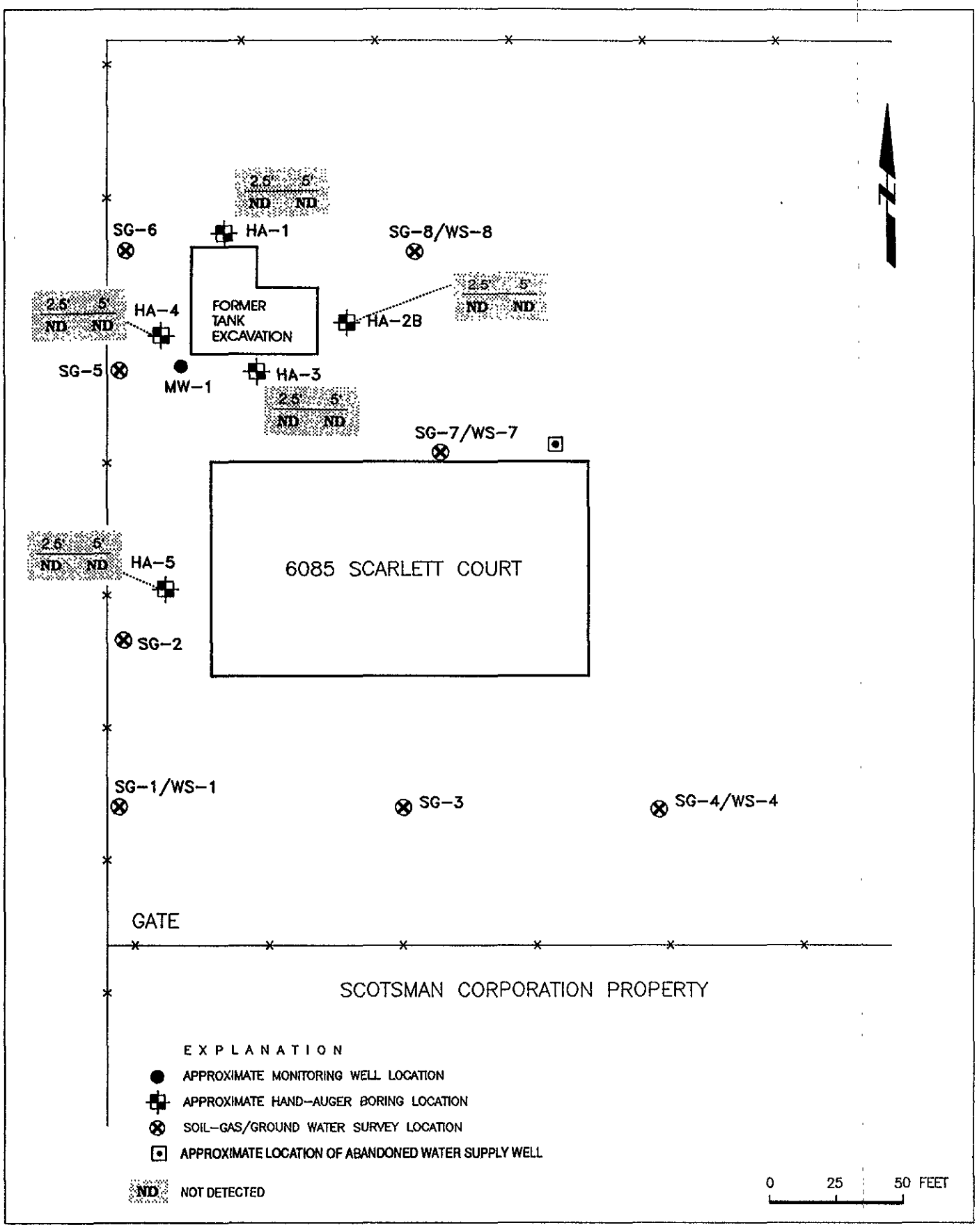


Figure 5 : RESULTS OF ANALYSES FOR HAND-AUGER SOIL SAMPLES, MAY 1994

Project No. 3186
6085 Scarlett Court, Dublin, California

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3186S001.MJB:JSC 062794

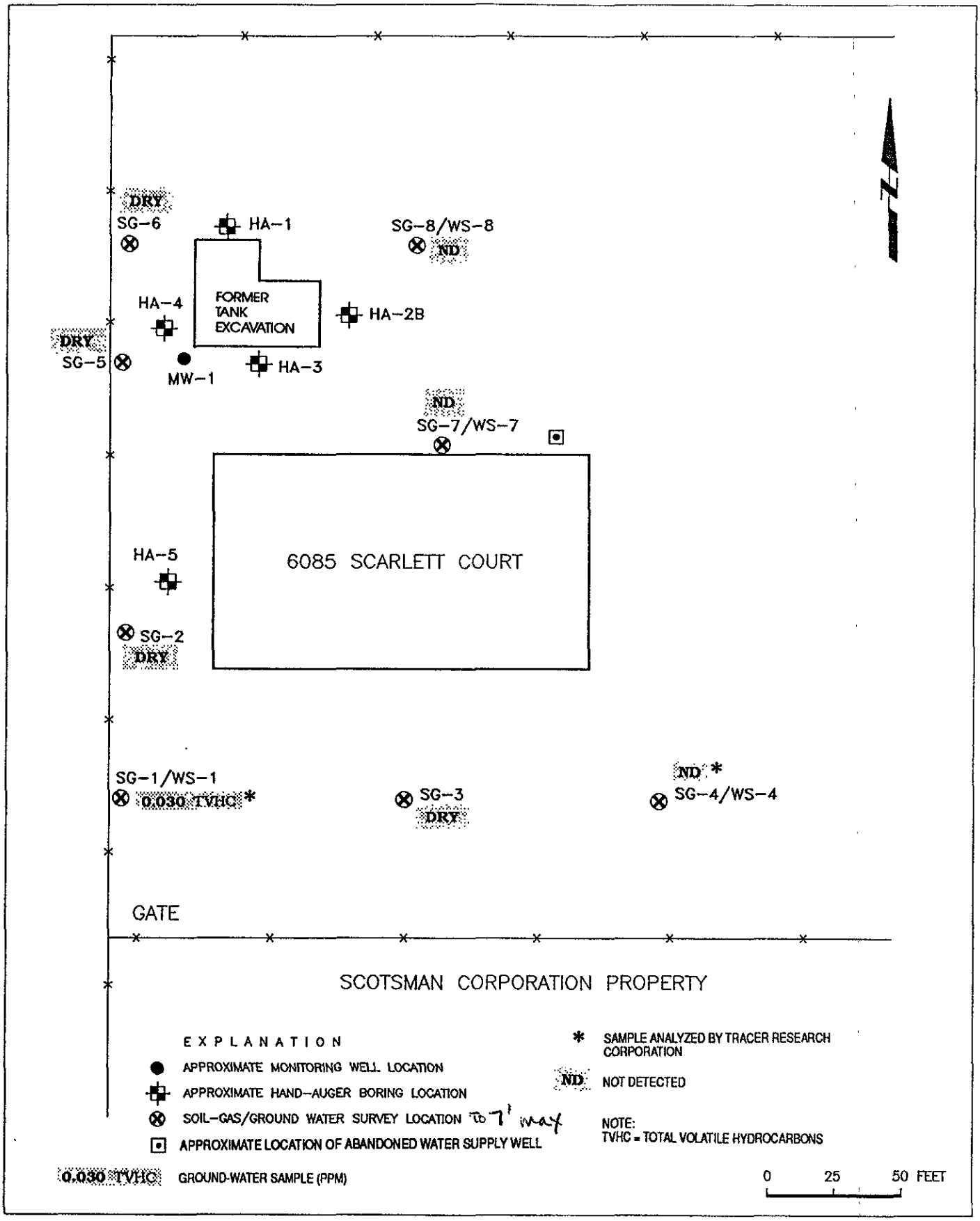

Figure 6 : RESULTS OF GROUND-WATER ANALYSES, MAY 1994

Project No. 3186
6085 Scarlett Court, Dublin, California

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3186S001.MJB:JSC 062794

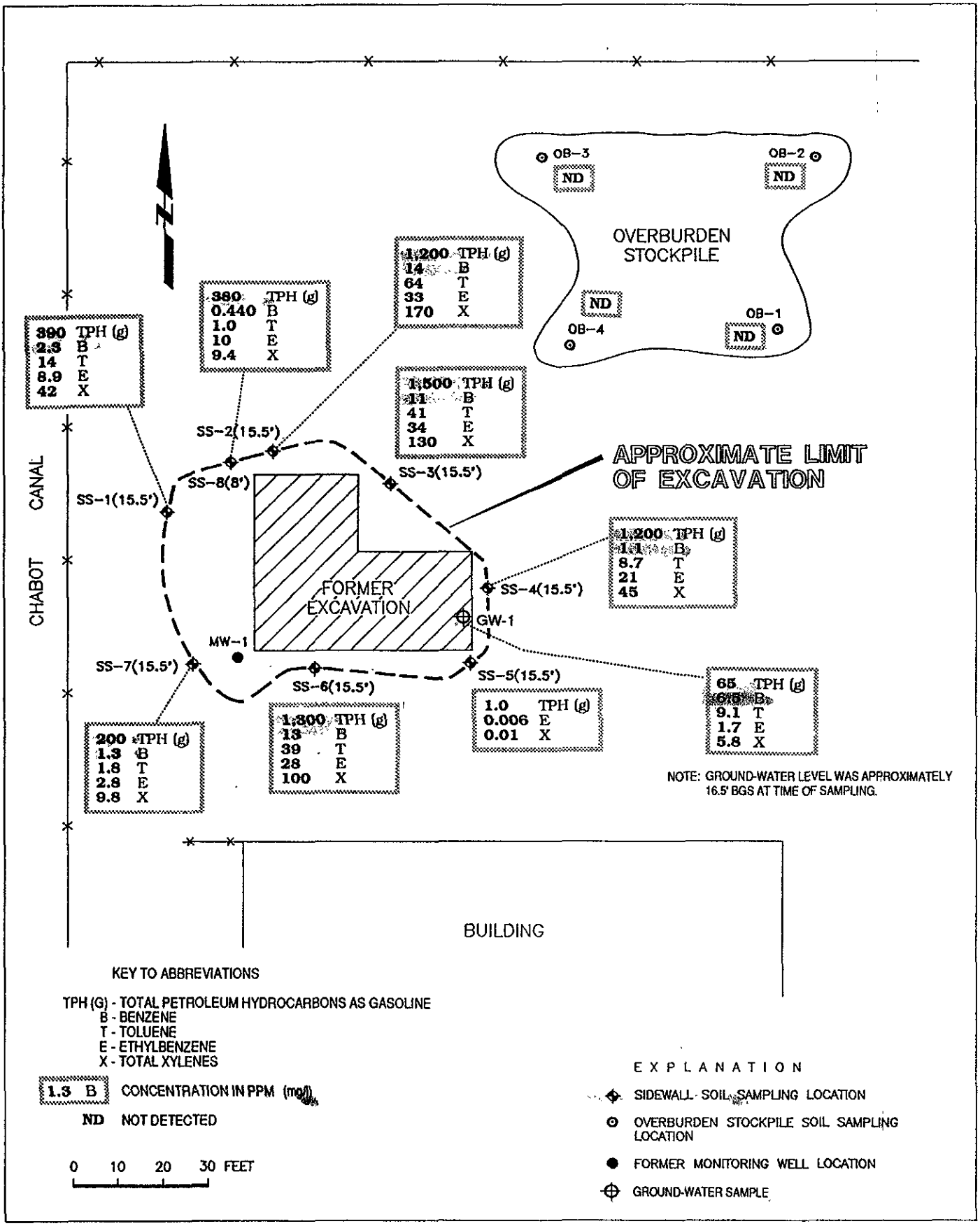

Figure 7 : RESULTS OF SOIL AND GROUND-WATER SAMPLE CHEMICAL ANALYSES, JULY 1994

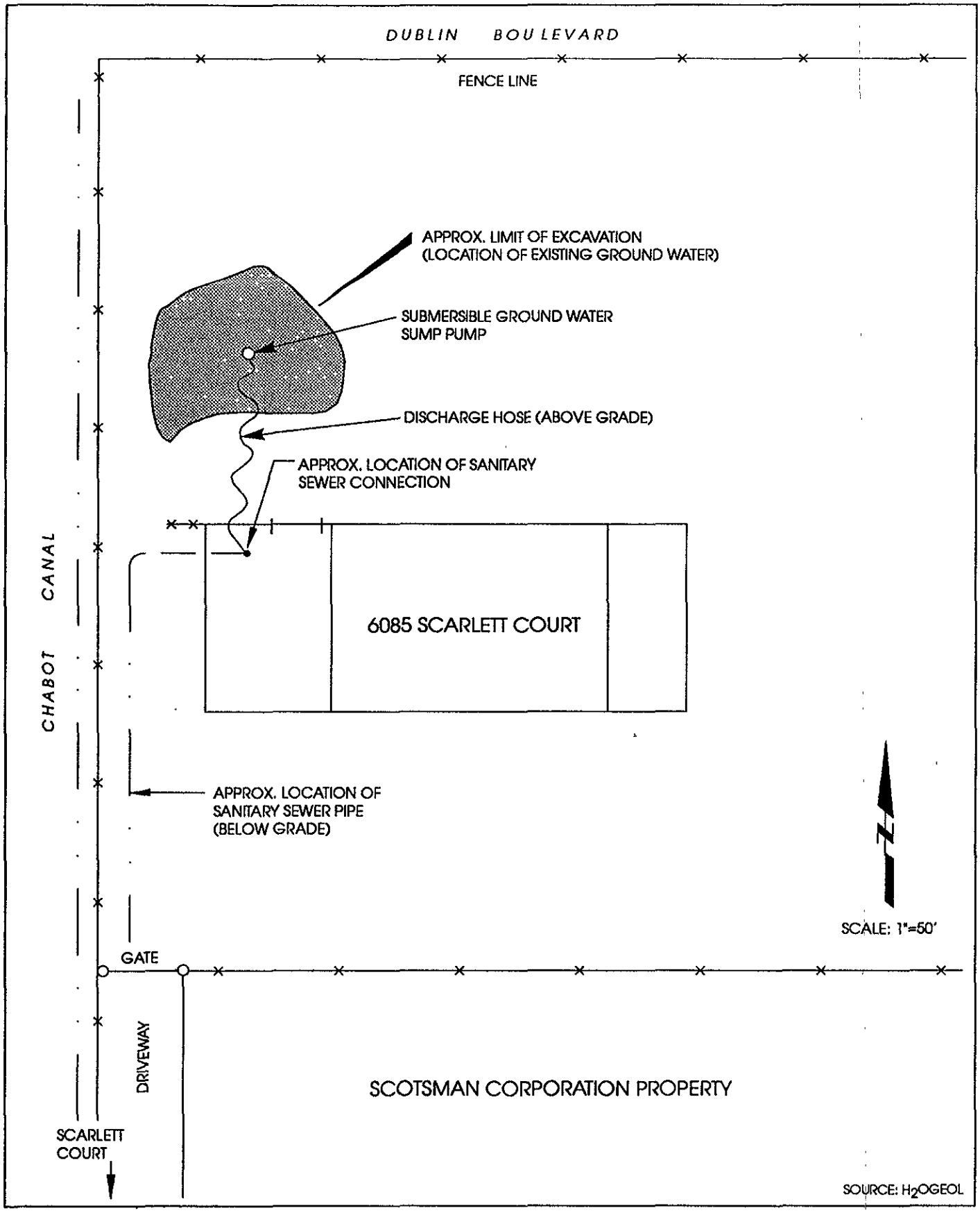

Figure 8 : SKEMATIC DIAGRAM OF GROUND-WATER DISCHARGE EQUIPMENT AND ROUTING

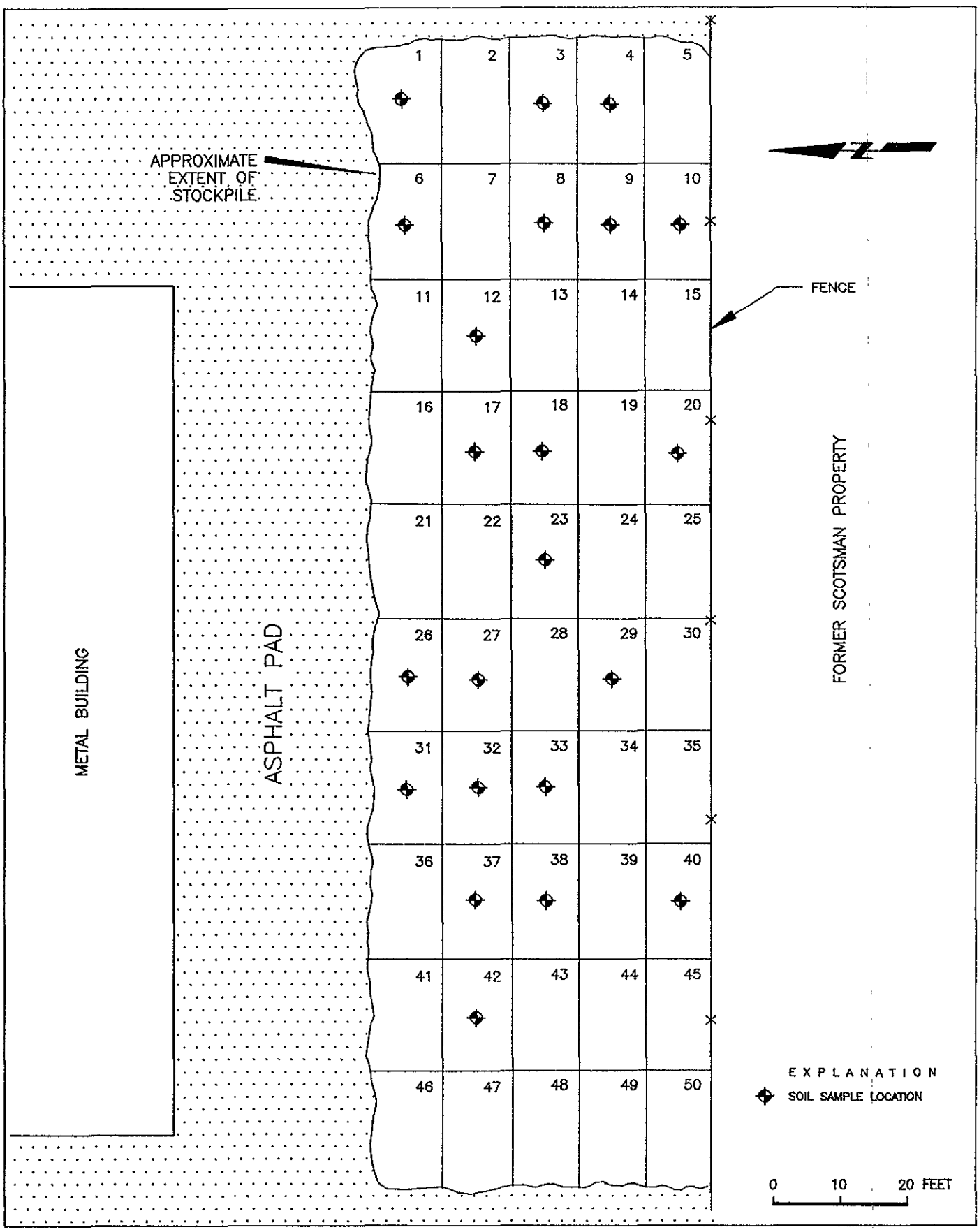

Figure 9 : STOCKPILE SAMPLING LOCATION

Project No. 3186.95
6085 Scarlett Court, Dublin

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3186.95-10S001.MJB:JSC 030295

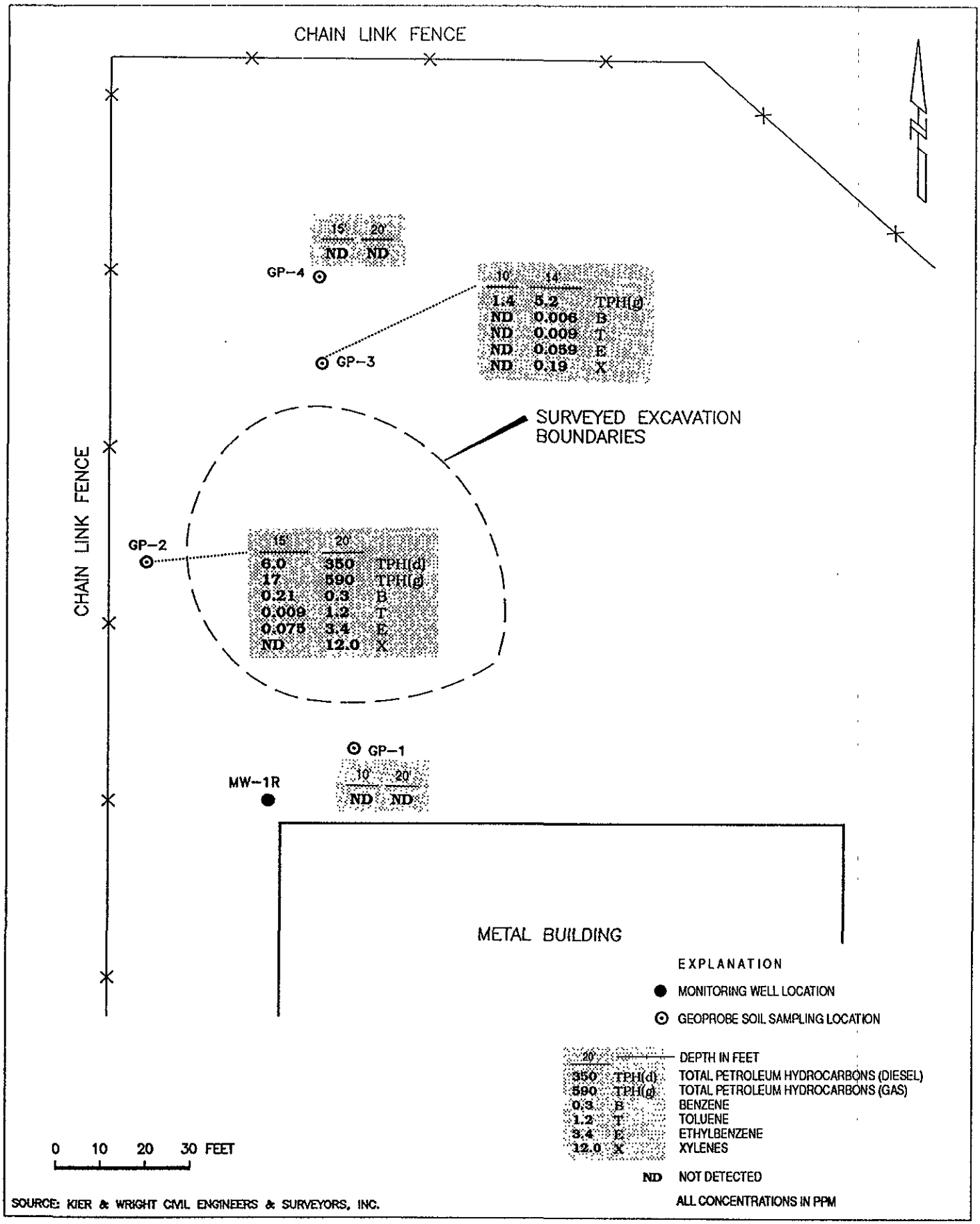

Figure 10 : ANALYTICAL RESULTS FOR GEOPROBE SOIL SAMPLES JANUARY 25, 1995

Project No. 3186.95
6085 Scarlett Court, Dublin
3186BASE.MJB:JSC 022295

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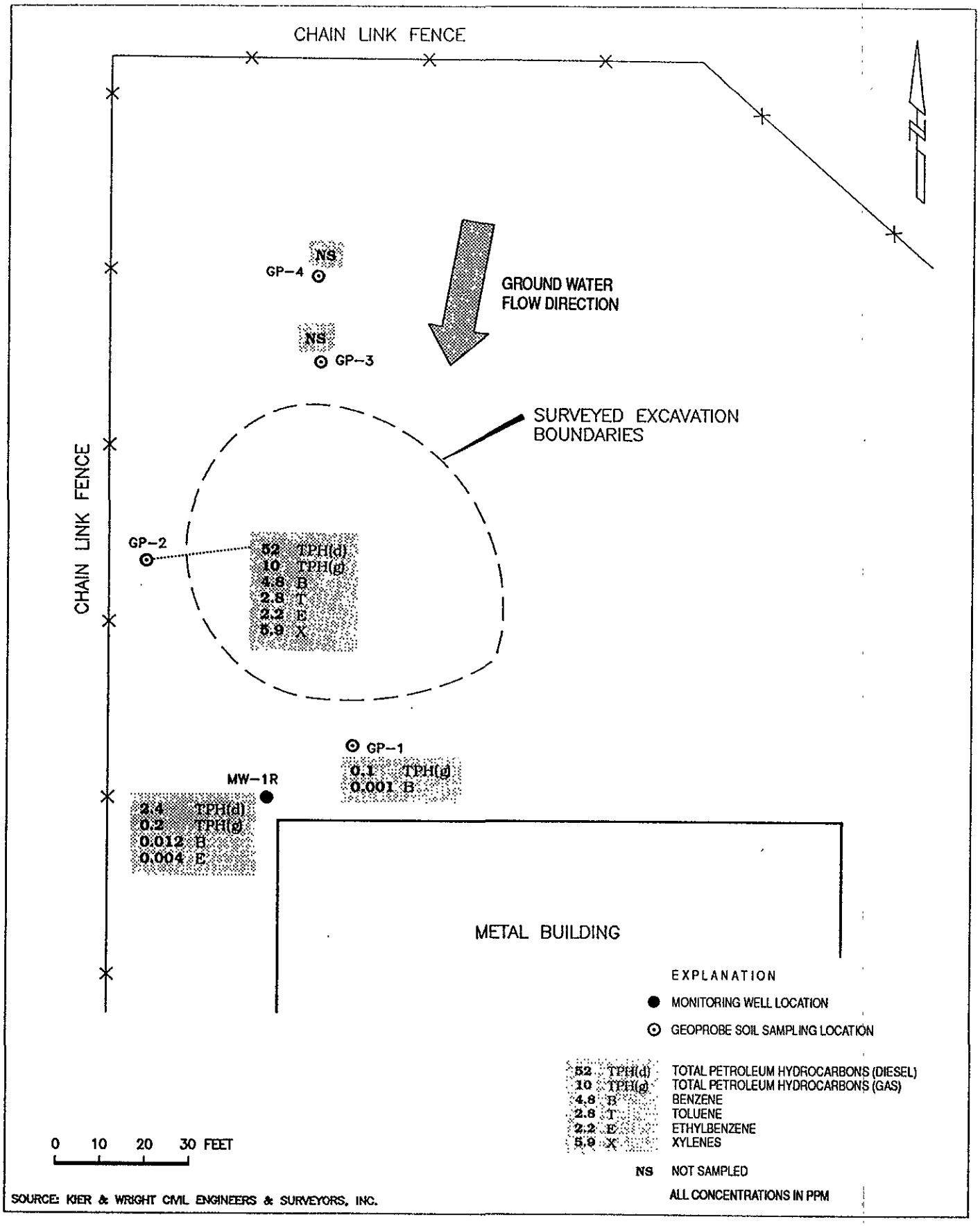

Figure 11 : ANALYTICAL RESULTS FOR GROUND-WATER SAMPLES JANUARY 25 AND FEBRUARY 1, 1995

Project No. 3186.95
6085 Scarlett Court, Dublin

3186BASE.MJB:JSC 022295

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ENGINEERS, HYDROGEOLOGISTS, & APPLIED SCIENTISTS

APPENDIX A

ACDEH APPROVAL LETTERS

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

RAFAT A. SHAHID, ASST. AGENCY DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH

StID 3730

July 8, 1994

Mr. James Lutton
Levine-Fricke
3001 Douglas Blvd, Suite 320
Roseville, CA 95661

RE: Proposal Approval for 6085 Scarlett Ct, Dublin 94566

Dear Mr. Lutton:

I have completed review of Levine-Fricke's Data Evaluation and Remedial Strategy proposal for the above referenced site. The proposal to overexcavate fuel contaminated soil around the former gasoline tank pit is acceptable. This activity will result in the decommissioning of monitoring well MW-1, which will require a permit from the Alameda County Zone 7 Water Agency. Also, a replacement well downgradient from the final excavation pit will be required. Soil samples collected should be analyzed for TPH-G, BTEX, and total lead.

Please notify this office at least 72 hours prior to the start of field work. Our office has moved to: 1131 Harbor Bay Parkway, 2nd Floor, Alameda, CA 94502. Or you may fax us at (510) ~~377~~-9335.
337

eva chu
Hazardous Materials Specialist

cc: Charles Lemoine, 1367 52nd Ave, Oakland, CA 94601
files

~~271-1394~~
phone 271-4330
271-4310

RECEIVED
JUL 15

lemoine8

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

RAFAT A. SHAHID, Assistant Agency Director

ALAMEDA COUNTY CC4580
DEPT. OF ENVIRONMENTAL HEALTH
ENVIRONMENTAL PROTECTION DIVISION
1131 HARBOR BAY PKWY., #250
ALAMEDA CA 94502-6577

StID 3730

January 10, 1995

Mr. Michael Bombard
Levine-Fricke
3001 Douglas Blvd, Suite 320
Roseville, CA 95661

RE: Workplan Approval for 6085 Scarlett Ct, Dublin 94566

Dear Mr. Bombard:

I have completed review of Levine-Fricke's January 1995 Work Plan for Further Soil and Groundwater Investigation for the above referenced site. The proposal to advance up to six soil borings to define the lateral and vertical extent of soil contamination, and to install one downgradient monitoring well to assess groundwater quality beneath the site is acceptable.

In addition to the collection of soil samples for analysis (up to two sample per boring), grab groundwater samples should also be collected from borings advanced up- and cross-gradient from the former tank pit. And, all soil samples collected with detectable readings on the OVA should be submitted to the lab for analysis for TPH-G, TPH-D, and BTEX.

Finally, at least two wells at the former Scotsman property (if not yet abandoned) should be included when surveying the newly installed well to verify groundwater flow direction/gradient.

Field work should commence within 45 days of the date of this letter, or **by February 28, 1995.** Please notify this office at least 72 hours prior to the start of field activities.

If you have any questions, I can be reached at (510) 567-6762.

eva chu
Hazardous Materials Specialist

cc: James McKeehan, EPDBP, 6612 Owens Dr, Pleasanton 94588
Arlan Ness, c/o John Loar, Blackhawk Corporation,
3820 Blackhawk Rd, Blackhawk 94506
files

lemoine.9

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APPENDIX B

FIELD PROCEDURES

APPENDIX B

FIELD PROCEDURES

B-1 Soil-Gas/Ground-Water Survey

A shallow (less than 7.5 feet bgs) soil-gas survey was performed at the Site by Tracer Research Corporation of Emeryville, California (TRC), a Levine•Fricke subcontractor, on May 20, 1994. Methods utilized during the survey are described below.

Soil-Gas Sampling Methods. Soil-gas samples were collected at a total of eight locations on the Site (Figure 2). After collection, the soil-gas samples were analyzed on site by TRC for TVH using EPA Method 8015, and for BTEX using EPA Method 8020.

Soil-gas samples were collected by driving a 1-inch-diameter metal probe into the ground, using a truck-mounted hydraulic sample driver, to the desired soil-gas sampling depth. The probe was pulled up and a vacuum was induced in the probe using an electric vacuum pump. The probe was pulled up until the vacuum pressure gauge on the vacuum pump indicated an adequate flow of soil gas into the probe.

After purging approximately 5 to 10 soil-gas probe volumes of gas from the probe, a sample of the soil gas was collected from the probe using a gas-tight syringe and immediately analyzed. An on-site gas chromatograph/flame ionization detector (GC/FID) was used to perform the analyses. Soil-gas sampling probes were decontaminated before initiating sampling operations.

After collecting the soil-gas sample, the probe was driven to a depth of approximately 7 feet bgs and a ground-water sample was collected where possible. Due to the nature of the sediments, several of the sampling locations were dry and no ground-water sample could be collected. Collected ground-water samples WS-1 and WS-4 were analyzed for TVH and BTEX compounds by TRC on site.

Quality Assurance and Quality Control. TRC's quality assurance/quality control (QA/QC) procedures included the analysis of chemical standards, syringe blanks (labeled AIR), and system blanks. No concentrations of BTEX compounds above analytical detection limits were reported by TRC in syringe or system blanks collected during the soil-gas survey.

Soil-Gas Sampling Analysis Results. Analytical results from soil-gas samples collected during this soil-gas investigation are provided in TRC's report (Appendix C).

B-2 Hand Auger Boring Advancement, Soil, and Ground-Water Sample Collection

The soil samples were collected beneath the asphalt pad by first cutting a 3-inch diameter hole in the pad using a jackhammer. After the hole was cut, hand auger sampling equipment was used to advance the soil boring to the desired depth.

During advancement, a photoionization detector (PID) was used to qualitatively measure concentrations of petroleum hydrocarbons in soil samples. At one foot depth intervals, a soil sample was collected from each boring into a resealable plastic bag. The soil in the bag was broken up to allow for volatilization. After waiting a short period of time, the probe of the PID was inserted into the bag and measurements of volatile organic compounds in the bag were recorded.

Soil samples were collected for analysis at depths of 2.5 and 5 feet bgs using slide-hammer sampling equipment where subsurface conditions permitted. Soil samples for analysis were collected in clean, 2-inch diameter by 6-inch long, brass sample liners. After removal, each liner was sealed by placing a piece of Teflon tape over each end of the tube, and covering with plastic caps. Each plastic cap was then wrapped with duct tape to provide a tight seal. Collected soil samples were then labeled and immediately placed in an ice-chilled cooler for transportation to the analytical laboratory under strict chain-of-custody protocol.

In locations where ground-water samples could not be collected during the soil-gas/ground-water survey, hand-auger borings were advanced to depths of approximately 10 feet bgs and allowed to stand open. In those locations where sufficient ground water entered the open borehole, a water sample was collected. Water samples were collected by lowering a disposable polyvinyl chloride (PVC) bailer fitted with new nylon rope into the open borehole. After collection, each ground-water sample was decanted from the bailer into laboratory-supplied 40-ml volatile organic analysis (VOA) vials and one-liter amber-colored glass bottles (two of each kind of bottle for each sample). After filling, each VOA was inverted and tapped to assure that no bubbles were present. If bubbles were present, the VOA was re-filled and the above procedure was repeated until no further bubbles were noted. Collected ground-water samples were then subsequently capped, labeled and stored in an ice-chilled cooler for transport to the analytical laboratory under strict chain-of-custody protocol.

Sampling equipment was decontaminated by washing with Alconox (a laboratory-grade detergent) and rinsed with distilled water before each use.

B-3 Excavation Soil Sample Collection

After remedial excavation activities had ceased, soil samples were collected from the sidewalls of the excavation at locations and depths selected by Ms. Eva Chu of ACDEH

(Figure 7). Soil samples were collected directly from the excavator bucket using a slide-hammer sampler fitted with clean 2-inch diameter by 6-inch long brass tubes. After collection, each soil sample was prepared for transportation to the analytical laboratory as in Section A-2.

B-4 Excavation Ground-Water Sample Collection

Water samples were collected from four locations within the excavation by lowering a disposable PVC bailer fitted with new nylon rope into the excavation or by lowering one-liter amber-colored glass bottles directly into the water in the excavation. After collection, each ground-water sample was decanted from the bailer into laboratory-supplied 40-ml VOA vials (two of each bottle for each sample). Collected samples were prepared for shipment to the laboratory as in Section A-2. The four discrete ground-water samples were composited into one sample for analysis by the analytical laboratory before analysis.

B-5 Geoprobe Soil and Ground-Water Sampling

Four soil borings were advanced during January 1995 by Vironex, Inc of Foster City, California, using the Geoprobe soil sampling system. Field activities during advancement and sampling were performed under the direct supervision of a Levine•Fricke registered geologist.

The Geoprobe soil sampling system utilizes a truck-mounted, hydraulically pushed sampling system. A 2-inch outside-diameter sampler is used to continuously push each through 4-foot interval to the total depth of the boring. The soil samples are collected in 2-inch diameter by 4-foot long, clear acetate cores or one-inch diameter by 6-inch long brass tubes. In areas where the Geoprobe cannot be pushed, a hydraulically-powered hammer is used to drive the sampler into the soil. Soil samples were collected continuously to a total depth of 20 feet bgs. The approximately 6-inch long samples to be submitted to the laboratory were cut out of the core with a hacksaw. After cutting the sample, each sample was sealed with Teflon tape and capped with rubber caps. The samples were labeled and immediately placed in an ice-chilled cooler for transport to AEN under strict chain-of-custody protocol. The samples to be submitted to the laboratory were chosen for submittal based on visual and olfactory evidence and PID measurements. Lithologic logs for each soil boring are included in Appendix H.

After soil sampling activities ceased, a ground-water sample was collected from selected borings by inserting clean 1-inch diameter PVC casing, using 5 feet of machine-slotted screen, into the open borehole. After the casing was inserted, a ½-inch by 3-foot long PVC bailer was inserted into the casing. Collected ground-water samples were decanted directly from the bailer into laboratory-supplied sample bottles. After collection, the ground-water samples were prepared for transport to AEN as detailed in Section A-2.

B-6 Monitoring Well Drilling and Installation

Soil Boring Drilling

One soil boring was drilled during January 1995 by Gregg Drilling and Testing, Inc. of Pacheco, California, using the hollow-stem auger method. Field activities during drilling, including well construction, well development, and sampling were performed under the direct supervision of a Levine•Fricke registered geologist.

The hollow-stem auger method, with 8-inch outside diameter augers, was used to complete drilling of the pilot hole to the desired total depth. Soil samples were collected at minimum 5-foot depth intervals using a modified California Sampler, described, and lithologically logged during the drilling of each boring. Lithologic logs for each soil boring are included in Appendix H. Soil cuttings generated during the drilling of the soil borings were added to the existing stockpile at the Site. Drilling equipment was steam-cleaned before use in each boring.

Soil samples for analysis were collected from the sampler into clean 2-inch-diameter by 6-inch-long brass sample liners. After collection, each sample liner was prepared for transportation to the analytical laboratory as described in Section A-2.

During the drilling of each boring, soil samples also were collected for field screening with a PID to qualitatively assess the presence of petroleum hydrocarbons. Soil samples for field screening were collected from the sampler and placed into re-sealable plastic bags and screened with the PID as in Section A-2.

Well Construction

Newly installed monitoring well MW-1R was constructed in the vertical boring by installing 2-inch-diameter, Schedule 40 PVC casing; the perforated interval consists of 0.020-inch machine slotted perforations. A sand pack of Number 3 Monterey sand was then placed around the screened interval, extending 0.5 feet above the top of the perforations. Approximately 0.5 feet of bentonite pellets were placed above this sand pack as a seal. Levels of sand and bentonite in the well annulus were confirmed during well construction by sounding with a weighted tape. The remaining annular space above the bentonite seal was grouted with a cement-bentonite slurry to the surface. A traffic-rated, flush-to-grade, vault with locking cap and lock was installed at the surface and cemented in place. Details of well construction are included in Appendix H.

Well Development and Sampling

Monitoring well MW-1R was developed and sampled for chemical analysis during January 1995. The monitoring well at the Site was developed in order to clear silt and sand from the well and to establish better hydraulic communication between the well and the surrounding sediments. Newly installed well MW-1R was developed and sampled using a disposable PVC bailer. Development continued until approximately 10 well volumes of water had been evacuated from the well, or until the water clarity improved and the parameters being monitored (pH, specific conductance, and temperature) had stabilized. Water evacuated during development was placed in a 55-gallon drum on site.

Well MW-1R was sampled for TPHg, TPHd, and BTEX compounds, and these samples were placed in 40 ml glass vials and one-liter, amber-colored glass bottles; three vials and two bottles from the well. Before each use, the PVC bailer was fitted with new nylon rope.

Ground-water samples were prepared for transport to the analytical laboratory as detailed in Section A-2. Samples were then transported under strict chain-of-custody protocol by laboratory courier to AEN for analysis.

Ground-Water Elevation Measurements

The ground-water elevation was measured in well MW-1R using an electric well probe graduated in 0.01-foot increments. The well elevation was surveyed by Kier and Wright Civil Engineers and Surveyors, Inc. of Pleasanton, California, to the nearest 0.01-foot and tied to benchmarks located near the Site.

APPENDIX C

LABORATORY DATA SHEETS

TRACER RESEARCH CORPORATION
LEVINE & FRICKE/DUBLIN, CALIFORNIA/114-0095-S
05/20/94
CONDENSED DATA SHEET

SAMPLE	HS E-BENZENE ug/l	HS XYLENE ug/l	HS TVHC ug/l	0	0	0	0
				0	0	0	0
				12			
AIR	NA	NA	NA				
SG-1-5'	NA	NA	NA				
SG-2-5'	NA	NA	NA				
SG-3-5'	NA	NA	NA				
SG-4-5'	NA	NA	NA				
WS-4-6'	<5	<10	<8				
SG-5-4'	NA	NA	NA				
SG-7-4'	NA	NA	NA				
SG-8-4'	NA	NA	NA				
WS-1-7.5'	<5	<10	30				

ANALYST_____VERIFIED_____

TRACER RESEARCH CORPORATION
LEVINE & FRICKE/DUBLIN, CALIFORNIA/114-0095-S
05/20/94
CONDENSED DATA SHEET

DRAFT
BY [illegible] DATE 5/20/94

SAMPLE	BENZENE ug/l	TOLUENE ug/l	E-BENZENE ug/l	XYLENES ug/l	TVHC ug/l	HS BENZENE ug/l	HS TOLUENE ug/l
AIR	<0.2	<0.2	<0.3	<0.5	<0.5	NA	NA
SG-1-5'	<0.2	<0.2	<0.3	<0.5	<0.5	NA	NA
SG-2-5'	<0.2	<0.2	<0.3	<0.5	0.5	NA	NA
SG-3-5'	<0.2	<0.2	<0.3	<0.5	2	NA	NA
SG-4-5'	<0.2	<0.2	<0.3	<0.5	<0.5	NA	NA
WS-4-6'	NA	NA	NA	NA	NA	<2	<3
SG-5-4'	<0.2	<0.2	<0.3	<0.5	<0.5	NA	NA
SG-7-4'	<0.2	<0.2	<0.3	<0.5	<0.5	NA	NA
SG-8-4'	<0.2	<0.2	<0.3	<0.5	<0.5	NA	NA
WS-1-7.5'	NA	NA	NA	NA	NA	<2	<3

ANALYST [signature] VERIFIED [signature]

American Environmental Network

Certificate of Analysis

DOHS Certification: 1132 VELA Accreditation: 11134

LEVINE-FRICKE
3001 DOUGLAS BLVD. STE 320
ROSEVILLE, CA 95661

ATTN: MICHAEL BOMBARD
CLIENT PROJ. ID: 3186
CLIENT PROJ. NAME: DUBLIN
C.O.C. NUMBER: 05745

REPORT DATE: 06/08/94

DATE(S) SAMPLED: 05/20/94

DATE RECEIVED: 05/23/94

AEN WORK ORDER: 9405282

PROJECT SUMMARY:

On May 23, 1994, this laboratory received 10 soil sample(s).

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

Please see quality control report for a summary of QC data pertaining to this project.

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

Larry Klein
Laboratory Director

LEVINE-FRICKE

SAMPLE ID: HA-1-5'
AEN LAB NO: 9405282-02
AEN WORK ORDER: 9405282
CLIENT PROJ. ID: 3186

DATE SAMPLED: 05/20/94
DATE RECEIVED: 05/23/94
REPORT DATE: 06/08/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	05/26/94
Toluene	108-88-3	ND	5	ug/kg	05/26/94
Ethylbenzene	100-41-4	ND	5	ug/kg	05/26/94
Xylenes, Total	1330-20-7	ND	5	ug/kg	05/26/94
Purgeable HCs as Gasoline	5030/GCFID	ND	0.2	mg/kg	05/26/94
#Extraction for Diesel/Oil	EPA 3550	-		Extrn Date	05/24/94
TPH as Diesel	GC-FID	ND	1	mg/kg	05/25/94

ND = Not detected at or above the reporting limit
* = Value above reporting limit

LEVINE-FRICKE

SAMPLE ID: HA-2B-2.5'
AEN LAB NO: 9405282-03
AEN WORK ORDER: 9405282
CLIENT PROJ. ID: 3186

DATE SAMPLED: 05/20/94
DATE RECEIVED: 05/23/94
REPORT DATE: 06/08/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	05/26/94
Toluene	108-88-3	ND	5	ug/kg	05/26/94
Ethylbenzene	100-41-4	ND	5	ug/kg	05/26/94
Xylenes, Total	1330-20-7	ND	5	ug/kg	05/26/94
Purgeable HCs as Gasoline	5030/GCFID	ND	0.2	mg/kg	05/26/94
#Extraction for Diesel/Oil	EPA 3550	-		Extrn Date	05/24/94
TPH as Diesel	GC-FID	ND	1	mg/kg	05/25/94

ND = Not detected at or above the reporting limit
* = Value above reporting limit

LEVINE-FRICKE

SAMPLE ID: HA-2B-5'
AEN LAB NO: 9405282-04
AEN WORK ORDER: 9405282
CLIENT PROJ. ID: 3186

DATE SAMPLED: 05/20/94
DATE RECEIVED: 05/23/94
REPORT DATE: 06/08/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	05/27/94
Toluene	108-88-3	ND	5	ug/kg	05/27/94
Ethylbenzene	100-41-4	ND	5	ug/kg	05/27/94
Xylenes, Total	1330-20-7	ND	5	ug/kg	05/27/94
Purgeable HCs as Gasoline	5030/GCFID	ND	0.2	mg/kg	05/27/94
#Extraction for Diesel/Oil	EPA 3550	-		Extrn Date	05/24/94
TPH as Diesel	GC-FID	ND	1	mg/kg	05/30/94

ND = Not detected at or above the reporting limit
* = Value above reporting limit

LEVINE-FRICKE

SAMPLE ID: HA-3-2.5'
AEN LAB NO: 9405282-05
AEN WORK ORDER: 9405282
CLIENT PROJ. ID: 3186

DATE SAMPLED: 05/20/94
DATE RECEIVED: 05/23/94
REPORT DATE: 06/08/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	05/27/94
Toluene	108-88-3	ND	5	ug/kg	05/27/94
Ethylbenzene	100-41-4	ND	5	ug/kg	05/27/94
Xylenes, Total	1330-20-7	ND	5	ug/kg	05/27/94
Purgeable HCs as Gasoline	5030/GCFID	ND	0.2	mg/kg	05/27/94
#Extraction for Diesel/Oil	EPA 3550	-		Extrn Date	05/24/94
TPH as Diesel	GC-FID	ND	1	mg/kg	05/25/94

ND = Not detected at or above the reporting limit
* = Value above reporting limit

LEVINE-FRICKE

SAMPLE ID: HA-3-5'
AEN LAB NO: 9405282-06
AEN WORK ORDER: 9405282
CLIENT PROJ. ID: 3186

DATE SAMPLED: 05/20/94
DATE RECEIVED: 05/23/94
REPORT DATE: 06/08/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	05/27/94
Toluene	108-88-3	ND	5	ug/kg	05/27/94
Ethylbenzene	100-41-4	ND	5	ug/kg	05/27/94
Xylenes, Total	1330-20-7	ND	5	ug/kg	05/27/94
Purgeable HCs as Gasoline	5030/GCFID	ND	0.2	mg/kg	05/27/94
#Extraction for Diesel/Oil	EPA 3550	-		Extrn Date	05/24/94
TPH as Diesel	GC-FID	ND	1	mg/kg	05/25/94

ND = Not detected at or above the reporting limit
* = Value above reporting limit

LEVINE-FRICKE

SAMPLE ID: HA-4-2.5'
AEN LAB NO: 9405282-07
AEN WORK ORDER: 9405282
CLIENT PROJ. ID: 3186

DATE SAMPLED: 05/20/94
DATE RECEIVED: 05/23/94
REPORT DATE: 06/08/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	05/27/94
Toluene	108-88-3	ND	5	ug/kg	05/27/94
Ethylbenzene	100-41-4	ND	5	ug/kg	05/27/94
Xylenes, Total	1330-20-7	ND	5	ug/kg	05/27/94
Purgeable HCs as Gasoline	5030/GCFID	ND	0.2	mg/kg	05/27/94
#Extraction for Diesel/Oil	EPA 3550	-		Extrn Date	05/24/94
TPH as Diesel	GC-FID	ND	1	mg/kg	05/30/94

ND = Not detected at or above the reporting limit
* = Value above reporting limit

LEVINE-FRICKE

SAMPLE ID: HA-4-5'
AEN LAB NO: 9405282-08
AEN WORK ORDER: 9405282
CLIENT PROJ. ID: 3186

DATE SAMPLED: 05/20/94
DATE RECEIVED: 05/23/94
REPORT DATE: 06/08/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	05/28/94
Toluene	108-88-3	ND	5	ug/kg	05/28/94
Ethylbenzene	100-41-4	ND	5	ug/kg	05/28/94
Xylenes, Total	1330-20-7	ND	5	ug/kg	05/28/94
Purgeable HCs as Gasoline	5030/GCFID	ND	0.2	mg/kg	05/28/94
#Extraction for Diesel/Oil	EPA 3550	-		Extrn Date	05/24/94
TPH as Diesel	GC-FID	ND	1	mg/kg	05/25/94

ND = Not detected at or above the reporting limit
* = Value above reporting limit

LEVINE-FRICKE

SAMPLE ID: HA-5-2.5'
AEN LAB NO: 9405282-09
AEN WORK ORDER: 9405282
CLIENT PROJ. ID: 3186

DATE SAMPLED: 05/20/94
DATE RECEIVED: 05/23/94
REPORT DATE: 06/08/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	05/28/94
Toluene	108-88-3	ND	5	ug/kg	05/28/94
Ethylbenzene	100-41-4	ND	5	ug/kg	05/28/94
Xylenes, Total	1330-20-7	ND	5	ug/kg	05/28/94
Purgeable HCs as Gasoline	5030/GCFID	ND	0.2	mg/kg	05/28/94
#Extraction for Diesel/Oil	EPA 3550	-		Extrn Date	05/24/94
TPH as Diesel	GC-FID	ND	1	mg/kg	05/25/94

ND = Not detected at or above the reporting limit
* = Value above reporting limit

LEVINE-FRICKE

SAMPLE ID: HA-5-5'
AEN LAB NO: 9405282-10
AEN WORK ORDER: 9405282
CLIENT PROJ. ID: 3186

DATE SAMPLED: 05/20/94
DATE RECEIVED: 05/23/94
REPORT DATE: 06/08/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	05/28/94
Toluene	108-88-3	ND	5	ug/kg	05/28/94
Ethylbenzene	100-41-4	ND	5	ug/kg	05/28/94
Xylenes, Total	1330-20-7	ND	5	ug/kg	05/28/94
Purgeable HCs as Gasoline	5030/GCFID	ND	0.2	mg/kg	05/28/94
#Extraction for Diesel/Oil	EPA 3550	-		Extrn Date	05/24/94
TPH as Diesel	GC-FID	ND	1	mg/kg	05/26/94

ND = Not detected at or above the reporting limit
* = Value above reporting limit

AEN (CALIFORNIA)
QUALITY CONTROL REPORT

AEN JOB NUMBER: 9405282

CLIENT PROJECT ID: 3186

Quality Control Summary

All laboratory quality control parameters were found to be within established limits.

Definitions

The following abbreviations are found throughout the QC report:

ND = Not Detected at or above the reporting limit
RPD = Relative Percent Difference
< = Less Than

QUALITY CONTROL DATA

DATE EXTRACTED: 05/23/94
DATE ANALYZED: 05/24/94
CLIENT PROJ. ID: 3186

AEN JOB NO: 9405282
SAMPLE SPIKED: SAND
INSTRUMENT: C

LABORATORY CONTROL SAMPLE
METHOD: EPA 3550 GCFID
(SOIL MATRIX)

ANALYTE	Spike Added (mg/kg)	Percent Recovery
Diesel	40.8	71

CURRENT QC LIMITS

Analyte	Percent Recovery
Diesel	(44-105)

METHOD BLANK RESULT

Lab Id.	Extractable Hydrocarbons as Diesel (mg/kg)
052494-METHOD BLANK	ND
Reporting Limit	1

QUALITY CONTROL DATA

INSTRUMENT: H

CLIENT PROJ. ID: 3186

AEN JOB NO: 9405282
AEN LAB NO: 0526-BLANK
DATE ANALYZED: 05/26/94

BTEX AND HYDROCARBONS
METHOD: EPA 8020, 5030 GCFID
(SOIL MATRIX)

	CAS #	CONCENTRATION (ug/kg)	REPORTING LIMIT (ug/kg)
Benzene	71-43-2	ND	5
Toluene	108-88-3	ND	5
Ethylbenzene	100-41-4	ND	5
Xylenes, Total	1330-20-7	ND	5
PURGEABLE HYDROCARBONS AS:			
Gasoline		ND mg/kg	0.2 mg/kg

QUALITY CONTROL DATA

INSTRUMENT: H

CLIENT PROJ. ID: 3186

AEN JOB NO: 9405282
AEN LAB NO: 0527-BLANK
DATE ANALYZED: 05/27/94

BTEX AND HYDROCARBONS
METHOD: EPA 8020, 5030 GCFID
(SOIL MATRIX)

	CAS #	CONCENTRATION (ug/kg)	REPORTING LIMIT (ug/kg)
Benzene	71-43-2	ND	5
Toluene	108-88-3	ND	5
Ethylbenzene	100-41-4	ND	5
Xylenes, Total	1330-20-7	ND	5
PURGEABLE HYDROCARBONS AS:			
Gasoline		ND mg/kg	0.2 mg/kg

QUALITY CONTROL DATA

INSTRUMENT: H

CLIENT PROJ. ID: 3186

AEN JOB NO: 9405282
AEN LAB NO: 0528-BLANK
DATE ANALYZED: 05/28/94

BTEX AND HYDROCARBONS
METHOD: EPA 8020, 5030 GCFID
(SOIL MATRIX)

	CAS #	CONCENTRATION (ug/kg)	REPORTING LIMIT (ug/kg)
Benzene	71-43-2	ND	5
Toluene	108-88-3	ND	5
Ethylbenzene	100-41-4	ND	5
Xylenes, Total	1330-20-7	ND	5
PURGEABLE HYDROCARBONS AS:			
Gasoline		ND mg/kg	0.2 mg/kg

QUALITY CONTROL DATA

CLIENT PROJ. ID: 3186

AEN JOB NO: 9405282

INSTRUMENT: H

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

Date Analyzed	SAMPLE IDENTIFICATION Sample Id.	Lab Id.	SURROGATE RECOVERY (PERCENT) Fluorobenzene
05/26/94	HA-1-2.5'	01	105
05/26/94	HA-1-5'	02	100
05/26/94	HA-2B-2.5'	03	113
05/27/94	HA-2B-5'	04	101
05/27/94	HA-3-2.5'	05	104
05/27/94	HA-3-5'	06	101
05/27/94	HA-4-2.5'	07	106
05/28/94	HA-4-5'	08	101
05/28/94	HA-5-2.5'	09	104
05/28/94	HA-5-5'	10	105

CURRENT QC LIMITS

ANALYTE	PERCENT RECOVERY
Fluorobenzene	(78-114)

QUALITY CONTROL DATA

DATE ANALYZED: 05/27/94
SAMPLE SPIKED: LCS
CLIENT PROJ. ID: 3186

AEN JOB NO: 9405282
INSTRUMENT: H

LABORATORY CONTROL SAMPLE
METHOD: EPA 8020, 5030 GCFID
(SOIL MATRIX)

ANALYTE	Spike Added (ug/kg)	Percent Recovery
Benzene	19.6	91
Toluene	72.9	93
Hydrocarbons as Gasoline	1000	100

CURRENT QC LIMITS

Analyte	Percent Recovery
Benzene	(65-122)
Toluene	(67-124)
Gasoline	(60-125)

*** END OF REPORT ***

California Laboratory Services

9105282

CHAIN OF CUSTODY

LOG NO. 05745

CLIENT NAME	[illegible]
ADDRESS	[illegible] Douglas Blvd #[illegible] / Roseville CA [illegible]
PROJECT NAME	Dublin [illegible]
PROJECT MANAGER	M. Bombard
PHONE #	[illegible]
SAMPLED BY	[illegible]
JOB DESCRIPTION	
SITE LOCATION	Dublin

CLIENT JOB NUMBER: 3186

DESTINATION LABORATORY:
- ☐ CLS 3249 FITZGERALD RD. RANCHO CORDOVA, CA 95742
- ☒ OTHER: AEN

ANALYSIS REQUESTED: TPHG, TPHD, BTEX compounds

FIELD CONDITIONS:

COMPOSITE:

SPECIAL INSTRUCTIONS:

TURN AROUND TIME: 24 HOURS / 48 HOURS / 1 WEEK / 2 WEEKS

DATE	TIME	SAMPLE IDENTIFICATION	METHOD	MATRIX	CONTAINER NO.	CONTAINER TYPE	PRESERVATIVES	TPHG	TPHD	BTEX compounds	NOTE / FIELD READINGS
5/20/94	1144	HA-1-2.5'	DRIVE	01A	1	SOIL		X	X	X	NORMAL TAT
↓	1257	HA-1-5'	↓	02A	↓	↓		X	X	X	TO M. BOMBARD
	1555	HA-2B-2.5'		03A				X	X	X	@ L.F. ROSEVILLE
	1620	HA-2B-5'		04A				X	X	X	
	1425	HA-3-2.5'		05A				X	X	X	
	1455	HA-3-5'		06A				X	X	X	
	1525	HA-4-2.5'		07A				X	X	X	
	1540	HA-4-5'		08A				X	X	X	
	1710	HA-5-2.5'		09A				X	X	X	
↓	1720	HA-5-5'	↓	10A	↓	↓		X	X	X	

SUSPECTED CONSTITUENTS

SAMPLE RETENTION TIME

PRESERVATIVES: (1) HCL (2) HNO_3 (3) = COLD (4)

RELINQUISHED BY (SIGN)	PRINT NAME / COMPANY	DATE / TIME	REC'D BY (SIGN)	PRINT NAME / COMPANY
[signature]	D. Fortner / L.F.	5/20/94 / 2300	[signature]	NEIL HEBRYK 5/23/94 11:40
[signature]	N. HEBRYK	5/23/94 12:30		

REC'D AT LAB BY: [signature] DATE / TIME: 5/23/94 12:30

CONDITIONS / COMMENTS:

SHIPPED VIA: ☐ FED X ☐ UPS ☐ OTHER ______ AIR BILL #

LAB FILE COPY

MJB

American Environmental Network

Certificate of Analysis

DOHS Certification: 1172 AIHA Accreditation: 11134

LEVINE-FRICKE
3001 DOUGLAS BLVD. STE 320
ROSEVILLE, CA 95661

ATTN: MIKE BOMBARD
CLIENT PROJ. ID: 3186
CLIENT PROJ. NAME: SCARLETT CT
C.O.C. NUMBER: 0476

REPORT DATE: 08/16/94
DATE(S) SAMPLED: 07/29/94
DATE RECEIVED: 07/29/94
AEN WORK ORDER: 9407350

PROJECT SUMMARY:

On July 29, 1994, this laboratory received 13 (12 soil and 1 water) sample(s).

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

Please see quality control report for a summary of QC data pertaining to this project.

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

Larry Klein
Laboratory Director

LEVINE-FRICKE

SAMPLE ID: SS-1
AEN LAB NO: 9407350-01
AEN WORK ORDER: 9407350
CLIENT PROJ. ID: 3186

DATE SAMPLED: 07/29/94
DATE RECEIVED: 07/29/94
REPORT DATE: 08/16/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	2,300 *	100	ug/kg	08/08/94
Toluene	108-88-3	14,000 *	100	ug/kg	08/08/94
Ethylbenzene	100-41-4	8,900 *	100	ug/kg	08/08/94
Xylenes, Total	1330-20-7	42,000 *	100	ug/kg	08/08/94
Purgeable HCs as Gasoline	5030/GCFID	390 *	4	mg/kg	08/08/94

ND = Not detected at or above the reporting limit
* = Value above reporting limit

LEVINE-FRICKE

SAMPLE ID: SS-2
AEN LAB NO: 9407350-02
AEN WORK ORDER: 9407350
CLIENT PROJ. ID: 3186

DATE SAMPLED: 07/29/94
DATE RECEIVED: 07/29/94
REPORT DATE: 08/16/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	14,000 *	500	ug/kg	08/08/94
Toluene	108-88-3	64,000 *	500	ug/kg	08/08/94
Ethylbenzene	100-41-4	33,000 *	500	ug/kg	08/08/94
Xylenes, Total	1330-20-7	170,000 *	500	ug/kg	08/08/94
Purgeable HCs as Gasoline	5030/GCFID	1,200 *	20	mg/kg	08/08/94

ND = Not detected at or above the reporting limit
* = Value above reporting limit

LEVINE-FRICKE

SAMPLE ID: SS-3
AEN LAB NO: 9407350-03
AEN WORK ORDER: 9407350
CLIENT PROJ. ID: 3186

DATE SAMPLED: 07/29/94
DATE RECEIVED: 07/29/94
REPORT DATE: 08/16/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	11,000 *	500	ug/kg	08/09/94
Toluene	108-88-3	41,000 *	500	ug/kg	08/09/94
Ethylbenzene	100-41-4	34,000 *	500	ug/kg	08/09/94
Xylenes, Total	1330-20-7	130,000 *	500	ug/kg	08/09/94
Purgeable HCs as Gasoline	5030/GCFID	1,500 *	20	mg/kg	08/09/94

ND = Not detected at or above the reporting limit
* = Value above reporting limit

LEVINE-FRICKE

SAMPLE ID: SS-4
AEN LAB NO: 9407350-04
AEN WORK ORDER: 9407350
CLIENT PROJ. ID: 3186

DATE SAMPLED: 07/29/94
DATE RECEIVED: 07/29/94
REPORT DATE: 08/16/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	1,100 *	500	ug/kg	08/07/94
Toluene	108-88-3	8,700 *	500	ug/kg	08/07/94
Ethylbenzene	100-41-4	21,000 *	500	ug/kg	08/07/94
Xylenes, Total	1330-20-7	45,000 *	500	ug/kg	08/07/94
Purgeable HCs as Gasoline	5030/GCFID	1,200 *	20	mg/kg	08/07/94

ND = Not detected at or above the reporting limit
* = Value above reporting limit

LEVINE-FRICKE

SAMPLE ID: SS-5
AEN LAB NO: 9407350-05
AEN WORK ORDER: 9407350
CLIENT PROJ. ID: 3186

DATE SAMPLED: 07/29/94
DATE RECEIVED: 07/29/94
REPORT DATE: 08/16/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	08/06/94
Toluene	108-88-3	ND	5	ug/kg	08/06/94
Ethylbenzene	100-41-4	6 *	5	ug/kg	08/06/94
Xylenes, Total	1330-20-7	10 *	5	ug/kg	08/06/94
Purgeable HCs as Gasoline	5030/GCFID	1.0 *	0.2	mg/kg	08/06/94

ND = Not detected at or above the reporting limit
* = Value above reporting limit

LEVINE-FRICKE

SAMPLE ID: SS-6
AEN LAB NO: 9407350-06
AEN WORK ORDER: 9407350
CLIENT PROJ. ID: 3186

DATE SAMPLED: 07/29/94
DATE RECEIVED: 07/29/94
REPORT DATE: 08/16/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	13,000 *	500	ug/kg	08/09/94
Toluene	108-88-3	39,000 *	500	ug/kg	08/09/94
Ethylbenzene	100-41-4	28,000 *	500	ug/kg	08/09/94
Xylenes, Total	1330-20-7	100,000 *	500	ug/kg	08/09/94
Purgeable HCs as Gasoline	5030/GCFID	1,300 *	20	mg/kg	08/09/94

ND = Not detected at or above the reporting limit
* = Value above reporting limit

LEVINE-FRICKE

SAMPLE ID: SS-7
AEN LAB NO: 9407350-07
AEN WORK ORDER: 9407350
CLIENT PROJ. ID: 3186

DATE SAMPLED: 07/29/94
DATE RECEIVED: 07/29/94
REPORT DATE: 08/16/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	1,300 *	100	ug/kg	08/07/94
Toluene	108-88-3	1,800 *	100	ug/kg	08/07/94
Ethylbenzene	100-41-4	2,800 *	100	ug/kg	08/07/94
Xylenes, Total	1330-20-7	9,800 *	100	ug/kg	08/07/94
Purgeable HCs as Gasoline	5030/GCFID	200 *	4	mg/kg	08/07/94

ND = Not detected at or above the reporting limit
* = Value above reporting limit

LEVINE-FRICKE

SAMPLE ID: SS-8
AEN LAB NO: 9407350-08
AEN WORK ORDER: 9407350
CLIENT PROJ. ID: 3186

DATE SAMPLED: 07/29/94
DATE RECEIVED: 07/29/94
REPORT DATE: 08/16/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	440 *	100	ug/kg	08/07/94
Toluene	108-88-3	1,000 *	100	ug/kg	08/07/94
Ethylbenzene	100-41-4	10,000 *	100	ug/kg	08/07/94
Xylenes, Total	1330-20-7	9,400 *	100	ug/kg	08/07/94
Purgeable HCs as Gasoline	5030/GCFID	380 *	4	mg/kg	08/07/94

ND = Not detected at or above the reporting limit
* = Value above reporting limit

LEVINE-FRICKE

SAMPLE ID: OB-1
AEN LAB NO: 9407350-09
AEN WORK ORDER: 9407350
CLIENT PROJ. ID: 3186

DATE SAMPLED: 07/29/94
DATE RECEIVED: 07/29/94
REPORT DATE: 08/16/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	08/08/94
Toluene	108-88-3	ND	5	ug/kg	08/08/94
Ethylbenzene	100-41-4	ND	5	ug/kg	08/08/94
Xylenes, Total	1330-20-7	ND	5	ug/kg	08/08/94
Purgeable HCs as Gasoline	5030/GCFID	ND	0.2	mg/kg	08/08/94

ND = Not detected at or above the reporting limit
* = Value above reporting limit

LEVINE-FRICKE

SAMPLE ID: OB-2
AEN LAB NO: 9407350-10
AEN WORK ORDER: 9407350
CLIENT PROJ. ID: 3186

DATE SAMPLED: 07/29/94
DATE RECEIVED: 07/29/94
REPORT DATE: 08/16/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	08/11/94
Toluene	108-88-3	ND	5	ug/kg	08/11/94
Ethylbenzene	100-41-4	ND	5	ug/kg	08/11/94
Xylenes, Total	1330-20-7	ND	5	ug/kg	08/11/94
Purgeable HCs as Gasoline	5030/GCFID	ND	0.2	mg/kg	08/11/94

ND = Not detected at or above the reporting limit
* = Value above reporting limit

LEVINE-FRICKE

SAMPLE ID: OB-3
AEN LAB NO: 9407350-11
AEN WORK ORDER: 9407350
CLIENT PROJ. ID: 3186

DATE SAMPLED: 07/29/94
DATE RECEIVED: 07/29/94
REPORT DATE: 08/16/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	08/11/94
Toluene	108-88-3	ND	5	ug/kg	08/11/94
Ethylbenzene	100-41-4	ND	5	ug/kg	08/11/94
Xylenes, Total	1330-20-7	ND	5	ug/kg	08/11/94
Purgeable HCs as Gasoline	5030/GCFID	ND	0.2	mg/kg	08/11/94

ND = Not detected at or above the reporting limit
* = Value above reporting limit

LEVINE-FRICKE

SAMPLE ID: OB-4
AEN LAB NO: 9407350-12
AEN WORK ORDER: 9407350
CLIENT PROJ. ID: 3186

DATE SAMPLED: 07/29/94
DATE RECEIVED: 07/29/94
REPORT DATE: 08/16/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	08/11/94
Toluene	108-88-3	ND	5	ug/kg	08/11/94
Ethylbenzene	100-41-4	ND	5	ug/kg	08/11/94
Xylenes, Total	1330-20-7	ND	5	ug/kg	08/11/94
Purgeable HCs as Gasoline	5030/GCFID	ND	0.2	mg/kg	08/11/94

ND = Not detected at or above the reporting limit
* = Value above reporting limit

LEVINE-FRICKE

SAMPLE ID: GW-1
AEN LAB NO: 9407350-13
AEN WORK ORDER: 9407350
CLIENT PROJ. ID: 3186

DATE SAMPLED: 07/29/94
DATE RECEIVED: 07/29/94
REPORT DATE: 08/16/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	6,500 *	50	ug/L	08/09/94
Toluene	108-88-3	9,100 *	50	ug/L	08/09/94
Ethylbenzene	100-41-4	1,700 *	50	ug/L	08/09/94
Xylenes, Total	1330-20-7	5,800 *	200	ug/L	08/09/94
Purgeable HCs as Gasoline	5030/GCFID	65 *	5	mg/L	08/09/94

ND = Not detected at or above the reporting limit
* = Value above reporting limit

AEN (CALIFORNIA)
QUALITY CONTROL REPORT

AEN JOB NUMBER: 9407350

CLIENT PROJECT ID: 3186

Quality Control and Project Summary

All laboratory quality control parameters were found to be within established limits.

Definitions

Laboratory Control Sample (LCS)/Method Spike(s): Control samples of known composition. LCS and Method Spike data are used to validate batch analytical results.

Matrix Spike(s): Aliquot of a sample (aqueous or solid) with added quantities of specific compounds and subjected to the entire analytical procedure. Matrix spike and matrix spike duplicate QC data are advisory.

Method Blank: An analytical control consisting of all reagents, internal standards, and surrogate standards carried through the entire analytical process. Used to monitor laboratory background and reagent contamination.

Not Detected (ND): Not detected at or above the reporting limit.

Relative Percent Difference (RPD): An indication of method precision based on duplicate analysis.

Reporting Limit (RL): The lowest concentration that can reliably be determined during routine laboratory operations. The RL is generally 1 to 10 times the Method Detection Limit (MDL). Reporting limits are matrix and method dependent and take into account any dilutions performed as part of the analysis.

Surrogates: Organic compounds which are similar to analytes of interest in chemical behavior, but are not found in environmental samples. Surrogates are added to all blanks, calibration and check standards, samples, and spiked samples. Surrogate recovery is monitored as an indication of acceptable sample preparation and instrumental performance.

D: Surrogates diluted out.

#: Indicates result outside of established laboratory QC limits.

QUALITY CONTROL DATA

AEN JOB NO: 9407350
AEN LAB NO: 0805-BLANK
DATE ANALYZED: 08/06/94
INSTRUMENT: H

BTEX AND HYDROCARBONS
METHOD: EPA 8020, 5030 GCFID
(SOIL MATRIX)

	CAS #	CONCENTRATION (ug/kg)	REPORTING LIMIT (ug/kg)
Benzene	71-43-2	ND	5
Toluene	108-88-3	ND	5
Ethylbenzene	100-41-4	ND	5
Xylenes, Total	1330-20-7	ND	5
PURGEABLE HYDROCARBONS AS:			
Gasoline		ND mg/kg	0.2 mg/kg

QUALITY CONTROL DATA

AEN JOB NO: 9407350
AEN LAB NO: 0807-BLANK
DATE ANALYZED: 08/07/94
INSTRUMENT: H

BTEX AND HYDROCARBONS
METHOD: EPA 8020, 5030 GCFID
(SOIL MATRIX)

	CAS #	CONCENTRATION (ug/kg)	REPORTING LIMIT (ug/kg)
Benzene	71-43-2	ND	5
Toluene	108-88-3	ND	5
Ethylbenzene	100-41-4	ND	5
Xylenes, Total	1330-20-7	ND	5
PURGEABLE HYDROCARBONS AS:			
Gasoline		ND mg/kg	0.2 mg/kg

QUALITY CONTROL DATA

AEN JOB NO: 9407350
AEN LAB NO: 0808-BLANK
DATE ANALYZED: 08/08/94
INSTRUMENT: H

BTEX AND HYDROCARBONS
METHOD: EPA 8020, 5030 GCFID
(SOIL MATRIX)

	CAS #	CONCENTRATION (ug/kg)	REPORTING LIMIT (ug/kg)
Benzene	71-43-2	ND	5
Toluene	108-88-3	ND	5
Ethylbenzene	100-41-4	ND	5
Xylenes, Total	1330-20-7	ND	5
PURGEABLE HYDROCARBONS AS:			
Gasoline		ND mg/kg	0.2 mg/kg

QUALITY CONTROL DATA

AEN JOB NO: 9407350
AEN LAB NO: 0809-BLANK
DATE ANALYZED: 08/09/94
INSTRUMENT: H

BTEX AND HYDROCARBONS
METHOD: EPA 8020, 5030 GCFID
(SOIL MATRIX)

	CAS #	CONCENTRATION (ug/kg)	REPORTING LIMIT (ug/kg)
Benzene	71-43-2	ND	5
Toluene	108-88-3	ND	5
Ethylbenzene	100-41-4	ND	5
Xylenes, Total	1330-20-7	ND	5
PURGEABLE HYDROCARBONS AS:			
Gasoline		ND mg/kg	0.2 mg/kg

QUALITY CONTROL DATA

AEN JOB NO: 9407350
AEN LAB NO: 0811-BLANK
DATE ANALYZED: 08/11/94
INSTRUMENT: H

BTEX AND HYDROCARBONS
METHOD: EPA 8020, 5030 GCFID
(SOIL MATRIX)

	CAS #	CONCENTRATION (ug/kg)	REPORTING LIMIT (ug/kg)
Benzene	71-43-2	ND	5
Toluene	108-88-3	ND	5
Ethylbenzene	100-41-4	ND	5
Xylenes, Total	1330-20-7	ND	5
PURGEABLE HYDROCARBONS AS:			
Gasoline		ND mg/kg	0.2 mg/kg

QUALITY CONTROL DATA

AEN JOB NO: 9407350
INSTRUMENT: H

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

Date Analyzed	SAMPLE IDENTIFICATION Sample Id.	Lab Id.	SURROGATE RECOVERY (PERCENT) Fluorobenzene
08/08/94	SS-1	01	101
08/08/94	SS-2	02	103
08/09/94	SS-3	03	99
08/07/94	SS-4	04	99
08/06/94	SS-5	05	101
08/09/94	SS-6	06	101
08/07/94	SS-7	07	98
08/07/94	SS-8	08	99
08/08/94	OB-1	09	99
08/11/94	OB-2	10	100
08/11/94	OB-3	11	99
08/11/94	OB-4	12	99

CURRENT QC LIMITS

ANALYTE	PERCENT RECOVERY
Fluorobenzene	(78-114)

QUALITY CONTROL DATA

AEN JOB NO: 9407350
DATE ANALYZED: 08/09/94
SAMPLE SPIKED: 9407364-03
INSTRUMENT: H

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

ANALYTE	Spike Added (ug/kg)	Average Percent Recovery	RPD
Benzene	19.6	98	8
Toluene	72.9	98	5
Hydrocarbons as Gasoline	1000	102	12

CURRENT QC LIMITS

Analyte	Percent Recovery	RPD
Benzene	(81-127)	11
Toluene	(84-121)	14
Gasoline	(66-116)	20

QUALITY CONTROL DATA

AEN JOB NO: 9407350
AEN LAB NO: 0808-BLANK
DATE ANALYZED: 08/08-09/94
INSTRUMENT: F

BTEX AND HYDROCARBONS
METHOD: EPA 8020, 5030 GCFID
(WATER MATRIX)

	CAS #	CONCENTRATION (ug/kg)	REPORTING LIMIT (ug/kg)
Benzene	71-43-2	ND	5
Toluene	108-88-3	ND	5
Ethylbenzene	100-41-4	ND	5
Xylenes, Total	1330-20-7	ND	5
PURGEABLE HYDROCARBONS AS:			
Gasoline		ND mg/kg	0.2 mg/kg

QUALITY CONTROL DATA

AEN JOB NO: 9407350
INSTRUMENT: F

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

Date Analyzed	SAMPLE IDENTIFICATION		SURROGATE RECOVERY (PERCENT)
	Sample Id.	Lab Id.	Fluorobenzene
08/09/94	GW-1	13	95

CURRENT QC LIMITS

ANALYTE	PERCENT RECOVERY
Fluorobenzene	(70-115)

QUALITY CONTROL DATA

AEN JOB NO: 9407350
DATE ANALYZED: 08/08/94
SAMPLE SPIKED: 9407345-02
INSTRUMENT: F

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

ANALYTE	Spike Added (ug/L)	Average Percent Recovery	RPD
Benzene	10.6	101	5
Toluene	40.2	101	5
Hydrocarbons as Gasoline	500	104	8

CURRENT QC LIMITS

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

*** END OF REPORT ***

R-4, S-B R-3, S-2

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

9407350

Project No.: 3186	Field Logbook No.:	Date: 7/29/94	Serial No.: No 0476
Project Name: 6085 Scarlett Court	Project Location: Dublin, CA		
Sampler (Signature):			

SAMPLES						ANALYSES								Samplers: MJB
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 601	EPA 624	TPH G	TPH D BTEX			HOLD	RUSH	REMARKS
SS-1	7/29	1210	01A	1 BRASS	SOIL			X	X	X				NORMAL TAT
SS-2		1215	02A											
SS-3		1218	03A											RESULTS TO
SS-4		1223	04A											
SS-5		1225	05A											MIKE BOMBARD
SS-6		1230	06A											ROSEVILLE
SS-7		1235	02A											
SS-8		1250	08A											16:00
OB-1		1323	09A											8-1-94 Cancel all
OB-2		1330	10A											direct analysis
OB-3		1335	11A											per Mike Bombard RB
OB-4		1340	12A											
GW-1		1400	13 15 AB	2 VOA	H2O			X		X				

Cancel

Cancel

RELINQUISHED BY: (Signature)	DATE 7/29/94	TIME 1451	RECEIVED BY: (Signature) Emily Haight	DATE 7/29/94	TIME 1454
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
3001 Douglas Boulevard, Suite 320
Roseville, California 95661
(916) 786-0320

Analytical Laboratory: AEN

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

FORM NO. 86/COC/ARF

MTB

American Environmental Network

Certificate of Analysis

DOHS Certification: 1172 AIHA Accreditation: 11134

LEVINE-FRICKE
3001 DOUGLAS BLVD. STE 320
ROSEVILLE, CA 95661

ATTN: MICHAEL BOMBARD
CLIENT PROJ. ID: 3186.94-08
CLIENT PROJ. NAME: SCARLET CT.
C.O.C. NUMBER: 013330

REPORT DATE: 02/21/95

DATE(S) SAMPLED: 01/30/95

DATE RECEIVED: 01/31/95

AEN WORK ORDER: 9501366

PROJECT SUMMARY:

On January 31, 1995, this laboratory received 25 soil sample(s).

Client requested 22 samples be analyzed for organic parameters; three samples were placed on hold. Results of analysis are summarized on the following pages. Please see quality control report for a summary of QC data pertaining to this project.

Samples will be stored for 30 days after completion of analysis, then disposed of in accordance with State and Federal regulations. Samples may be archived by prior arrangement.

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

Larry Klein
Laboratory Director

LEVINE-FRICKE

SAMPLE ID: SS-1
AEN LAB NO: 9501366-01
AEN WORK ORDER: 9501366
CLIENT PROJ. ID: 3186.94-08

DATE SAMPLED: 01/30/95
DATE RECEIVED: 01/31/95
REPORT DATE: 02/21/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	02/07/95
Toluene	108-88-3	ND	5	ug/kg	02/07/95
Ethylbenzene	100-41-4	ND	5	ug/kg	02/07/95
Xylenes, Total	1330-20-7	ND	5	ug/kg	02/07/95
Purgeable HCs as Gasoline	5030/GCFID	0.7 *	0.2	mg/kg	02/07/95
#Extraction for TPH	EPA 3550	-		Extrn Date	02/03/95
TPH as Diesel	GC-FID	92 *	1	mg/kg	02/06/95

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: SS-3
AEN LAB NO: 9501366-02
AEN WORK ORDER: 9501366
CLIENT PROJ. ID: 3186.94-08

DATE SAMPLED: 01/30/95
DATE RECEIVED: 01/31/95
REPORT DATE: 02/21/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	02/07/95
Toluene	108-88-3	13 *	5	ug/kg	02/07/95
Ethylbenzene	100-41-4	ND	5	ug/kg	02/07/95
Xylenes, Total	1330-20-7	5 *	5	ug/kg	02/07/95
Purgeable HCs as Gasoline	5030/GCFID	5.2 *	0.2	mg/kg	02/07/95
#Extraction for TPH	EPA 3550	-		Extrn Date	02/03/95
TPH as Diesel	GC-FID	54 *	1	mg/kg	02/06/95

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: SS-4
AEN LAB NO: 9501366-03
AEN WORK ORDER: 9501366
CLIENT PROJ. ID: 3186.94-08

DATE SAMPLED: 01/30/95
DATE RECEIVED: 01/31/95
REPORT DATE: 02/21/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	02/07/95
Toluene	108-88-3	ND	5	ug/kg	02/07/95
Ethylbenzene	100-41-4	ND	5	ug/kg	02/07/95
Xylenes, Total	1330-20-7	ND	5	ug/kg	02/07/95
Purgeable HCs as Gasoline	5030/GCFID	0.6 *	0.2	mg/kg	02/07/95
#Extraction for TPH	EPA 3550	-		Extrn Date	02/03/95
TPH as Diesel	GC-FID	100 *	1	mg/kg	02/06/95

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: SS-6
AEN LAB NO: 9501366-04
AEN WORK ORDER: 9501366
CLIENT PROJ. ID: 3186.94-08

DATE SAMPLED: 01/30/95
DATE RECEIVED: 01/31/95
REPORT DATE: 02/21/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	30	ug/kg	02/07/95
Toluene	108-88-3	ND	30	ug/kg	02/07/95
Ethylbenzene	100-41-4	ND	30	ug/kg	02/07/95
Xylenes, Total	1330-20-7	ND	30	ug/kg	02/07/95
Purgeable HCs as Gasoline	5030/GCFID	2.2 *	1	mg/kg	02/07/95
#Extraction for TPH	EPA 3550	-		Extrn Date	02/03/95
TPH as Diesel	GC-FID	22 *	1	mg/kg	02/06/95

Reporting limits elevated for gas/BTEX due to matrix interference.

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: SS-8
AEN LAB NO: 9501366-05
AEN WORK ORDER: 9501366
CLIENT PROJ. ID: 3186.94-08

DATE SAMPLED: 01/30/95
DATE RECEIVED: 01/31/95
REPORT DATE: 02/21/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	02/07/95
Toluene	108-88-3	ND	5	ug/kg	02/07/95
Ethylbenzene	100-41-4	ND	5	ug/kg	02/07/95
Xylenes, Total	1330-20-7	ND	5	ug/kg	02/07/95
Purgeable HCs as Gasoline	5030/GCFID	0.9 *	0.2	mg/kg	02/07/95
#Extraction for TPH	EPA 3550	-		Extrn Date	02/03/95
TPH as Diesel	GC-FID	110 *	1	mg/kg	02/06/95

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: SS-9
AEN LAB NO: 9501366-06
AEN WORK ORDER: 9501366
CLIENT PROJ. ID: 3186.94-08

DATE SAMPLED: 01/30/95
DATE RECEIVED: 01/31/95
REPORT DATE: 02/21/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	02/07/95
Toluene	108-88-3	ND	5	ug/kg	02/07/95
Ethylbenzene	100-41-4	ND	5	ug/kg	02/07/95
Xylenes, Total	1330-20-7	ND	5	ug/kg	02/07/95
Purgeable HCs as Gasoline	5030/GCFID	0.5 *	0.2	mg/kg	02/07/95
#Extraction for TPH	EPA 3550	-		Extrn Date	02/03/95
TPH as Diesel	GC-FID	98 *	1	mg/kg	02/06/95

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: SS-10
AEN LAB NO: 9501366-07
AEN WORK ORDER: 9501366
CLIENT PROJ. ID: 3186.94-08

DATE SAMPLED: 01/30/95
DATE RECEIVED: 01/31/95
REPORT DATE: 02/21/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	30	ug/kg	02/07/95
Toluene	108-88-3	ND	30	ug/kg	02/07/95
Ethylbenzene	100-41-4	ND	30	ug/kg	02/07/95
Xylenes, Total	1330-20-7	ND	30	ug/kg	02/07/95
Purgeable HCs as Gasoline	5030/GCFID	2.9 *	1	mg/kg	02/07/95
#Extraction for TPH	EPA 3550	-		Extrn Date	02/03/95
TPH as Diesel	GC-FID	100 *	1	mg/kg	02/06/95

Reporting limits elevated for gas/BTEX due to matrix interference.

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: SS-12
AEN LAB NO: 9501366-08
AEN WORK ORDER: 9501366
CLIENT PROJ. ID: 3186.94-08

DATE SAMPLED: 01/30/95
DATE RECEIVED: 01/31/95
REPORT DATE: 02/21/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	02/07/95
Toluene	108-88-3	7 *	5	ug/kg	02/07/95
Ethylbenzene	100-41-4	ND	5	ug/kg	02/07/95
Xylenes, Total	1330-20-7	7 *	5	ug/kg	02/07/95
Purgeable HCs as Gasoline	5030/GCFID	7.3 *	0.2	mg/kg	02/07/95
#Extraction for TPH	EPA 3550	-		Extrn Date	02/03/95
TPH as Diesel	GC-FID	46 *	1	mg/kg	02/06/95

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: SS-17
AEN LAB NO: 9501366-10
AEN WORK ORDER: 9501366
CLIENT PROJ. ID: 3186.94-08

DATE SAMPLED: 01/30/95
DATE RECEIVED: 01/31/95
REPORT DATE: 02/21/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	30	ug/kg	02/07/95
Toluene	108-88-3	91 *	30	ug/kg	02/07/95
Ethylbenzene	100-41-4	90 *	30	ug/kg	02/07/95
Xylenes, Total	1330-20-7	940 *	30	ug/kg	02/07/95
Purgeable HCs as Gasoline	5030/GCFID	40 *	1	mg/kg	02/07/95
#Extraction for TPH	EPA 3550	-		Extrn Date	02/03/95
TPH as Diesel	GC-FID	41 *	1	mg/kg	02/06/95

Reporting limits elevated for gas/BTEX due to matrix interference.

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: SS-18
AEN LAB NO: 9501366-11
AEN WORK ORDER: 9501366
CLIENT PROJ. ID: 3186.94-08

DATE SAMPLED: 01/30/95
DATE RECEIVED: 01/31/95
REPORT DATE: 02/21/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	10	ug/kg	02/08/95
Toluene	108-88-3	38 *	10	ug/kg	02/08/95
Ethylbenzene	100-41-4	ND	10	ug/kg	02/08/95
Xylenes, Total	1330-20-7	64 *	30	ug/kg	02/08/95
Purgeable HCs as Gasoline	5030/GCFID	47 *	2	mg/kg	02/08/95
#Extraction for TPH	EPA 3550	-		Extrn Date	02/03/95
TPH as Diesel	GC-FID	64 *	1	mg/kg	02/06/95

Reporting limits elevated for gas/BTEX due to high levels of target compounds. Sample run at dilution

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: SS-20
AEN LAB NO: 9501366-12
AEN WORK ORDER: 9501366
CLIENT PROJ. ID: 3186.94-08

DATE SAMPLED: 01/30/95
DATE RECEIVED: 01/31/95
REPORT DATE: 02/21/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	02/08/95
Toluene	108-88-3	ND	5	ug/kg	02/08/95
Ethylbenzene	100-41-4	ND	5	ug/kg	02/08/95
Xylenes, Total	1330-20-7	ND	5	ug/kg	02/08/95
Purgeable HCs as Gasoline	5030/GCFID	3.5 *	0.2	mg/kg	02/08/95
#Extraction for TPH	EPA 3550	-		Extrn Date	02/03/95
TPH as Diesel	GC-FID	59 *	1	mg/kg	02/06/95

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: SS-23
AEN LAB NO: 9501366-14
AEN WORK ORDER: 9501366
CLIENT PROJ. ID: 3186.94-08

DATE SAMPLED: 01/30/95
DATE RECEIVED: 01/31/95
REPORT DATE: 02/21/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	02/08/95
Toluene	108-88-3	ND	5	ug/kg	02/08/95
Ethylbenzene	100-41-4	ND	5	ug/kg	02/08/95
Xylenes, Total	1330-20-7	ND	5	ug/kg	02/08/95
Purgeable HCs as Gasoline	5030/GCFID	1.7 *	0.2	mg/kg	02/08/95
#Extraction for TPH	EPA 3550	-		Extrn Date	02/03/95
TPH as Diesel	GC-FID	45 *	1	mg/kg	02/06/95

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: SS-26
AEN LAB NO: 9501366-15
AEN WORK ORDER: 9501366
CLIENT PROJ. ID: 3186.94-08

DATE SAMPLED: 01/30/95
DATE RECEIVED: 01/31/95
REPORT DATE: 02/21/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	710 *	100	ug/kg	02/08/95
Toluene	108-88-3	1,900 *	100	ug/kg	02/08/95
Ethylbenzene	100-41-4	3,500 *	100	ug/kg	02/08/95
Xylenes, Total	1330-20-7	14,000 *	300	ug/kg	02/08/95
Purgeable HCs as Gasoline	5030/GCFID	290 *	20	mg/kg	02/08/95
#Extraction for TPH	EPA 3550	-		Extrn Date	02/03/95
TPH as Diesel	GC-FID	83 *	1	mg/kg	02/06/95

Reporting limits elevated for gas/BTEX due to high levels of target compounds. Sample run at dilution

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: SS-27
AEN LAB NO: 9501366-16
AEN WORK ORDER: 9501366
CLIENT PROJ. ID: 3186.94-08

DATE SAMPLED: 01/30/95
DATE RECEIVED: 01/31/95
REPORT DATE: 02/21/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	50	ug/kg	02/08/95
Toluene	108-88-3	1,100 *	50	ug/kg	02/08/95
Ethylbenzene	100-41-4	450 *	50	ug/kg	02/08/95
Xylenes, Total	1330-20-7	2,700 *	200	ug/kg	02/08/95
Purgeable HCs as Gasoline	5030/GCFID	440 *	10	mg/kg	02/08/95
#Extraction for TPH	EPA 3550	-		Extrn Date	02/03/95
TPH as Diesel	GC-FID	84 *	1	mg/kg	02/06/95

Reporting limits elevated for gas/BTEX due to high levels of target compounds. Sample run at dilution

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: SS-29
AEN LAB NO: 9501366-17
AEN WORK ORDER: 9501366
CLIENT PROJ. ID: 3186.94-08

DATE SAMPLED: 01/30/95
DATE RECEIVED: 01/31/95
REPORT DATE: 02/21/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	02/08/95
Toluene	108-88-3	ND	5	ug/kg	02/08/95
Ethylbenzene	100-41-4	ND	5	ug/kg	02/08/95
Xylenes, Total	1330-20-7	ND	5	ug/kg	02/08/95
Purgeable HCs as Gasoline	5030/GCFID	4.2 *	0.2	mg/kg	02/08/95
#Extraction for TPH	EPA 3550	-		Extrn Date	02/05/95
TPH as Diesel	GC-FID	71 *	1	mg/kg	02/06/95

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: SS-31
AEN LAB NO: 9501366-18
AEN WORK ORDER: 9501366
CLIENT PROJ. ID: 3186.94-08

DATE SAMPLED: 01/30/95
DATE RECEIVED: 01/31/95
REPORT DATE: 02/21/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	10	ug/kg	02/08/95
Toluene	108-88-3	140 *	10	ug/kg	02/08/95
Ethylbenzene	100-41-4	ND	10	ug/kg	02/08/95
Xylenes, Total	1330-20-7	91 *	30	ug/kg	02/08/95
Purgeable HCs as Gasoline	5030/GCFID	56 *	2	mg/kg	02/08/95
#Extraction for TPH	EPA 3550	-		Extrn Date	02/05/95
TPH as Diesel	GC-FID	100 *	1	mg/kg	02/06/95

Reporting limits elevated for gas/BTEX due to high levels of target compounds. Sample run at dilution

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: SS-32
AEN LAB NO: 9501366-19
AEN WORK ORDER: 9501366
CLIENT PROJ. ID: 3186.94-08

DATE SAMPLED: 01/30/95
DATE RECEIVED: 01/31/95
REPORT DATE: 02/21/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	02/08/95
Toluene	108-88-3	ND	5	ug/kg	02/08/95
Ethylbenzene	100-41-4	ND	5	ug/kg	02/08/95
Xylenes, Total	1330-20-7	ND	5	ug/kg	02/08/95
Purgeable HCs as Gasoline	5030/GCFID	0.5 *	0.2	mg/kg	02/08/95
#Extraction for TPH	EPA 3550	-		Extrn Date	02/05/95
TPH as Diesel	GC-FID	59 *	1	mg/kg	02/06/95

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: SS-33
AEN LAB NO: 9501366-20
AEN WORK ORDER: 9501366
CLIENT PROJ. ID: 3186.94-08

DATE SAMPLED: 01/30/95
DATE RECEIVED: 01/31/95
REPORT DATE: 02/21/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	02/08/95
Toluene	108-88-3	ND	5	ug/kg	02/08/95
Ethylbenzene	100-41-4	ND	5	ug/kg	02/08/95
Xylenes, Total	1330-20-7	50 *	5	ug/kg	02/09/95
Purgeable HCs as Gasoline	5030/GCFID	19 *	0.2	mg/kg	02/09/95
#Extraction for TPH	EPA 3550	-		Extrn Date	02/05/95
TPH as Diesel	GC-FID	58 *	1	mg/kg	02/06/95

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: SS-37
AEN LAB NO: 9501366-21
AEN WORK ORDER: 9501366
CLIENT PROJ. ID: 3186.94-08

DATE SAMPLED: 01/30/95
DATE RECEIVED: 01/31/95
REPORT DATE: 02/21/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	02/08/95
Toluene	108-88-3	ND	5	ug/kg	02/08/95
Ethylbenzene	100-41-4	ND	5	ug/kg	02/08/95
Xylenes, Total	1330-20-7	ND	5	ug/kg	02/08/95
Purgeable HCs as Gasoline	5030/GCFID	3.7 *	0.2	mg/kg	02/08/95
#Extraction for TPH	EPA 3550	-		Extrn Date	02/05/95
TPH as Diesel	GC-FID	74 *	1	mg/kg	02/06/95

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: SS-38
AEN LAB NO: 9501366-22
AEN WORK ORDER: 9501366
CLIENT PROJ. ID: 3186.94-08

DATE SAMPLED: 01/30/95
DATE RECEIVED: 01/31/95
REPORT DATE: 02/21/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	02/08/95
Toluene	108-88-3	ND	5	ug/kg	02/08/95
Ethylbenzene	100-41-4	ND	5	ug/kg	02/08/95
Xylenes, Total	1330-20-7	ND	5	ug/kg	02/08/95
Purgeable HCs as Gasoline	5030/GCFID	2.2 *	0.2	mg/kg	02/08/95
#Extraction for TPH	EPA 3550	-		Extrn Date	02/05/95
TPH as Diesel	GC-FID	29 *	1	mg/kg	02/06/95

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: SS-40
AEN LAB NO: 9501366-23
AEN WORK ORDER: 9501366
CLIENT PROJ. ID: 3186.94-08

DATE SAMPLED: 01/30/95
DATE RECEIVED: 01/31/95
REPORT DATE: 02/21/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	02/08/95
Toluene	108-88-3	ND	5	ug/kg	02/08/95
Ethylbenzene	100-41-4	ND	5	ug/kg	02/08/95
Xylenes, Total	1330-20-7	ND	5	ug/kg	02/08/95
Purgeable HCs as Gasoline	5030/GCFID	3.5 *	0.2	mg/kg	02/08/95
#Extraction for TPH	EPA 3550	-		Extrn Date	02/05/95
TPH as Diesel	GC-FID	210 *	1	mg/kg	02/06/95

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: SS-42
AEN LAB NO: 9501366-24
AEN WORK ORDER: 9501366
CLIENT PROJ. ID: 3186.94-08

DATE SAMPLED: 01/30/95
DATE RECEIVED: 01/31/95
REPORT DATE: 02/21/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	02/09/95
Toluene	108-88-3	ND	5	ug/kg	02/09/95
Ethylbenzene	100-41-4	ND	5	ug/kg	02/09/95
Xylenes, Total	1330-20-7	ND	20	ug/kg	02/09/95
Purgeable HCs as Gasoline	5030/GCFID	0.8 *	1	mg/kg	02/09/95
#Extraction for TPH	EPA 3550	-		Extrn Date	02/05/95
TPH as Diesel	GC-FID	74 *	1	mg/kg	02/06/95

Reporting limits elevated for gas/BTEX due to matrix interference.

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

AEN (CALIFORNIA)
QUALITY CONTROL REPORT

AEN JOB NUMBER: 9501366

CLIENT PROJECT ID: 3186.94-08

Quality Control Summary

All laboratory quality control parameters were found to be within established limits.

Definitions

Laboratory Control Sample (LCS)/Method Spike(s): Control samples of known composition. LCS and Method Spike data are used to validate batch analytical results.

Matrix Spike(s): Aliquot of a sample (aqueous or solid) with added quantities of specific compounds and subjected to the entire analytical procedure. Matrix spike and matrix spike duplicate QC data are advisory.

Method Blank: An analytical control consisting of all reagents, internal standards, and surrogate standards carried through the entire analytical process. Used to monitor laboratory background and reagent contamination.

Not Detected (ND): Not detected at or above the reporting limit.

Relative Percent Difference (RPD): An indication of method precision based on duplicate analysis.

Reporting Limit (RL): The lowest concentration routinely determined during laboratory operations. The RL is generally 1 to 10 times the Method Detection Limit (MDL). Reporting limits are matrix, method, and analyte dependent and take into account any dilutions performed as part of the analysis.

Surrogates: Organic compounds which are similar to analytes of interest in chemical behavior, but are not found in environmental samples. Surrogates are added to all blanks, calibration and check standards, samples, and spiked samples. Surrogate recovery is monitored as an indication of acceptable sample preparation and instrumental performance.

D: *Surrogates diluted out.*

#: Indicates result outside of established laboratory QC limits.

QUALITY CONTROL DATA

METHOD: EPA 3550 GCFID

AEN JOB NO: 9501366
AEN LAB NO: 0203-BLANK
DATE EXTRACTED: 02/03/95
DATE ANALYZED: 02/06/95
INSTRUMENT: C
MATRIX: SOIL

Method Blank

	Result (mg/kg)	Reporting Limit (mg/kg)
Diesel	ND	1

AEN LAB NO: 0205-BLANK
DATE EXTRACTED: 02/05/95
DATE ANALYZED: 02/06/95
INSTRUMENT: C
MATRIX: SOIL

Method Blank

	Result (mg/kg)	Reporting Limit (mg/kg)
Diesel	ND	1

QUALITY CONTROL DATA

METHOD: EPA 3550 GCFID

AEN JOB NO: 9501366
DATE(S) EXTRACTED: 02/03/95; 02/05/95
INSTRUMENT: C
MATRIX: SOIL

Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Percent Recovery n-Pentacosane
02/06/95	SS-1	01	98
02/06/95	SS-3	02	93
02/06/95	SS-4	03	91
02/06/95	SS-6	04	92
02/06/95	SS-8	05	97
02/06/95	SS-9	06	96
02/06/95	SS-10	07	92
02/06/95	SS-12	08	91
02/06/95	SS-17	10	92
02/06/95	SS-18	11	93
02/06/95	SS-20	12	91
02/06/95	SS-23	14	91
02/06/95	SS-26	15	94
02/06/95	SS-27	16	91
02/06/95	SS-29	17	97
02/06/95	SS-31	18	92
02/06/95	SS-32	19	90
02/06/95	SS-33	20	94
02/06/95	SS-37	21	89
02/06/95	SS-38	22	90
02/06/95	SS-40	23	83
02/06/95	SS-42	24	89
QC Limits:			45-120

QUALITY CONTROL DATA

METHOD: EPA 3550 GCFID

AEN JOB NO: 9501366
DATE EXTRACTED: 02/03/95
DATE ANALYZED: 02/06/95
SAMPLE SPIKED: 9501366-03
INSTRUMENT: C

Matrix Spike Recovery Summary

Analyte	Spike Added (mg/kg)	Average Percent Recovery	RPD	QC Limits Percent Recovery	QC Limits RPD
Diesel	33.5	50	6	44-108	13

QUALITY CONTROL DATA

METHOD: EPA 8020, 5030 GCFID

AEN JOB NO: 9501366
AEN LAB NO: 0207-BLANK
DATE ANALYZED: 02/07/95
MATRIX: SOIL

Method Blank

	CAS #	Result (ug/kg)	Reporting Limit (ug/kg)
Benzene	71-43-2	ND	5
Toluene	108-88-3	ND	5
Ethylbenzene	100-41-4	ND	5
Xylenes, Total	1330-20-7	ND	5
HCs as Gasoline		ND mg/kg	0.2 mg/kg

AEN LAB NO: 0208-BLANK
DATE ANALYZED: 02/08/95

Method Blank

	CAS #	Result (ug/kg)	Reporting Limit (ug/kg)
Benzene	71-43-2	ND	5
Toluene	108-88-3	ND	5
Ethylbenzene	100-41-4	ND	5
Xylenes, Total	1330-20-7	ND	5
HCs as Gasoline		ND mg/kg	0.2 mg/kg

AEN LAB NO: 0209-BLANK
DATE ANALYZED: 02/09/95

Method Blank

	CAS #	Result (ug/kg)	Reporting Limit (ug/kg)
Benzene	71-43-2	ND	5
Toluene	108-88-3	ND	5
Ethylbenzene	100-41-4	ND	5
Xylenes, Total	1330-20-7	ND	5
HCs as Gasoline		ND mg/kg	0.2 mg/kg

QUALITY CONTROL DATA

METHOD: EPA 8020, 5030 GCFID

AEN JOB NO: 9501366
INSTRUMENT: E.H
MATRIX: SOIL

Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Percent Recovery Fluorobenzene
02/07/95	SS-1	01	105
02/07/95	SS-3	02	106
02/07/95	SS-4	03	105
02/07/95	SS-6	04	101
02/07/95	SS-8	05	107
02/07/95	SS-9	06	106
02/07/95	SS-10	07	103
02/07/95	SS-12	08	104
02/07/95	SS-17	10	107
02/08/95	SS-18	11	98
02/08/95	SS-20	12	108
02/08/95	SS-23	14	108
02/08/95	SS-26	15	103
02/08/95	SS-27	16	96
02/08/95	SS-29	17	99
02/08/95	SS-31	18	97
02/08/95	SS-32	19	102
02/08/95	SS-33	20	104
02/08/95	SS-37	21	102
02/08/95	SS-38	22	103
02/08/95	SS-40	23	103
02/09/95	SS-42	24	103
QC Limits:			92-110

QUALITY CONTROL DATA

METHOD: EPA 8020, 5030 GCFID

AEN JOB NO: 9501366
DATE ANALYZED: 02/08/95
SAMPLE SPIKED: LCS
INSTRUMENT: E

Laboratory Control Sample

Analyte	Spike Added (ug/kg)	Percent Recovery	QC Limits Percent Recovery
Benzene	35.5	95	63-117
Toluene	100.9	96	67-114
Hydrocarbons as Gasoline	1000	98	63-120

*** END OF REPORT ***

R-S,S-H

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

9501366

Project No.: 3186.94.08	Field Logbook No.:	Date: 1/30/95	Serial No.: № 013330
Project Name: 6055 Scarlet Ct	Project Location: Dublin		
Sampler (Signature): [signature]			Samplers: [initials]

SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	EPA 601	EPA 624	TPHg	TPHd	BTEX	HOLD	RUSH	REMARKS
SS-1	1/30/95		01A					X	X	X			Results to Mike
SS-3	↓		02A					↓	↓	↓			Bombard in Roseville
SS-4 RB			03A										(916) 786 0320
~~SS-7~~		(SS-6)	04A										
SS-8			05A										2/1/95 8:45 Per Michael
SS-9			06A										Bombard, correct sample
SS-10			07A										id for AEN 04A is SS-6
SS-12			08A										RB
SS-15			09A								X		
SS-17			10A										
SS-18			11A										
SS-20			12A										
SS-22			13A								X		
SS-23			14A										
SS-26			15A										
SS-27	↓		16A					↓	↓	↓			

RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
[signature] R. Benton	1/30/95	4:30	[signature] Michael E. McMullen	1/31/95	16:00
[signature] Michael E. McMullen	1/31/95	17:25			
			Denise Harrington	1/31/95	1725
METHOD OF SHIPMENT:	DATE	TIME	LAB COMMENTS:		

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

Analytical Laboratory: AEN

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

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

9501366

Project No.: 3186.94.08	Field Logbook No.:	Date: 1/30/95	Serial No.: № 013262
Project Name: 6085 Scarlett Ct	Project Location: Dublin		
Sampler (Signature):			Samplers: RWB

SAMPLES						ANALYSES						
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 601	EPA 624	TPHg	TPHd	BTEX	HOLD	RUSH
SS-29	1/30/95		17A					X	X	X		
SS-31	↓		18A					↓	↓	↓		
SS-32			19A									
SS-33			20A									
SS-37			21A									
SS-38			22A									
SS-40			23A									
SS-42			24A									
SS-47	✓		25A					↓	↓	↓	X	

REMARKS: Results on Mike Bombard in Roseville (916) 7860320

RELINQUISHED BY: (Signature)	DATE 1/30/95	TIME 4:30	RECEIVED BY: (Signature)	DATE 1/31/95	TIME 16:00
RELINQUISHED BY: (Signature)	DATE 1/31/95	TIME 17:25	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature) Denise Harrington	DATE 1/31/95	TIME 1725
METHOD OF SHIPMENT:	DATE	TIME	LAB COMMENTS:		

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

Analytical Laboratory:
AEN

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

FORM NO. 86/COC/ARF

MJB

American Environmental Network

Certificate of Analysis

DOHS Certification: 1172 AIHA Accreditation: 11134

LEVINE-FRICKE
3001 DOUGLAS BLVD. STE 320
ROSEVILLE, CA 95661

ATTN: MIKE BOMBARD
CLIENT PROJ. ID: 3186.95.06
CLIENT PROJ. NAME: SCARLETT CT.
C.O.C. NUMBER: 013264

REPORT DATE: 02/14/95
DATE(S) SAMPLED: 02/01/95
DATE RECEIVED: 02/01/95
AEN WORK ORDER: 9502012

PROJECT SUMMARY:

On February 1, 1995, this laboratory received 1 water sample(s).

Client requested sample(s) be analyzed for organic parameters. Results of analysis are summarized on the following page(s). Please see quality control report for a summary of QC data pertaining to this project.

Samples will be stored for 30 days after completion of analysis, then disposed of in accordance with State and Federal regulations. Samples may be archived by prior arrangement.

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

Larry Klein
Laboratory Director

LEVINE-FRICKE

SAMPLE ID: MW1R
AEN LAB NO: 9502012-01
AEN WORK ORDER: 9502012
CLIENT PROJ. ID: 3186.95.06

DATE SAMPLED: 02/01/95
DATE RECEIVED: 02/01/95
REPORT DATE: 02/14/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	12 *	0.5	ug/L	02/08/95
Toluene	108-88-3	ND	0.5	ug/L	02/08/95
Ethylbenzene	100-41-4	4 *	0.5	ug/L	02/08/95
Xylenes, Total	1330-20-7	ND	2	ug/L	02/08/95
Purgeable HCs as Gasoline	5030/GCFID	2.4 *	0.05	mg/L	02/09/95
#Extraction for TPH	EPA 3510	-		Extrn Date	02/06/95
TPH as Diesel	GC-FID	0.2 *	0.05	mg/L	02/07/95

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

AEN (CALIFORNIA)
QUALITY CONTROL REPORT

AEN JOB NUMBER: 9502012

CLIENT PROJECT ID: 3186.95.06

Quality Control Summary

All laboratory quality control parameters were found to be within established limits.

Definitions

Laboratory Control Sample (LCS)/Method Spike(s): Control samples of known composition. LCS and Method Spike data are used to validate batch analytical results.

Matrix Spike(s): Aliquot of a sample (aqueous or solid) with added quantities of specific compounds and subjected to the entire analytical procedure. Matrix spike and matrix spike duplicate QC data are advisory.

Method Blank: An analytical control consisting of all reagents, internal standards, and surrogate standards carried through the entire analytical process. Used to monitor laboratory background and reagent contamination.

Not Detected (ND): Not detected at or above the reporting limit.

Relative Percent Difference (RPD): An indication of method precision based on duplicate analysis.

Reporting Limit (RL): The lowest concentration routinely determined during laboratory operations. The RL is generally 1 to 10 times the Method Detection Limit (MDL). Reporting limits are matrix, method, and analyte dependent and take into account any dilutions performed as part of the analysis.

Surrogates: Organic compounds which are similar to analytes of interest in chemical behavior, but are not found in environmental samples. Surrogates are added to all blanks, calibration and check standards, samples, and spiked samples. Surrogate recovery is monitored as an indication of acceptable sample preparation and instrumental performance.

D: Surrogates diluted out.

#: Indicates result outside of established laboratory QC limits.

QUALITY CONTROL DATA

METHOD: EPA 3510 GCFID

AEN JOB NO: 9502012
DATE EXTRACTED: 02/06/95
INSTRUMENT: C
MATRIX: WATER

Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Percent Recovery n-Pentacosane
02/07/95	MW1R	01	93
QC Limits:			30-120

DATE EXTRACTED: 02/03/95
DATE ANALYZED: 02/04/95
SAMPLE SPIKED: DI WATER
INSTRUMENT: C

Method Spike Recovery Summary

Analyte	Spike Added (mg/L)	Average Percent Recovery	RPD	QC Limits Percent Recovery	QC Limits RPD
Diesel	1.67	93	5	65-103	12

AEN LAB NO: 0206-BLANK
DATE EXTRACTED: 02/06/95
DATE ANALYZED: 02/07/95

Method Blank

	Result (mg/L)	Reporting Limit (mg/L)
Diesel	ND	0.05

QUALITY CONTROL DATA

METHOD: EPA 8020, 5030 GCFID

AEN JOB NO: 9502012
AEN LAB NO: 0208-BLANK
DATE ANALYZED: 02/08/95
MATRIX: WATER

Method Blank

	CAS #	Result (ug/L)	Reporting Limit (ug/L)
Benzene	71-43-2	ND	0.5
Toluene	108-88-3	ND	0.5
Ethylbenzene	100-41-4	ND	0.5
Xylenes, Total	1330-20-7	ND	2
HCs as Gasoline		ND mg/L	0.05 mg/L

QUALITY CONTROL DATA

METHOD: EPA 8020, 5030 GCFID

AEN JOB NO: 9502012
INSTRUMENT: H
MATRIX: WATER

Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Percent Recovery Fluorobenzene
02/08/95	MW1R	01	106
QC Limits:			92-109

DATE ANALYZED: 02/08/95
SAMPLE SPIKED: 9502055-01
INSTRUMENT: H

Matrix Spike Recovery Summary

Analyte	Spike Added (ug/L)	Average Percent Recovery	RPD	QC Limits Percent Recovery	QC Limits RPD
Benzene	18.2	105	14	85-109	17
Toluene	52.8	104	13	87-111	16
Hydrocarbons as Gasoline	500	102	10	66-117	19

*** END OF REPORT ***

R-1, S-F
R-3, S-2

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

9502012

Project No.: 3186.95.06	Field Logbook No.:	Date: 2/1/95	Serial No.: № 013264
Project Name: Eagle #1	Project Location: Dublin		
Sampler (Signature): [signature]			

SAMPLES						ANALYSES								Samplers: RWB
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 601	EPA 624	TPHg	TPHd	B/E		HOLD	RUSH	REMARKS
MW1R	2/1/95	9:15	01A - E	5	H2O			X	X	X				Results to Mike Bonbard at Roseville office (916) 786-0320

RELINQUISHED BY: (Signature) [signature]	DATE 2/1/95	TIME 12:00	RECEIVED BY: (Signature) [signature]	DATE 2/1/95	TIME 16:45
RELINQUISHED BY: (Signature) [signature]	DATE 2/1/95	TIME 17:30	RECEIVED BY: (Signature) Lisa L. Pruitt	DATE 2-1-95	TIME 17:30
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

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FORM NO. 86/COC/ARF

3186.95 MJB

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
1900 Bates Avenue, Suite L, Concord, CA 94520, (510) 686-9600, FAX (510) 686-9689
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

American Environmental Net.
440 Vincent Road
Pleasant Hill, CA 94523

Attention: Denise Harrington

Client Proj. ID: 9501309

Lab Proj. ID: 9501I16

Sampled: 01/25/95
Received: 01/31/95
Analyzed: see below

Reported: 02/10/95

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9501I16-01				
Sample Desc : SOLID,GP-1-7				
Organic Carbon : Total	mg/Kg	02/06/95	100	1800
Lab No: 9501I16-02				
Sample Desc : SOLID,GP-3-7				
Organic Carbon : Total	mg/Kg	02/06/95	100	1600
Lab No: 9501I16-03				
Sample Desc : SOLID,GP-4-7				
Organic Carbon : Total	mg/Kg	02/06/95	100	2100

Analytes reported as N D were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Mark Cargasacchi
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
1900 Bates Avenue, Suite L, Concord, CA 94520, (510) 686-9600, FAX (510) 686-9689
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

American Environmental Network
3440 Vincent Road
Pleasant Hill, CA 94523
Attention: Denise Harrington

Client Project ID: 9501309
Matrix: Solid
Work Order #: 9501116 -01-03
Reported: Feb 13, 1995

QUALITY CONTROL DATA REPORT

Analyte:	Total Organic Carbon
QC Batch#:	IN0206959060TCA
Analy. Method:	EPA 9060
Prep. Method:	N/A

Analyst:	K. Hynes
MS/MSD #:	950110601
Sample Conc.:	1800
Prepared Date:	2/6/95
Analyzed Date:	2/6/95
Instrument I.D.#:	INTOC1
Conc. Spiked:	5000 mg/Kg
Result:	6600
MS % Recovery:	96
Dup. Result:	6500
MSD % Recov.:	94
RPD:	1.5
RPD Limit:	0-40

LCS #:	-
Prepared Date:	-
Analyzed Date:	-
Instrument I.D.#:	-
Conc. Spiked:	-
LCS Result:	-
LCS % Recov.:	-

MS/MSD LCS Control Limits	60-140

SEQUOIA ANALYTICAL

Mark J. Cargasacchi
Project Manager

Please Note:
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

[redacted] Client [redacted] A[redacted]
Address:
Contact DENISE HARRINGTON
Alt. Contact:

American Environmental Network
3440 Vincent Road, Pleasant Hill, CA 94523
Phone (510) 930-9000
FAX (510) 930-0256

REQUEST FOR ANALYSIS / CHAIN OF CUSTODY

Lab Job Number:
Lab Destination: SEQUOIA
Date Samples Shipped:
Lab Contact: MARK CARGASACCHI
Date Results Required: STANDARD
Date Report Required: ↓
Client Phone No.:
Client FAX No.:

Address Report To:
2. ditto

Send Invoice To:
3. ditto

Send Report To: 1 or 2 (Circle one)

Client P.O. No.: —— Client Project I.D. No.: 9501309

Sample Team Member (s)

9501116

Lab Number	Client Sample Identification	Air Volume	Date/ Time Collected	Sample Type*	Pres.	No. of Cont.	Type of Cont.	ANALYSIS: TOC (9060)	Comments / Hazards
	GP-1-7		1/25/95	S	COLD	1	GLASS	X	
	GP-3-7		↓	↓	↓	↓	↓	X	
	GP-4-7		↓	↓	↓	↓	↓	X	

Relinquished by: (Signature) [signature]	DATE 1-31-95	TIME 0850	Received by: (Signature) [signature] DATE 1-31-95 TIME 0850
Relinquished by: (Signature) [signature]	DATE 1-31-95	TIME 1240	Received by: (Signature) DATE TIME
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature) [signature] DATE 1-31-95 TIME 1240
Method of Shipment			Lab Comments

*Sample type (Specify): 1) 37mm 0.8 µm MCEF 2) 25mm 0.8 µm MCEF 3) 25mm 0.4 µm polycarb. filter
4) PVC filter, diam. __ , pore size ____ 5) Charcoal tube 6) Silica gel tube 7) Water 8) Soil 9) Bulk Sample
10) Other _____ 11) Other _____

COPIES: WHITE - JOB FILE YELLOW - PROJECT FILE PINK - CLIENT

K-3, S-1
R-1, S-F
R-5, S-L

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

9501309

Project No.: 3186.95-08	Field Logbook No.:	Date: 1/27/95	Serial No.: № 0885
Project Name: 6085 SCARLETT COURT	Project Location: DUBLIN, CA		
Sampler (Signature): [signature]			Samplers: MJB

SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	TPH-G EPA 8015	TPH-D EPA 8015	BTEX	GEOTECH ANALYSIS (A)			HOLD	RUSH	REMARKS
GP-1-5	1/25/95		01A	1	SOIL							X		NORMAL TAT
GP-1-7	↓		02A	↓	↓				X					
GP-1-10			03A			X	X	X						* HOT SAMPLE!
GP-1-15			04A									X		
GP-1-20			05A			X	X	X						
GP-2-5			06A									X		(A) GEOTECHNICAL ANALYSIS:
GP-2-10			07A									X		BULK DENSITY
GP-2-15*			08A			X	X	X						TOTAL ORGANIC CARBON
GP-2-20*			09A			X	X	X						MOISTURE CONTENT
GP-3-5			10A									X		~~* INTRINSIC PERMEABILITY~~ DSH
GP-3-7		@1215	11A						X					
GP-3-10			12A			X	X	X						
GP-3-15		@1232	13A									X		*Sleeve size too narrow for
~~GP-3-20~~														permeability analysis per
GP-~~2~~3-7			14A									X		subcontract lab. — 1/30/95 —
GP-4-5	↓	@1030	15A	↓	↓							X		DSH

RELINQUISHED BY: (Signature) [signature]	DATE 1/27/95	TIME 1030	RECEIVED BY: (Signature) [signature]	DATE 1/27	TIME 1030
RELINQUISHED BY: (Signature) [signature]	DATE 1/27	TIME 1200	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature) Denise Harrington	DATE 1/27/95	TIME 1230
METHOD OF SHIPMENT: COURIER	DATE 1/27/95	TIME	LAB COMMENTS:		

Sample Collector: LEVINE-FRICKE
3001 Douglas Boulevard, Suite 320
Roseville, California 95661
(916) 786-0320

Analytical Laboratory: AEN
(510) 930-9090

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

FORM NO. 86/COC/ARF

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

9501309

Project No.: 3186.95-08
Field Logbook No.:
Date: 1/27/95
Serial No.: № 0886

Project Name: 6085 Scarlett Court
Project Location: Dublin, CA

Sampler (Signature): [signature]

Samplers: MJB

SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	TPH G EPA 8015	TPH D EPA 8015	BTEX	GEOTECH ANALYSIS (A)			HOLD	RUSH	REMARKS
GP-4-7	1/25/95		16A	1	SOIL				X					NORMAL TAT
GP-4-10	↓		17A	↓	↓							*		
GP-4-15	@1359		18A			X	X	X						
GP-4-20			19A			X	X	X						* HOT SAMPLE!
GP-1			21A-C	3	H2O	X	X	X						
GP-2 *	↓		22A-C	3	H2O	X	X	X						
GP-3-14 (~~GP-1-14~~)	1/25/95 @1355		20A	1	SOIL	X	X	X						

REMARKS:
(A) GEOTECHNICAL ANALYSIS:
BULK DENSITY
TOTAL ORGANIC CARBON
MOISTURE CONTENT
~~INTRINSIC PERMEABILITY~~ DSH
see COC #0885

* 1/30 per client - sample GP-4-10 on Hold; sample GP-1-14 to be called GP-3-14 as per COC. - DSH

RELINQUISHED BY: (Signature) [signature]	DATE 1/27/95	TIME 1030	RECEIVED BY: (Signature) [signature]	DATE 1/27	TIME 1030
RELINQUISHED BY: (Signature) [signature]	DATE 1/27	TIME 1230	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature) Denise Harrington	DATE 1/27/95	TIME 1230
METHOD OF SHIPMENT: COURIER	DATE 1/27/95	TIME	LAB COMMENTS:		

Sample Collector: LEVINE-FRICKE
3001 Douglas Boulevard, Suite 320
Roseville, California 95661
(916) 786-0320

Analytical Laboratory: AEN
(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: 11134

FEB 15

LEVINE-FRICKE
3001 DOUGLAS BLVD. STE 320
ROSEVILLE, CA 95661

ATTN: MICHAEL BOMBARD
CLIENT PROJ. ID: 3186.95-08
CLIENT PROJ. NAME: SCARLETT CT.
C.O.C. NUMBER: 0885,0886

REPORT DATE: 02/10/95
DATE(S) SAMPLED: 01/25/95
DATE RECEIVED: 01/27/95
AEN WORK ORDER: 9501309

PROJECT SUMMARY:

On January 27, 1995, this laboratory received 22 (2 water and 20 soil) sample(s).

Client requested 13 samples be analyzed for organic parameters; nine samples were placed on hold. Portions for geotechnical analysis were subcontracted to a geotechnical laboratory; report is enclosed. Portions for TOC were subcontracted to a DOHS certified laboratory; report will follow at a later date. Results of analysis are summarized on the following page(s).

Please see quality control report for a summary of QC data pertaining to this project.

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

Larry Klein
Laboratory Director

LEVINE-FRICKE

SAMPLE ID: GP-1-10
AEN LAB NO: 9501309-03
AEN WORK ORDER: 9501309
CLIENT PROJ. ID: 3186.95-08

DATE SAMPLED: 01/25/95
DATE RECEIVED: 01/27/95
REPORT DATE: 02/10/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	02/06/95
Toluene	108-88-3	ND	5	ug/kg	02/06/95
Ethylbenzene	100-41-4	ND	5	ug/kg	02/06/95
Xylenes, Total	1330-20-7	ND	5	ug/kg	02/06/95
Purgeable HCs as Gasoline	5030/GCFID	ND	0.2	mg/kg	02/06/95
#Extraction for TPH	EPA 3550	-		Extrn Date	02/01/95
TPH as Diesel	GC-FID	ND	1	mg/kg	02/02/95

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: GP-1-20
AEN LAB NO: 9501309-05
AEN WORK ORDER: 9501309
CLIENT PROJ. ID: 3186.95-08

DATE SAMPLED: 01/25/95
DATE RECEIVED: 01/27/95
REPORT DATE: 02/10/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	02/06/95
Toluene	108-88-3	ND	5	ug/kg	02/06/95
Ethylbenzene	100-41-4	ND	5	ug/kg	02/06/95
Xylenes, Total	1330-20-7	ND	5	ug/kg	02/06/95
Purgeable HCs as Gasoline	5030/GCFID	ND	0.2	mg/kg	02/06/95
#Extraction for TPH	EPA 3550	-		Extrn Date	02/01/95
TPH as Diesel	GC-FID	ND	1	mg/kg	02/02/95

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: GP-2-15
AEN LAB NO: 9501309-08
AEN WORK ORDER: 9501309
CLIENT PROJ. ID: 3186.95-08

DATE SAMPLED: 01/25/95
DATE RECEIVED: 01/27/95
REPORT DATE: 02/10/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	210 *	5	ug/kg	02/03/95
Toluene	108-88-3	9 *	5	ug/kg	02/03/95
Ethylbenzene	100-41-4	75 *	5	ug/kg	02/03/95
Xylenes, Total	1330-20-7	ND	5	ug/kg	02/03/95
Purgeable HCs as Gasoline	5030/GCFID	6.0 *	0.2	mg/kg	02/03/95
#Extraction for TPH	EPA 3550	-		Extrn Date	02/01/95
TPH as Diesel	GC-FID	17 *	1	mg/kg	02/02/95

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: GP-2-20
AEN LAB NO: 9501309-09
AEN WORK ORDER: 9501309
CLIENT PROJ. ID: 3186.95-08

DATE SAMPLED: 01/25/95
DATE RECEIVED: 01/27/95
REPORT DATE: 02/10/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	300 *	200	ug/kg	02/07/95
Toluene	108-88-3	1,200 *	200	ug/kg	02/07/95
Ethylbenzene	100-41-4	3,400 *	200	ug/kg	02/07/95
Xylenes, Total	1330-20-7	12,000 *	600	ug/kg	02/07/95
Purgeable HCs as Gasoline	5030/GCFID	350 *	8	mg/kg	02/07/95
#Extraction for TPH	EPA 3550	-		Extrn Date	02/01/95
TPH as Diesel	GC-FID	590 *	1	mg/kg	02/07/95

Reporting limits elevated for gas/BTEX due to high levels of target compounds. Sample run at dilution.

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: GP-3-10
AEN LAB NO: 9501309-12
AEN WORK ORDER: 9501309
CLIENT PROJ. ID: 3186.95-08

DATE SAMPLED: 01/25/95
DATE RECEIVED: 01/27/95
REPORT DATE: 02/10/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	02/07/95
Toluene	108-88-3	ND	5	ug/kg	02/07/95
Ethylbenzene	100-41-4	ND	5	ug/kg	02/07/95
Xylenes, Total	1330-20-7	ND	5	ug/kg	02/07/95
Purgeable HCs as Gasoline	5030/GCFID	1.4 *	0.2	mg/kg	02/07/95
#Extraction for TPH	EPA 3550	-		Extrn Date	02/01/95
TPH as Diesel	GC-FID	ND	1	mg/kg	02/03/95

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: GP-4-15
AEN LAB NO: 9501309-18
AEN WORK ORDER: 9501309
CLIENT PROJ. ID: 3186.95-08

DATE SAMPLED: 01/25/95
DATE RECEIVED: 01/27/95
REPORT DATE: 02/10/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	02/03/95
Toluene	108-88-3	ND	5	ug/kg	02/03/95
Ethylbenzene	100-41-4	ND	5	ug/kg	02/03/95
Xylenes, Total	1330-20-7	ND	5	ug/kg	02/03/95
Purgeable HCs as Gasoline	5030/GCFID	ND	0.2	mg/kg	02/03/95
#Extraction for TPH	EPA 3550	-		Extrn Date	02/01/95
TPH as Diesel	GC-FID	ND	1	mg/kg	02/02/95

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: GP-4-20
AEN LAB NO: 9501309-19
AEN WORK ORDER: 9501309
CLIENT PROJ. ID: 3186.95-08

DATE SAMPLED: 01/25/95
DATE RECEIVED: 01/27/95
REPORT DATE: 02/10/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	02/04/95
Toluene	108-88-3	ND	5	ug/kg	02/04/95
Ethylbenzene	100-41-4	ND	5	ug/kg	02/04/95
Xylenes, Total	1330-20-7	ND	5	ug/kg	02/04/95
Purgeable HCs as Gasoline	5030/GCFID	ND	0.2	mg/kg	02/04/95
#Extraction for TPH	EPA 3550	-		Extrn Date	02/01/95
TPH as Diesel	GC-FID	ND	1	mg/kg	02/03/95

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: GP-3-14
AEN LAB NO: 9501309-20
AEN WORK ORDER: 9501309
CLIENT PROJ. ID: 3186.95-08

DATE SAMPLED: 01/25/95
DATE RECEIVED: 01/27/95
REPORT DATE: 02/10/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	6 *	5	ug/kg	02/04/95
Toluene	108-88-3	9 *	5	ug/kg	02/04/95
Ethylbenzene	100-41-4	59 *	5	ug/kg	02/04/95
Xylenes, Total	1330-20-7	190 *	5	ug/kg	02/04/95
Purgeable HCs as Gasoline	5030/GCFID	5.2 *	0.2	mg/kg	02/04/95
#Extraction for TPH	EPA 3550	-		Extrn Date	02/01/95
TPH as Diesel	GC-FID	ND	1	mg/kg	02/03/95

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: GP-1
AEN LAB NO: 9501309-21
AEN WORK ORDER: 9501309
CLIENT PROJ. ID: 3186.95-08

DATE SAMPLED: 01/25/95
DATE RECEIVED: 01/27/95
REPORT DATE: 02/10/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	1 *	0.5	ug/L	01/31/95
Toluene	108-88-3	ND	0.5	ug/L	01/31/95
Ethylbenzene	100-41-4	ND	0.5	ug/L	01/31/95
Xylenes, Total	1330-20-7	ND	2	ug/L	01/31/95
Purgeable HCs as Gasoline	5030/GCFID	0.1 *	0.05	mg/L	01/31/95
#Extraction for TPH	EPA 3510	-		Extrn Date	01/31/95
TPH as Diesel	GC-FID	ND	0.05	mg/L	02/02/95

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: GP-2
AEN LAB NO: 9501309-22
AEN WORK ORDER: 9501309
CLIENT PROJ. ID: 3186.95-08

DATE SAMPLED: 01/25/95
DATE RECEIVED: 01/27/95
REPORT DATE: 02/10/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	4,800 *	50	ug/L	01/31/95
Toluene	108-88-3	2,800 *	50	ug/L	01/31/95
Ethylbenzene	100-41-4	2,200 *	50	ug/L	01/31/95
Xylenes, Total	1330-20-7	5,900 *	200	ug/L	01/31/95
Purgeable HCs as Gasoline	5030/GCFID	52 *	5	mg/L	01/31/95
#Extraction for TPH	EPA 3510	-		Extrn Date	01/31/95
TPH as Diesel	GC-FID	10 *	0.05	mg/L	02/02/95

Reporting limits elevated for gas/BTEX due to high levels of target compounds. Sample run at dilution.

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

AEN (CALIFORNIA)
QUALITY CONTROL REPORT

AEN JOB NUMBER: 9501309

CLIENT PROJECT ID: 3186.95-08

Quality Control Summary

All laboratory quality control parameters were found to be within established limits.

Definitions

Laboratory Control Sample (LCS)/Method Spike(s): Control samples of known composition. LCS and Method Spike data are used to validate batch analytical results.

Matrix Spike(s): Aliquot of a sample (aqueous or solid) with added quantities of specific compounds and subjected to the entire analytical procedure. Matrix spike and matrix spike duplicate QC data are advisory.

Method Blank: An analytical control consisting of all reagents, internal standards, and surrogate standards carried through the entire analytical process. Used to monitor laboratory background and reagent contamination.

Not Detected (ND): Not detected at or above the reporting limit.

Relative Percent Difference (RPD): An indication of method precision based on duplicate analysis.

Reporting Limit (RL): *The lowest concentration routinely determined during laboratory operations.* The RL is generally 1 to 10 times the Method Detection Limit (MDL). Reporting limits are matrix, method, and analyte dependent and take into account any dilutions performed as part of the analysis.

Surrogates: Organic compounds which are similar to analytes of interest in chemical behavior, but are not found in environmental samples. Surrogates are added to all blanks, calibration and check standards, samples, and spiked samples. Surrogate recovery is monitored as an indication of acceptable sample preparation and instrumental performance.

D: Surrogates diluted out.

#: Indicates result outside of established laboratory QC limits.

QUALITY CONTROL DATA

METHOD: EPA 3510 GCFID

AEN JOB NO: 9501309
DATE EXTRACTED: 01/31/95
INSTRUMENT: C
MATRIX: WATER

Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Percent Recovery n-Pentacosane
02/02/95	GP-1	21	98
02/02/95	GP-2	22	96
QC Limits:			30-120

DATE EXTRACTED: 01/29/95
DATE ANALYZED: 01/29/95
SAMPLE SPIKED: DI WATER
INSTRUMENT: C

Method Spike Recovery Summary

Analyte	Spike Added (mg/L)	Average Percent Recovery	RPD	QC Limits Percent Recovery	QC Limits RPD
Diesel	2.09	89	<1	65-103	12

AEN LAB NO: 0131-BLANK
DATE EXTRACTED: 01/31/95
DATE ANALYZED: 02/02/95

Method Blank

	Result (mg/L)	Reporting Limit (mg/L)
Diesel	ND	0.05

QUALITY CONTROL DATA

METHOD: EPA 3550 GCFID

AEN JOB NO: 9501309
AEN LAB NO: 0201-BLANK
DATE EXTRACTED: 02/01/95
DATE ANALYZED: 02/02/95
INSTRUMENT: C
MATRIX: SOIL

Method Blank

	Result (mg/kg)	Reporting Limit (mg/kg)
Diesel	ND	1

QUALITY CONTROL DATA

METHOD: EPA 3550 GCFID

AEN JOB NO: 9501309
DATE EXTRACTED: 02/01/95
INSTRUMENT: C
MATRIX: SOIL

Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Percent Recovery n-Pentacosane
02/02/95	GP-1-10	03	91
02/02/95	GP-1-20	05	91
02/02/95	GP-2-15	08	84
02/07/95	GP-2-20	09	95
02/03/95	GP-3-10	12	90
02/02/95	GP-4-15	18	90
02/03/95	GP-4-20	19	88
02/03/95	GP-3-14	20	61
QC Limits:			45-120

DATE EXTRACTED: 02/01/95
DATE ANALYZED: 02/01/95
SAMPLE SPIKED: 9501307-06
INSTRUMENT: C

Matrix Spike Recovery Summary

Analyte	Spike Added (mg/kg)	Average Percent Recovery	RPD	QC Limits Percent Recovery	QC Limits RPD
Diesel	41.7	76	2	44-108	13

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

QUALITY CONTROL DATA

METHOD: EPA 8020, 5030 GCFID

AEN JOB NO: 9501309
AEN LAB NO: 0131-BLANK
DATE ANALYZED: 01/31/95
MATRIX: WATER

Method Blank

	CAS #	Result (ug/L)	Reporting Limit (ug/L)
Benzene	71-43-2	ND	0.5
Toluene	108-88-3	ND	0.5
Ethylbenzene	100-41-4	ND	0.5
Xylenes, Total	1330-20-7	ND	2
HCs as Gasoline		ND mg/L	0.05 mg/L

QUALITY CONTROL DATA

METHOD: EPA 8020, 5030 GCFID

AEN JOB NO: 9501309
INSTRUMENT: F
MATRIX: WATER

Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Percent Recovery Fluorobenzene
01/31/95	GP-1	21	98
01/31/95	GP-2	22	97
QC Limits:			92-109

DATE ANALYZED: 01/31/95
SAMPLE SPIKED: 9501172-02
INSTRUMENT: F

Matrix Spike Recovery Summary

Analyte	Spike Added (ug/L)	Average Percent Recovery	RPD	QC Limits Percent Recovery	QC Limits RPD
Benzene	17.9	97	4	85-109	17
Toluene	49.9	99	5	87-111	16
Hydrocarbons as Gasoline	500	92	3	66-117	19

QUALITY CONTROL DATA

METHOD: EPA 8020, 5030 GCFID

AEN JOB NO: 9501309
AEN LAB NO: 0203-BLANK
DATE ANALYZED: 02/03/95
MATRIX: SOIL

Method Blank

	CAS #	Result (ug/kg)	Reporting Limit (ug/kg)
Benzene	71-43-2	ND	5
Toluene	108-88-3	ND	5
Ethylbenzene	100-41-4	ND	5
Xylenes, Total	1330-20-7	ND	5
Purgeable Hydrocarbons as: Gasoline		ND mg/kg	0.2 mg/kg

AEN LAB NO: 0204-BLANK
DATE ANALYZED: 02/04/95

Method Blank

	CAS #	Result (ug/kg)	Reporting Limit (ug/kg)
Benzene	71-43-2	ND	5
Toluene	108-88-3	ND	5
Ethylbenzene	100-41-4	ND	5
Xylenes, Total	1330-20-7	ND	5
Purgeable Hydrocarbons as: Gasoline		ND mg/kg	0.2 mg/kg

QUALITY CONTROL DATA

METHOD: EPA 8020, 5030 GCFID

AEN JOB NO: 9501309
AEN LAB NO: 0206-BLANK
DATE ANALYZED: 02/06/95
MATRIX: SOIL

Method Blank

	CAS #	Result (ug/kg)	Reporting Limit (ug/kg)
Benzene	71-43-2	ND	5
Toluene	108-88-3	ND	5
Ethylbenzene	100-41-4	ND	5
Xylenes, Total	1330-20-7	ND	5
Purgeable Hydrocarbons as: Gasoline		ND mg/kg	0.2 mg/kg

AEN LAB NO: 0207-BLANK
DATE ANALYZED: 02/07/95

Method Blank

	CAS #	Result (ug/kg)	Reporting Limit (ug/kg)
Benzene	71-43-2	ND	5
Toluene	108-88-3	ND	5
Ethylbenzene	100-41-4	ND	5
Xylenes, Total	1330-20-7	ND	5
Purgeable Hydrocarbons as: Gasoline		ND mg/kg	0.2 mg/kg

QUALITY CONTROL DATA

METHOD: EPA 8020, 5030 GCFID

AEN JOB NO: 9501309
INSTRUMENT: E
MATRIX: SOIL

Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Percent Recovery Fluorobenzene
02/06/95	GP-1-10	03	101
02/06/95	GP-1-20	05	102
02/03/95	GP-2-15	08	104
02/07/95	GP-2-20	09	100
02/07/95	GP-3-10	12	100
02/03/95	GP-4-15	18	101
02/04/95	GP-4-20	19	99
02/04/95	GP-3-14	20	103
QC Limits:			92-110

DATE ANALYZED: 02/04/95
SAMPLE SPIKED: 9501321-03
INSTRUMENT: E

Matrix Spike Recovery Summary

Analyte	Spike Added (ug/kg)	Average Percent Recovery	RPD	QC Limits Percent Recovery	QC Limits RPD
Benzene	35.5	98	5	79-113	26
Toluene	100.9	100	8	84-110	20
Hydrocarbons as Gasoline	1000	98	10	60-126	20

*** END OF REPORT ***

ASTM D2850

WATER CONTENT(%), WET & DRY UNIT WEIGHT(PCF)

PROJECT NAME AMERICAN ENVIRONMENTAL NETWORK PROJECT NO. 90C0368A DATE 01/30/95

TESTED BY C. WASON REDUCED BY C. WASON REVIEWED BY C. CAPPS

CLIENT PROJECT I.D. NO.: 9501309/LF 3186.95-08 PAGE 1 OF 1

SPECIMEN NUMBER	DIAM. INCH	HEIGHT CM.	WET WT. GRAMS	DRY WT. GRAMS	VISUAL DESCRIPTION	WATER CONTENT	WET UNIT WEIGHT	DRY UNIT WEIGHT
GP-1-7	1.078	10.4	124.36	98.72	GRAY-BROWN SILTY CLAY W/ TRACES OF F-SAND, BLK SILT	25.97	126.72	100.59
GP-3-7	1.078	10.35	125.40	101.64	GRAY-BROWN SILTY CLAY W/ CALCIUM CARBONATED NOD	23.38	128.39	104.07
GP-4-7	1.078	10.15	122.67	99.45	BROWN SILTY CLAY W/ CALCIUM CARBONATED NOD	23.35	128.07	103.83

Woodward-Clyde

R-5, S-L

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

9501309

Project No.: 3186,95-08	Field Logbook No.:	Date: 1/27/95	Serial No.: No 0885
Project Name: 6085 SCARLETT COURT	Project Location: DUBLIN, CA		
Sampler (Signature): Michael J. Barkett			Samplers: MJB

SAMPLES / ANALYSES

SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	TPH/G EPA-8015	TPH/D EPA-8015	BTEX EPA-8240	GEOTECH ANALYSIS (A)			HOLD	RUSH	REMARKS
GP-1-5	1/25/95		01A	1	SOIL							X		NORMAL TAT
GP-1-7			02A						X					
GP-1-10			03A			X	X	X						* HOLD SAMPLE
GP-1-15			04A									X		
GP-1-20			05A			X	X	X						
GP-2-5			06A									X		(A) GEOTECHNICAL ANALYSIS:
GP-2-10			07A									X		BULK DENSITY
GP-2-15*			08A			X	X	X						TOTAL ORGANIC CARBON
GP-2-20*			09A			X	X	X						MOISTURE CONTENT
GP-3-5			10A									X		~~* INTRINSIC PERMEABILITY~~ DSH
GP-3-7		@ 1215	11A						X					
GP-3-10			12A			X	X	X						* Sleeve size too narrow for
GP-3-15		@ 1232	13A									X		permeability analysis per
~~GP-3-20~~														subcontract lab. — 1/30/95 -
GP-2-7			14A									X		DSH
GP-4-5	↓	@ 1030	15A	↓	↓							X		

RELINQUISHED BY: (Signature) Michael J. Barkett	DATE 1/27/95	TIME 1030	RECEIVED BY: (Signature) OVER YOUR HEAD	DATE 1/27	TIME 1030
RELINQUISHED BY: (Signature) OVER YOUR HEAD	DATE 1/27	TIME 1230	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature) Denise Harrington	DATE 1/27/95	TIME 1230
METHOD OF SHIPMENT: COURIER	DATE 1/22/95	TIME	LAB COMMENTS:		

Sample Collector: LEVINE-FRICKE
3001 Douglas Boulevard, Suite 320
Roseville, California 95661
(916) 786-0320

Analytical Laboratory: APEN
(510) 930-9090

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

FORM NO. 86/COC/ARF

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

9501309

Project No.: 3186.95-08	Field Logbook No.:	Date: 1/27/95	Serial No.: Nº 0886
Project Name: 6085 SCARLETT COURT	Project Location: DUBLIN, CA		
Sampler (Signature): Michael J Ruhl			

SAMPLES						ANALYSES									Samplers: MJR
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	TPH G EPA 8015	TPH D EPA 8015	BTEX	GEOTECH ANALYSIS (A)			HOLD	RUSH	REMARKS
GP-4-7	1/25/95		16A	1	SOIL				X					NORMAL TAT
GP-4-10	↓		17A	↓	↓							*		
GP-4-15	@1359		18A			X	X	X						*HOT SAMPLE
GP-4-20			19A			X	X	X						
GP-1			21A-C	3	H2O	X	X	X						
GP-2 *	↓		22A-C	3	H2O	X	X	X						(A) GEOTECHNICAL ANALYSIS: BULK DENSITY TOTAL ORGANIC CARBON MOISTURE CONTENT ~~INTRINSIC PERMEABILITY~~ DSH see COC # 0885
GP-3-14 ~~(GP-1-14)~~	1/25/95 @1355		20A	1	SOIL	X	X	X						* 1/30 per client - sample GP-4-10 on Hold; sample GP-1-14 to be called GP-3-14 as per COC. -DSH

RELINQUISHED BY: (Signature) Michael J Ruhl	DATE 1/27/95	TIME 1030	RECEIVED BY: (Signature) ODL TAT AEN	DATE 1/27	TIME 1030
RELINQUISHED BY: (Signature) ODL TAT AEN	DATE 1/27	TIME 1330	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature) Denise Harrington	DATE 1/27/95	TIME 1230
METHOD OF SHIPMENT: COURIER	DATE 1/27/95	TIME	LAB COMMENTS:		

Sample Collector: LEVINE-FRICKE
3001 Douglas Boulevard, Suite 320
Roseville, California 95661
(916) 786-0320

Analytical Laboratory: AEN
(510) 930-9090

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

FORM NO. 86/COC/ARF

MJB

American Environmental Network

Certificate of Analysis

DOHS Certification: 1172 AIHA Accreditation: 11134

LEVINE-FRICKE
3001 DOUGLAS BLVD. STE 320
ROSEVILLE, CA 95661

REPORT DATE: 11/29/94
DATE(S) SAMPLED: 11/18/94
DATE RECEIVED: 11/18/94
AEN WORK ORDER: 9411287

ATTN: JAMES LUTTON
CLIENT PROJ. ID: 3186
CLIENT PROJ. NAME: SCARLETT CT.
C.O.C. NUMBER: 0048

PROJECT SUMMARY:

On November 18, 1994, this laboratory received 4 water sample(s).

Client requested samples be composited into one sample and analyzed for organic parameters. Results of analysis are summarized on the following pages.

Please see quality control report for a summary of QC data pertaining to this project.

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

Larry Klein
Laboratory Director

LEVINE-FRICKE

SAMPLE ID: S1,S2,S3,S4
AEN LAB NO: 9411287-01
AEN WORK ORDER: 9411287
CLIENT PROJ. ID: 3186

DATE SAMPLED: 11/18/94
DATE RECEIVED: 11/18/94
REPORT DATE: 11/29/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	220 *	0.5	ug/L	11/21/94
Toluene	108-88-3	60 *	0.5	ug/L	11/21/94
Ethylbenzene	100-41-4	2 *	0.5	ug/L	11/21/94
Xylenes, Total	1330-20-7	100 *	2	ug/L	11/21/94
Purgeable HCs as Gasoline	5030/GCFID	1.1 *	0.05	mg/L	11/21/94

ND = Not detected at or above the reporting limit
* = Value above reporting limit

AEN (CALIFORNIA)
QUALITY CONTROL REPORT

AEN JOB NUMBER: 9411287

CLIENT PROJECT ID: 3186

Quality Control Summary

All laboratory quality control parameters were found to be within established limits.

Definitions

Laboratory Control Sample (LCS)/Method Spike(s): Control samples of known composition. LCS and Method Spike data are used to validate batch analytical results.

Matrix Spike(s): Aliquot of a sample (aqueous or solid) with added quantities of specific compounds and subjected to the entire analytical procedure. Matrix spike and matrix spike duplicate QC data are advisory.

Method Blank: An analytical control consisting of all reagents, internal standards, and surrogate standards carried through the entire analytical process. Used to monitor laboratory background and reagent contamination.

Not Detected (ND): Not detected at or above the reporting limit.

Relative Percent Difference (RPD): An indication of method precision based on duplicate analysis.

Reporting Limit (RL): The lowest concentration routinely determined during laboratory operations. The RL is generally 1 to 10 times the Method Detection Limit (MDL). Reporting limits are matrix, method, and analyte dependent and take into account any dilutions performed as part of the analysis.

Surrogates: Organic compounds which are similar to analytes of interest in chemical behavior, but are not found in environmental samples. Surrogates are added to all blanks, calibration and check standards, samples, and spiked samples. Surrogate recovery is monitored as an indication of acceptable sample preparation and instrumental performance.

D: Surrogates diluted out.

#: Indicates result outside of established laboratory QC limits.

QUALITY CONTROL DATA

METHOD: EPA 8020, 5030 GCFID

AEN JOB NO: 9411287
INSTRUMENT: F
MATRIX: WATER

Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Percent Recovery Fluorobenzene
11/21/94	S1-S4	01	93
QC Limits:			86-110

DATE ANALYZED: 11/21/94
SAMPLE SPIKED: 9411207-11G
INSTRUMENT: F

Matrix Spike Recovery Summary

Analyte	Spike Added (ug/L)	Average Percent Recovery	RPD	QC Limits Percent Recovery	QC Limits RPD
Benzene	19.2	96	4	82-125	15
Toluene	52.2	97	4	75-126	17
Hydrocarbons as Gasoline	500	98	5	75-132	16

*** END OF REPORT ***

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

9411287

Project No.: 3186	Field Logbook No.:	Date: 11/18/94	Serial No.:
Project Name: Scarlett Ct.	Project Location: 6085 Scarlett Ct, Dublin		No 0048
Sampler (Signature):			Samplers: DRS

SAMPLES					ANALYSES								
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 601	EPA 624	TPHg	BTEX		HOLD	RUSH	REMARKS
S1-S4	11/18/94	1410	01A8	8				X	X				• 72 hr TAT • Fax results to James Lutton w/ L.O.F • Composite of 4 samples & containers

RELINQUISHED BY: (Signature)	DATE 11/18/94	TIME 1515	RECEIVED BY: (Signature)	DATE	TIME	
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME	
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature) Denise Harrington	DATE 11/18/94	TIME 1515	
METHOD OF SHIPMENT:	DATE	TIME	LAB COMMENTS:			

Sample Collector:
LEVINE-FRICKE
~~3001 Douglas Boulevard~~, Suite 320
Roseville, California 95661
~~(916) 786-0320~~

Analytical Laboratory:
AEN

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

FORM NO. 86/COC/ARF

JKL

American Environmental Network

Certificate of Analysis

DOHS Certification: 1172 AIHA Accreditation: 11134

LEVINE-FRICKE
3001 DOUGLAS BLVD. STE 320
ROSEVILLE, CA 95661

ATTN: JIM LUTTON
CLIENT PROJ. ID: 3186.94
CLIENT PROJ. NAME: SCARLET COURT
C.O.C. NUMBER: 0813

REPORT DATE: 10/18/94
DATE(S) SAMPLED: 10/04/94
DATE RECEIVED: 10/04/94
AEN WORK ORDER: 9410032

PROJECT SUMMARY:

On October 4, 1994, this laboratory received 1 water sample(s).

Client requested sample(s) be analyzed for organic parameters. Results of analysis are summarized on the following page(s).

Please see quality control report for a summary of QC data pertaining to this project.

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

Larry Klein
Laboratory Director

RECEIVED
OCT 21

LEVINE-FRICKE

SAMPLE ID: W-1
AEN LAB NO: 9410032-01
AEN WORK ORDER: 9410032
CLIENT PROJ. ID: 3186.94

DATE SAMPLED: 10/04/94
DATE RECEIVED: 10/04/94
REPORT DATE: 10/18/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	3 *	0.5	ug/L	10/12/94
Toluene	108-88-3	ND	0.5	ug/L	10/12/94
Ethylbenzene	100-41-4	ND	0.5	ug/L	10/12/94
Xylenes, Total	1330-20-7	ND	2	ug/L	10/12/94
Purgeable HCs as Gasoline	5030/GCFID	ND	0.05	mg/L	10/12/94

ND = Not detected at or above the reporting limit
* = Value above reporting limit

AEN (CALIFORNIA)
QUALITY CONTROL REPORT

AEN JOB NUMBER: 9410032

CLIENT PROJECT ID: 3186.94

Quality Control and Project Summary

All laboratory quality control parameters were found to be within established limits.

Definitions

Laboratory Control Sample (LCS)/Method Spike(s): Control samples of known composition. LCS and Method Spike data are used to validate batch analytical results.

Matrix Spike(s): Aliquot of a sample (aqueous or solid) with added quantities of specific compounds and subjected to the entire analytical procedure. Matrix spike and matrix spike duplicate QC data are advisory.

Method Blank: An analytical control consisting of all reagents, internal standards, and surrogate standards carried through the entire analytical process. Used to monitor laboratory background and reagent contamination.

Not Detected (ND): Not detected at or above the reporting limit.

Relative Percent Difference (RPD): An indication of method precision based on duplicate analysis.

Reporting Limit (RL): The lowest concentration routinely determined during laboratory operations. The RL is generally 1 to 10 times the Method Detection Limit (MDL). Reporting limits are matrix, method, and analyte dependent and take into account any dilutions performed as part of the analysis.

Surrogates: Organic compounds which are similar to analytes of interest in chemical behavior, but are not found in environmental samples. Surrogates are added to all blanks, calibration and check standards, samples, and spiked samples. Surrogate recovery is monitored as an indication of acceptable sample preparation and instrumental performance.

D: Surrogates diluted out.

#: Indicates result outside of established laboratory QC limits.

QUALITY CONTROL DATA

AEN LAB NO: 1012-BLANK
DATE ANALYZED: 10/12/94

BTEX and Hydrocarbons
Method: EPA 8020, 5030 GCFID

	CAS #	Result (ug/L)	Reporting Limit (ug/L)
Benzene	71-43-2	ND	0.5
Toluene	108-88-3	ND	0.5
Ethylbenzene	100-41-4	ND	0.5
Xylenes, Total	1330-20-7	ND	2
Purgeable Hydrocarbons as:			
Gasoline		ND mg/L	0.05 mg/L

QUALITY CONTROL DATA

AEN JOB NO: 9410032
INSTRUMENT: F
MATRIX: WATER

Surrogate Standard Recovery Summary
Method: EPA 8020, 5030 GCFID

Date Analyzed	Client Id.	Lab Id.	Percent Recovery Fluorobenzene
10/12/94	W-1	01	94

Current QC Limits

Surrogate	Percent Recovery
Fluorobenzene	86-110

QUALITY CONTROL DATA

AEN JOB NO: 9410032
DATE ANALYZED: 10/11/94
SAMPLE SPIKED: LCS
INSTRUMENT: F
MATRIX: WATER

Laboratory Control Sample
Method: EPA 8020, 5030 GCFID

Analyte	Spike Added (ug/L)	Percent Recovery	QC Limits Percent Recovery
Benzene	18.5	92	69-108
Toluene	50.4	93	70-106
Hydrocarbons as Gasoline	500	76	69-110

*** END OF REPORT ***

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

AEN 9410032

Project No.: 3186.94	Field Logbook No.:	Date: 10/4/94	Serial No.:
Project Name: Scarlet Court	Project Location: Dublin		No. 0813
Sampler (Signature): Cheryl Chester			Samplers:

SAMPLES						ANALYSES								
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 601	EPA 624	TPHg + BTEX				HOLD	RUSH	REMARKS
W-1	10-4	3:15	01A	1	water			✓						Standard Turn around
W-2 Dup	10-4	3:30	B	1	water							X		
W-3 Dup	10-4	3:45	C	1	water							X		
														Results to Jim Lutton

RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
Cheryl Chester	10/4/94	6:00			
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
			Elaine Harrington	10/4/94	1800
METHOD OF SHIPMENT:	DATE	TIME	LAB COMMENTS:		

Sample Collector:
Cheryl Chester

LEVINE-FRICKE
3001 Douglas Boulevard, Suite 320
Roseville, California 95661
(916) 786-0320

Analytical Laboratory:

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: 11134

LEVINE-FRICKE
3001 DOUGLAS BLVD. STE 320
ROSEVILLE, CA 95661

ATTN: MIKE BOMBARD
CLIENT PROJ. ID: 3186.00
CLIENT PROJ. NAME: SIGNATURE PROP
C.O.C. NUMBER: 0036

REPORT DATE: 06/14/94

DATE(S) SAMPLED: 05/31/94

DATE RECEIVED: 06/01/94

AEN WORK ORDER: 9406006

PROJECT SUMMARY:

On June 1, 1994, this laboratory received 2 water sample(s).

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

Please see quality control report for a summary of QC data pertaining to this project.

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

Larry Klein
Laboratory Director

LEVINE-FRICKE

SAMPLE ID: WS-7
AEN LAB NO: 9406006-01
AEN WORK ORDER: 9406006
CLIENT PROJ. ID: 3186.00

DATE SAMPLED: 05/31/94
DATE RECEIVED: 06/01/94
REPORT DATE: 06/14/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	0.5	ug/L	06/08/94
Toluene	108-88-3	ND	0.5	ug/L	06/08/94
Ethylbenzene	100-41-4	ND	0.5	ug/L	06/08/94
Xylenes, Total	1330-20-7	ND	2	ug/L	06/08/94
Purgeable HCs as Gasoline	5030/GCFID	ND	0.05	mg/L	06/08/94
#Extraction for Diesel/Oil	EPA 3510	-		Extrn Date	06/06/94
TPH as Diesel	GC-FID	ND	0.05	mg/L	06/07/94

ND = Not detected at or above the reporting limit
* = Value above reporting limit

LEVINE-FRICKE

SAMPLE ID: WS-8
AEN LAB NO: 9406006-02
AEN WORK ORDER: 9406006
CLIENT PROJ. ID: 3186.00

DATE SAMPLED: 05/31/94
DATE RECEIVED: 06/01/94
REPORT DATE: 06/14/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	0.5	ug/L	06/08/94
Toluene	108-88-3	ND	0.5	ug/L	06/08/94
Ethylbenzene	100-41-4	ND	0.5	ug/L	06/08/94
Xylenes, Total	1330-20-7	ND	2	ug/L	06/08/94
Purgeable HCs as Gasoline	5030/GCFID	ND	0.05	mg/L	06/08/94
#Extraction for Diesel/Oil	EPA 3510	-		Extrn Date	06/06/94
TPH as Diesel	GC-FID	ND	0.05	mg/L	06/07/94

ND = Not detected at or above the reporting limit
* = Value above reporting limit

AEN (CALIFORNIA)
QUALITY CONTROL REPORT

AEN JOB NUMBER: 9406006

CLIENT PROJECT ID: 3186.00

Quality Control Summary

All laboratory quality control parameters were found to be within established limits.

Definitions

The following abbreviations are found throughout the QC report:

ND = Not Detected at or above the reporting limit
RPD = Relative Percent Difference
< = Less Than

QUALITY CONTROL DATA

DATE EXTRACTED: 06/03/94
DATE ANALYZED: 06/03/94
CLIENT PROJ. ID: 3186.00

AEN JOB NO: 9406006
SAMPLE SPIKED: DI WATER
INSTRUMENT: C

METHOD SPIKE RECOVERY SUMMARY
TPH EXTRACTABLE WATER
METHOD: EPA 3510 GCFID

ANALYTE	Spike Added (mg/L)	Average Percent Recovery	RPD	QC Limits Percent Recovery	QC Limits RPD
Diesel	2.04	92	5	63-109	10

METHOD BLANK RESULT

Lab Id.	Extractable Hydrocarbons as Diesel (mg/L)
060694-METHOD BLANK	ND
Reporting Limit	0.05

QUALITY CONTROL DATA

INSTRUMENT: F

CLIENT PROJ. ID: 3186.00

AEN JOB NO: 9406006
AEN LAB NO: 0608-BLANK
DATE ANALYZED: 06/08/94

BTEX AND HYDROCARBONS
METHOD: EPA 8020, 5030 GCFID
(WATER MATRIX)

	CAS #	CONCENTRATION (ug/L)	REPORTING LIMIT (ug/L)
Benzene	71-43-2	ND	0.5
Toluene	108-88-3	ND	0.5
Ethylbenzene	100-41-4	ND	0.5
Xylenes, Total	1330-20-7	ND	2
PURGEABLE HYDROCARBONS AS:			
Gasoline		ND mg/L	0.05 mg/L

QUALITY CONTROL DATA

CLIENT PROJ. ID: 3186.00

AEN JOB NO: 9406006

INSTRUMENT: F

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

Date Analyzed	SAMPLE IDENTIFICATION Sample Id.	Lab Id.	SURROGATE RECOVERY (PERCENT) Fluorobenzene
06/08/94	WS-7	01	94
06/08/94	WS-8	02	94

CURRENT QC LIMITS

ANALYTE	PERCENT RECOVERY
Fluorobenzene	(70-115)

QUALITY CONTROL DATA

DATE ANALYZED: 06/08/94
SAMPLE SPIKED: 9406041-02
CLIENT PROJ. ID: 3186.00

AEN JOB NO: 9406006
INSTRUMENT: F

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

ANALYTE	Spike Added (ug/L)	Average Percent Recovery	RPD
Benzene	10.0	102	7
Toluene	34.7	112	3
Hydrocarbons as Gasoline	500	119	<1

CURRENT QC LIMITS

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

*** END OF REPORT ***

R-3, S-1

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

9406006

Project No.: 3186.00	Field Logbook No.:	Date: 6-1-94	Serial No.: Nº 0036
Project Name: ~~DUBLIN~~ SIGNATURE PROPERTIES	Project Location: DUBLIN		
Sampler (Signature): Ellen J. Fricke			Samplers: DJF

SAMPLES						ANALYSES								
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 601	EPA 624	TPHD	TPHG	BTEX		HOLD	RUSH	REMARKS
MW-7	5/31/94	1930	01ABC	3	H_2O			✓	✓	✓				NORMAL TAT TO MIKE BOMBARD @ L.F. ROSEVILLE
MW-5	5/31/94	1745	02ABC	3	H_2O			✓	✓	✓				
														No duplicates for TPH-d

RELINQUISHED BY: (Signature) Ellen J. Fricke	DATE 6-1-94	TIME 1100	RECEIVED BY: (Signature)	DATE 6-1-94	TIME 1700
RELINQUISHED BY: (Signature)	DATE 6-1-94	TIME 1745	RECEIVED BY: (Signature) Lori L Pruitt	DATE 6-1-94	TIME 1345
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT:	DATE	TIME	LAB COMMENTS:		

Sample Collector:
LEVINE-FRICKE
3001 Douglas Boulevard, Suite 320
Roseville, California 95661
(916) 786-0320

Analytical Laboratory:
A.E.N. Pleasant Hill, CA.

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

FORM NO. 86/COC/ARF

APPENDIX D

ACDEH SITE INSPECTION FORM

white -env.health
yellow -facility
pink -files

ALAMEDA COUNTY, DEPARTMENT OF ENVIRONMENTAL HEALTH

Hazardous Materials Inspection Form

80 Swan Way, #200
Oakland, CA 94621
(415) 271-4320

II,III

-[illegible]-

Site ID # ____ Site Name [illegible] Today's Date 1/25/94

Site Address 6085 [illegible] Ct

City Dublin Zip 94 Phone ____

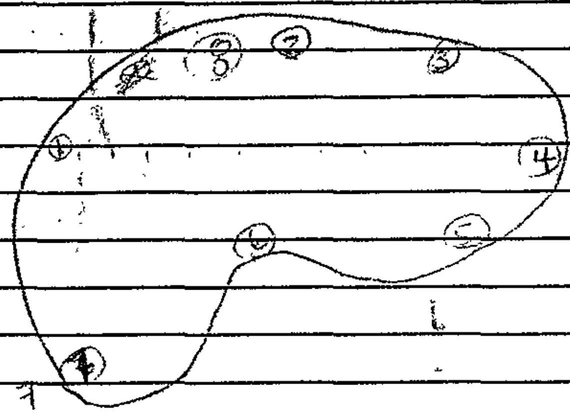
____ MAX AMT stored > 500 lbs, 55 gal., 200 cft.?

Inspection Categories:

____ I. Haz. Mat/Waste GENERATOR/TRANSPORTER
____ II. Business Plans, Acute Hazardous Materials
____ III. Underground Tanks [illegible]

* Calif. Administration Code (CAC) or the Health & Safety Code (HS&C)

Comments:



Soil samples collected at 14-15' depth
(1) stained [illegible] clay - [illegible]
(2) stained green clay - [illegible]
(3) stained green clay - [illegible]
(4) stained green silty clay - [illegible]
(5) brown clay - no odor
(6) stained green clay - [illegible]
(7) stained green clay - [illegible]
(8) at 9.5' [illegible]

Analysis [illegible] TPH-G, BTEX

I.A BUSINESS PLANS (Title 19)

___	1. Immediate Reporting	2703
___	2. Bus. Plan Stds.	25503(b)
___	3. RR Cars > 30 days	25503.7
___	4. Inventory Information	25504(a)
___	5. Inventory Complete	2730
___	6. Emergency Response	25504(b)
___	7. Training	25504(c)
___	8. Deficiency	25505(a)
___	9. Modification	25505(b)

II.B ACUTELY HAZ. MAT'LS

___	10. Registration Form Filed	25533(a)
___	11. Form Complete	25533(b)
___	12. RMPP Contents	25534(c)
___	13. Implement Sch. Req'd? (Y/N)	
___	14. Offsite Conseq. Assess.	25524(c)
___	15. Probable Risk Assessment	25534(d)
___	16. Persons Responsible	25534(g)
___	17. Certification	25534(f)
___	18. Exemption Request? (Y/N)	25536(b)
___	19. Trade Secret Requested?	25538

III. UNDERGROUND TANKS (Title 23)

General

___	1. Permit Application	25284 (H&S)
___	2. Pipeline Leak Detection	25292 (H&S)
___	3. Records Maintenance	2712
___	4. Release Report	2651
___	5. Closure Plans	2670

Monitoring for Existing Tanks

___ 6. Method
1) Monthly Test
2) Daily Vadose
Semi-annual gndwater
One time soils
3) Daily Vadose
One time soils
Annual tank test
4) Monthly Gndwater
One time soils
5) Daily Inventory
Annual tank testing
Cont pipe leak det
Vadose/gndwater mon.
6) Daily Inventory
Annual tank testing
Cont pipe leak det
7) Weekly Tank Gauge
Annual tank tstng
8) Annual Tank Testing
Daily Inventory
9) Other ________

___	7. Precis Tank Test Date: ______	2643
___	8. Inventory Rec.	2644
___	9. Soil Testing.	2646
___	10. Ground Water.	2647

New Tanks

___	11. Monitor Plan	2632
___	12. Access. Secure	2634
___	13. Plans Submit Date: ______	2711
___	14. As Built Date: ______	2635

Rev 6/88

II, III

Contact: [illegible]

Title: [illegible]

Signature: [illegible]

Inspector: [illegible]

Signature: [illegible]

APPENDIX E

ALAMEDA COUNTY FLOOD CONTROL DISTRICT WELL DESTRUCTION PERMIT

ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
5997 PARKSIDE DRIVE • PLEASANTON, CALIFORNIA 94566 • (415) 484-2600

GROUNDWATER PROTECTION ORDINANCE PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

1) CATION OF PROJECT 6085 Scarlett Court
Dublin, California

2) IENT
Name Executive Personnel Defined Benefit Plan
Address 6612 Owens Dr. Phone (510) 463-1152
ty Pleasanton, CA Zip 94588

3) APPLICANT
me Michael Bombard
Levine-Fricke, Inc.
Address 3001 Douglas Blvd, #3__ Phone (916) 786-0320
ty Roseville Zip 95661

4) SCRIPTION OF PROJECT
Water Well Construction ___ Geotechnical
thodic Protection ___ Well Destruction X

5) PROPOSED WATER WELL USE
mestic ___ Industrial ___ Irrigation ___
nicipal ___ Monitoring X Other ___

6) OPOSED CONSTRUCTION
illing Method:
ud Rotary ___ Air Rotary ___ Auger ___
Cable ___ Other ___

WELL PROJECTS
Drill Hole Diameter 8 in. Depth(s) 19.58 ft.
Casing Diameter 2 in. Number
Surface Seal Depth ___ ft. of Wells 1
Driller's License No. ___

GEOTECHNICAL PROJECTS
Number ___
Diameter ___ in. Maximum Depth ___ ft.

7) ESTIMATED STARTING DATE 7/25/94
TIMATED COMPLETION DATE 7/26/94

8) I hereby agree to comply with all requirements of is permit and Alameda County Ordinance No. 73-68.

APPLICANT'S [signature]

FOR OFFICE USE

PERMIT NUMBER 94476
LOCATION NUMBER 3S/1E 6G25

Approved [signature] Wyman Hong Date 13 Aug 94

PERMIT CONDITIONS

Circled Permit Requirements Apply

(A.) GENERAL
1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to proposed starting date.
2. Notify this office (484-2600) at least one day prior to starting work on permitted work and before placing well seals.
3. Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well projects, or bore hole logs and location sketch for geotechnical projects. Permitted work is completed when the last surface seal is placed or the last boring is completed.
4. Permit is void if project not begun within 90 days of approval date.

B. WATER WELLS, INCLUDING PIEZOMETERS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie, or equivalent.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic, irrigation, and monitoring wells unless a lesser depth is specially approved.

C. GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material.

D. CATHODIC. Fill hole above anode zone with concrete placed by tremie, or equivalent.

(E.) WELL DESTRUCTION. See attached.

13 August 1994

ZONE 7
WATER RESOURCES ENGINEERING
DRILLING ORDINANCE

EXECUTIVE PERSONNEL DEFINED BENEFIT PLAN
6085 SCARLETT COURT
DUBLIN
WELL 3S/1E 6G25
PERMIT 94476

Destruction Requirements:

1. Drill out the well so that the casing, seal, and gravel pack are removed to the bottom of the well.

2. Using a tremie pipe, fill the hole to 2 feet below the lower of finished grade or original ground with neat cement.

3. After the seal has set, backfill the remaining hole with compacted material.

These destruction requirements as proposed by Michael Bombard of Levine-Fricke meet or exceed the Zone 7 minimum requirements.

APPENDIX F

DUBLIN SAN RAMON SERVICES DISTRICT WATER DISCHARGE PERMIT

Post-it™ brand Fax Transmittal Memo 7672

To JAMES LUTTON
Company LEVINE FRICKE
Location
Fax # (916) 786-0366 Telephone # (916) 786-0320
Comments

No of Pages 14 Today's Date 11/4/94 Time
From SUE YOUNG
Company DSRSD
Location Dept. Charge
Fax # Telephone # (510) 846-4565
Original Disposition: ☐ Destroy ☑ Return ☐ Call for pickup

(1) JAMES McKEEHAN CANNOT SIGN THE SIGNED PERMIT TO THE DISTRICT ENGINEER DIRECTLY.
(2) ASK J. McKEEHAN TO COME TO THE PLANT & SIGN IT ON MONDAY. AFTER THAT, FERNANDO WILL TRY TO TALK TO THE PLANT MANAGER TO SEEK APPROVAL FOR THE DISCHARGE OF THE GROUNDWATER.
(3) I WON'T BE HERE ON MON & TUE., TALK TO FERNANDO ABOUT THIS PERMIT.

DUBLIN SAN RAMON SERVICES DISTRICT
PRETREATMENT PROGRAM
INDUSTRIAL WASTEWATER DISCHARGE PERMIT

PERMIT# 94015L

Effective Date: November 9, 1994
Expiration Date: December 9, 1994

Permit Fee: $256.00

IN ACCORDANCE WITH ALL TERMS AND CONDITIONS OF THE DUBLIN SAN RAMON SERVICES DISTRICT'S SEWAGE CODE (CHAPTER 7, ARTICLE 3) AND ALSO WITH ANY AND ALL APPLICABLE PROVISIONS OF FEDERAL AND/OR STATE LAWS OR REGULATIONS, PERMISSION IS HEREBY GRANTED TO:

EXECUTIVE PERSONNEL DEFINED BENEFIT PLAN
6612 OWENS DRIVE
PLEASANTON, CA 94588

SIC CLASSIFICATION: 6371 (PENSION, HEALTH, AND WELFARE FUNDS)

FOR THE DISPOSAL OF UP TO 150,000 GALLONS OF GROUNDWATER INTO THE DISTRICT'S COLLECTION SYSTEM CONTAINED IN THE EXCAVATION SITE AT THE SITE ADDRESS OF:

6085 SCARLETT COURT
DUBLIN, CA 94568

DISCHARGER UNDERSTANDS ALL THE CONDITIONS OF THIS PERMIT AND AGREES TO COMPLY WITH THESE CONDITIONS AND THE DISTRICT'S SEWAGE CODE (CHAPTER 7, ARTICLE 3). FAILURE TO COMPLY WITH THE REQUIREMENTS OF THIS PERMIT MAY BE GROUNDS FOR ADMINISTRATIVE ACTION, OR ENFORCEMENT PROCEEDINGS INCLUDING CIVIL OR CRIMINAL PENALTIES, INJUNCTIVE RELIEF, PERMIT REVOCATION AND SUMMARY ABATEMENTS.

IN ADDITION, THE DISCHARGER UNDERSTANDS THAT COMPLIANCE WITH THIS PERMIT DOES NOT RELIEVE THE DISCHARGER FROM COMPLIANCE WITH ANY AND ALL LOCAL, STATE AND FEDERAL PRETREATMENT STANDARDS AND REQUIREMENTS INCLUDING

DUBLIN SAN RAMON SERVICES DISTRICT
PRETREATMENT PROGRAM
INDUSTRIAL WASTEWATER DISCHARGE PERMIT

PERMIT# 94015L

Effective Date: November 9, 1994 Permit Fee: $256.00
Expiration Date: December 9, 1994

IN ACCORDANCE WITH ALL TERMS AND CONDITIONS OF THE DUBLIN SAN RAMON SERVICES DISTRICT'S SEWAGE CODE (CHAPTER 7, ARTICLE 3) AND ALSO WITH ANY AND ALL APPLICABLE PROVISIONS OF FEDERAL AND/OR STATE LAWS OR REGULATIONS, PERMISSION IS HEREBY GRANTED TO:

EXECUTIVE PERSONNEL DEFINED BENEFIT PLAN
6612 OWENS DRIVE
PLEASANTON, CA 94588

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FOR THE DISPOSAL OF UP TO 150,000 GALLONS OF GROUNDWATER INTO THE DISTRICT'S COLLECTION SYSTEM CONTAINED IN THE EXCAVATION SITE AT THE SITE ADDRESS OF:

6085 SCARLETT COURT
DUBLIN, CA 94568

DISCHARGER UNDERSTANDS ALL THE CONDITIONS OF THIS PERMIT AND AGREES TO COMPLY WITH THESE CONDITIONS AND THE DISTRICT'S SEWAGE CODE (CHAPTER 7, ARTICLE 3). FAILURE TO COMPLY WITH THE REQUIREMENTS OF THIS PERMIT MAY BE GROUNDS FOR ADMINISTRATIVE ACTION, OR ENFORCEMENT PROCEEDINGS INCLUDING CIVIL OR CRIMINAL PENALTIES, INJUNCTIVE RELIEF, PERMIT REVOCATION AND SUMMARY ABATEMENTS.

IN ADDITION, THE DISCHARGER UNDERSTANDS THAT COMPLIANCE WITH THIS PERMIT DOES NOT RELIEVE THE DISCHARGER FROM COMPLIANCE WITH ANY AND ALL LOCAL, STATE AND FEDERAL PRETREATMENT STANDARDS AND REQUIREMENTS INCLUDING ANY SUCH STANDARDS OR REQUIREMENTS THAT MAY BECOME EFFECTIVE DURING THE TERM OF THIS PERMIT.

COMPANY OFFICER: _____ _____
JAMES McKEEHAN DATE
TRUSTEE

DISTRICT REPRESENTATIVE:

_____ _____
ROBERT WHITLEY DATE
DISTRICT ENGINEER

revised 11/3/94

PART 1 - FEES AND CHARGES

The Discharger identified on the title page of this Permit is hereby given authorization to discharge the groundwater contained in the excavation site into the sanitary sewer provided that:

a. The Discharger makes payment of sewer service charges in association with the industrial/commercial wastewater discharge. Sewer service charges are based on the flow and strength of the wastewater. The strength of the wastewater is measured by the Biochemical Oxygen Demand (BOD) and the Total Suspended Solids (TSS) analyses.

b. The Discharger makes payment of the fees associated with the administration of this Permit. Fees shall include, but not be limited to, permit fees, inspection fees and sampling & analysis fees. Other fees may apply as a result of escalated enforcement action.

PART 2 - MONITORING REQUIREMENTS

I. DISCHARGE LOCATION AND LIMITATIONS

The discharge location shall be at the manhole in the driveway of 6085 Scarlett Court, Dublin, CA 94568.

The Discharger shall comply with all discharge limitations referenced in Appendix A of this Permit as they apply to any facility discharge which is analyzed by approved methods and/or permit conditions.

The Discharger shall also comply with the prohibited discharges referenced in Chapter 7, Article 3 of the District Code.

II. REPRESENTATIVE SAMPLING

Effluent samples collected for analyses shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring point(s) specified in this Permit and, unless otherwise specified, before the effluent joins or is diluted by any other wastestream, body of water or substance. All equipment used for sampling must be routinely inspected and maintained to ensure their accuracy.

III. SAMPLING AND ANALYSIS

The Discharger shall comply with the following sampling and analysis requirements:

a. Discharger shall be sampled, at a minimum, according to the required sampling frequency outlined in Appendix A.

b. All samples for the pollutants listed in Appendix A of this Permit shall be taken at the designated sampling location(s) referenced in Appendix B of this Permit.

c. All handling, preservation, and holding times of collected samples and laboratory analyses of samples shall be performed in accordance with 40 CFR Part 136 and amendments thereto unless specified otherwise in the monitoring conditions of this Permit. In addition, all samples shall be delivered as soon as possible to the certified laboratory, but never shall the delivery of the samples to the laboratory exceed twenty-four (24) hours from the time the samples were obtained.

d. The laboratory selected to perform the analysis must be certified by the State of California Department of Health Services for wastewater analyses.

IV. VIOLATIONS

If the results of any wastewater analysis performed by, or at the direction of, the Discharger indicates that a violation of this Permit has occurred, the Discharger shall:

a. Immediately halt the wastewater discharge entering the sanitary sewer; and

b. Inform the District of the violation within 24 hours of becoming aware of the violation.

PART 3 - REPORTING REQUIREMENTS

I. MONITORING REPORTS

If the Discharger monitors any pollutant more frequently than required by this Permit, using test procedures prescribed in 40 CFR 136 or amendments thereto, or otherwise approved by EPA or as specified in this Permit, the results of such monitoring shall be submitted within 45 days of the monitoring date to the District to determine compliance with all discharge limits as referenced in Appendix A. The monitoring results shall be submitted with the Signatory Requirement referenced in Part 4 Section IX of this Permit. Also, these monitoring results shall be included in the calculations to determine if and when the Discharger is in "Significant Noncompliance".

II. ACCIDENTAL DISCHARGE REPORT

The Discharger shall notify the District immediately, **by telephone**, upon becoming aware of the occurrence of any accidental discharge of substances prohibited by this Permit or the District Code or of any slug discharges or spills that may enter the sanitary sewer. The Discharger shall call the following telephone number to notify the District of such discharges:

(510) 846-4565 (24 hours a day)

The telephone message must include the following information:

a. Business name, contact person, and telephone number.
b. Location and time of discharge.
c. Composition of the waste including hazardous properties.
d. Concentration and volume.

e. Immediate corrective actions taken.
f. Any other information deemed relevant.

Within five (5) days following the accidental discharge the Discharger shall submit to the District a detailed written report. The report shall provide the following information:

a. Description and cause of the upset, slug load or accidental discharge. The description should also include location of discharge, composition, concentration and volume of waste.

b. Duration of noncompliance, including exact dates and times of noncompliance and, if the noncompliance is continuing, the time by which compliance is reasonably expected to occur.

c. All steps taken or to be taken to reduce, eliminate, and/or prevent recurrence of such an upset, slug load, accidental discharge, or other conditions of noncompliance.

d. Any information deemed relevant.

It shall be the responsibility of the Discharger to notify the District of any unusual discharge whether or not the Discharger is aware of any possible impact to the District's facilities or operations.

The Discharger's notification to the District of accidental discharges does not relieve the Discharger of other reporting requirements in accordance with local, state, or federal laws.

III. SUMMARY REPORT

The Discharger shall submit a summary report to the District documenting certain activities which occurred during the duration of the groundwater discharge. The report shall be due at the District office within thirty (30) days from the conclusion of the groundwater discharge and shall include the following:

a. A record of calibration performed on the pump that is used to pump the groundwater into the sanitary sewer. The calibration shall be performed upon the commencement of the discharge.

b. A pump operation log documenting the volume of groundwater discharged to the sanitary sewer during the discharge period, and the corresponding flow rate, dates and times of the pump operation.

c. The original laboratory results for the groundwater as required in Part 2 Section III of this Permit.

d. The submission, by an authorized representative, of the Signatory Requirement referenced in Part 4, Section IX, of this Permit.

All reports required by this Permit shall be submitted to Dublin San Ramon Services District at the following address:

7399 Johnson Drive
Pleasanton, CA 94588
ATTENTION: Industrial Waste Section

PART 4 - STANDARD CONDITIONS

I. INSPECTION AND ENTRY

The Discharger shall grant the District staff or authorized representatives entrance to the permitted facility for the purposes of inspection and sampling at all reasonable times. The inspection shall include the examination of all files pertaining to the requirements contained within this Permit and the District's Pretreatment code and/or the examination of all sources of industrial wastewater discharge.

In addition, the Discharger shall inform District staff of the facility's safety procedures and requirements including the use of personal protective equipment.

II. DILUTION

The Discharger shall not increase the use of potable or process water or, in any way, attempt to dilute an effluent as a partial or complete substitute for adequate treatment to achieve compliance with the limitations contained in this Permit, any National Pretreatment Standards, or any other wastewater effluent limitation developed by the District or State.

III. FACILITY MODIFICATION/CHANGES

The Discharger shall notify the District at least 30 days prior to any facility expansion, production increase, or process modification which results in new or substantially increased discharges or a change in the nature of the wastewater discharge.

Furthermore, the Discharger **shall obtain prior approval from the District** before discharging any new wastewaters, wastewaters which have substantially increased in volume, and/or wastewaters that have changed in nature.

IV. HAZARDOUS AND NON-SEWERABLE WASTES

Solids, sludge, filter backwash, non-sewerable wastewater, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in accordance with all applicable state, federal and local laws. Spent chemical solutions, and any toxic or hazardous wastes shall be either disposed of at an authorized site by a properly licensed hazardous waste hauler, or recycled by a properly licensed recycler. No discharge of untreated spent chemical solutions and/or hazardous wastes to the public sewer is permitted.

V. SPILL PROTECTION

The Discharger shall provide adequate protection including, but not limited to, secondary containment for all hazardous chemicals, hazardous waste and non-sewerable wastes which are stored in areas where potential spills could reach the facility's floor drains.

VI. RECORDS/LOGS

The Discharger shall maintain logs and records of all data pertaining to the operations and maintenance duties implemented for the purpose of achieving compliance with this Permit. Such documentation shall include, but not be limited to, records/logs for calibrations, spent chemical bath solutions, flow data, water usage data, chemical dose rates, routine maintenance of equipment, routine treatment process checks, analyses and process changes, as they pertain to the process wastewaters discharged from the facility.

VII. RECORDS RETENTION

The Discharger shall retain all records pertaining to the requirements set forth in this Permit including, but not limited to, effluent sampling and analysis data, reports, calibration and maintenance records, logs, and all original strip chart recordings for continuous monitoring instruments and receipts for off-haul of hazardous and non-sewerable wastes for a period of three (3) years.

These records shall be made available to officials of the EPA, State and the District or their authorized representatives.

In addition, all records pertaining to any investigation or enforcement action brought by the EPA, State or the District shall be retained for a minimum of three (3) years from the date of the conclusion of the investigation or enforcement action.

VIII. PERMIT MODIFICATIONS

The District reserves the right to revise this Permit if deemed necessary to comply with objectives presented in the District Code. No revision of the limitations or requirements hereunder shall subject the District to civil liability or penalty for interference with a vested right of the Discharger. This Permit may be modified only by the District.

IX. SIGNATORY REQUIREMENTS

All applications, reports, or information submitted to the District must contain the following certification statement followed by the signature and title of the officer representing the Discharger and the date the document was signed:

> "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant

penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

X. CONFIDENTIALITY

The Discharger may request that documents submitted to the District which may disclose restricted information or restricted processes be kept confidential and not be available to the public. However, these documents shall be available upon request to other governmental agencies in affiliation with the EPA pretreatment program and/or the National Pollutant Discharge Elimination System (NPDES). In addition, these documents shall be made available in enforcement procedures by the District, federal and/or the State or state agency implicating the Discharger.

Pretreatment records such as reports, questionnaires/permit applications, permits, inspection reports, violation notices, enforcement actions, wastewater flow and effluent data shall not be considered confidential.

XI. TRANSFERABILITY

This Industrial Wastewater Discharge Permit is non-transferable and valid only to the industry and owner to whom it is originally issued. Transfer of ownership, changes to industrial processes, or a significant change of wastewater quality shall void the Permit.

XII. ENFORCEMENT

Sections 7.3.37 and 7.3.38 of the District Code provides that any Discharger who violates a permit condition is subject to a civil penalties not to exceed Six Thousand Dollars ($6,000) for each day of such violations. Any person who willfully or negligently violates permit conditions is subject to criminal penalties of a fine not to exceed Five Hundred Dollars ($500) per day of violation, or by imprisonment in the county jail not to exceed six (6) months, or both. The Discharger may also be subject to sanctions under State and/or Federal law.

In addition to civil and criminal liability, the Discharger violating any of the provisions of this Permit or Chapter 7 of the District Code or causing damage to or otherwise inhibiting the District's wastewater disposal system shall be liable to the District for any expense, loss, or damage caused by such violation or discharge. The District shall bill the Discharger for the costs incurred by the District for any cleaning, repair, or replacement work caused by the violation or discharge. Refusal to pay the assessed costs shall constitute a separate violation of section 7.3.32 of the District Code.

XIII. DUTY TO REAPPLY

If the activities regulated by this Permit are planned, or anticipated, to be continued after the expiration date of this Permit, the Discharger shall submit a written request for the issuance of a new permit at least thirty (30) days prior to the expiration date of this Permit.

XIV. ANNUAL PUBLICATION

As required by the Federal Pretreatment Regulations (40 CFR 403.(f)(2)(vii)) the District will comply with the public participation requirements of 40 CFR part 25. Subsequently, any industrial/commercial user determined to be in "Significant Noncompliance" with applicable pretreatment requirements at any time during the last twelve (12) months shall be published in the largest newspaper circulated in the District's service area. Appendix C defines the criteria used to determine "Significant Noncompliance".

APPENDIX A

DISCHARGE LIMITATIONS

APPENDIX A

DISCHARGER NAME: Executive Personnel Defined Benefit Plan

The tables below lists the maximum concentrations allowed to be discharged into the sanitary sewer per the District Code and federal regulations.

The last column indicates the required sampling frequency. "--" indicates that these pollutants are not sampled on a routine basis. However, this does not relieve the Discharger from also complying with these limits. The District reserves the right to sample for any local limit pollutant.

I. Groundwater from the excavation site

POLLUTANT	LOCAL LIMIT mg/l	FEDERAL LIMIT		SAMPLE TYPE	REQUIRED SAMPLING FREQUENCY
		DAILY MAX mg/l	MONTHLY AVG mg/l		
ARSENIC	1.0	NA	NA	G	--
CADMIUM	1.0	0.11	0.07	G	--
CHROMIUM	5.0	2.77	1.71	G	--
COPPER	10.0	3.38	2.07	G	--
LEAD	2.0	0.69	0.43	G	--
MERCURY	0.5	NA	NA	G	--
NICKEL	5.0	3.98	2.38	G	--
SILVER	2.0	0.43	0.24	G	--
ZINC	10.0	2.61	1.48	G	--
CYANIDE	1.0	1.20	0.65	G	--
PHENOLS	5.0	NA	NA	G	--
T.I.C.H (608)	0.02	NA	NA	G	--
PCBs (608)	0.01	NA	NA	G	--
T.T.O. (624/625)	NA	2.13	NA	G	--
FLUORIDE	5.0	NA	NA	G	--
OIL/GREASE	200	NA	NA	G	--
TPH-GAS & TPH-DIESEL	15.0	NA	NA	G	1/week
EPA 602 (BTEX)	1.00	NA	NA	G	1/week
B.O.D.	NA	NA	NA	G	--
C.O.D.	NA	NA	NA	G	--
T.S.S.	NA	NA	NA	G	--
pH	MIN. 6.0* MAX. 11.0*	NA NA	NA NA	G	--

C = COMPOSITE
* = pH units
TPH = TOTAL PETROLEUM HYDROCARBONS
G = GRAB
NA = NOT APPLICABLE

APPENDIX B

SAMPLING LOCATION(S)

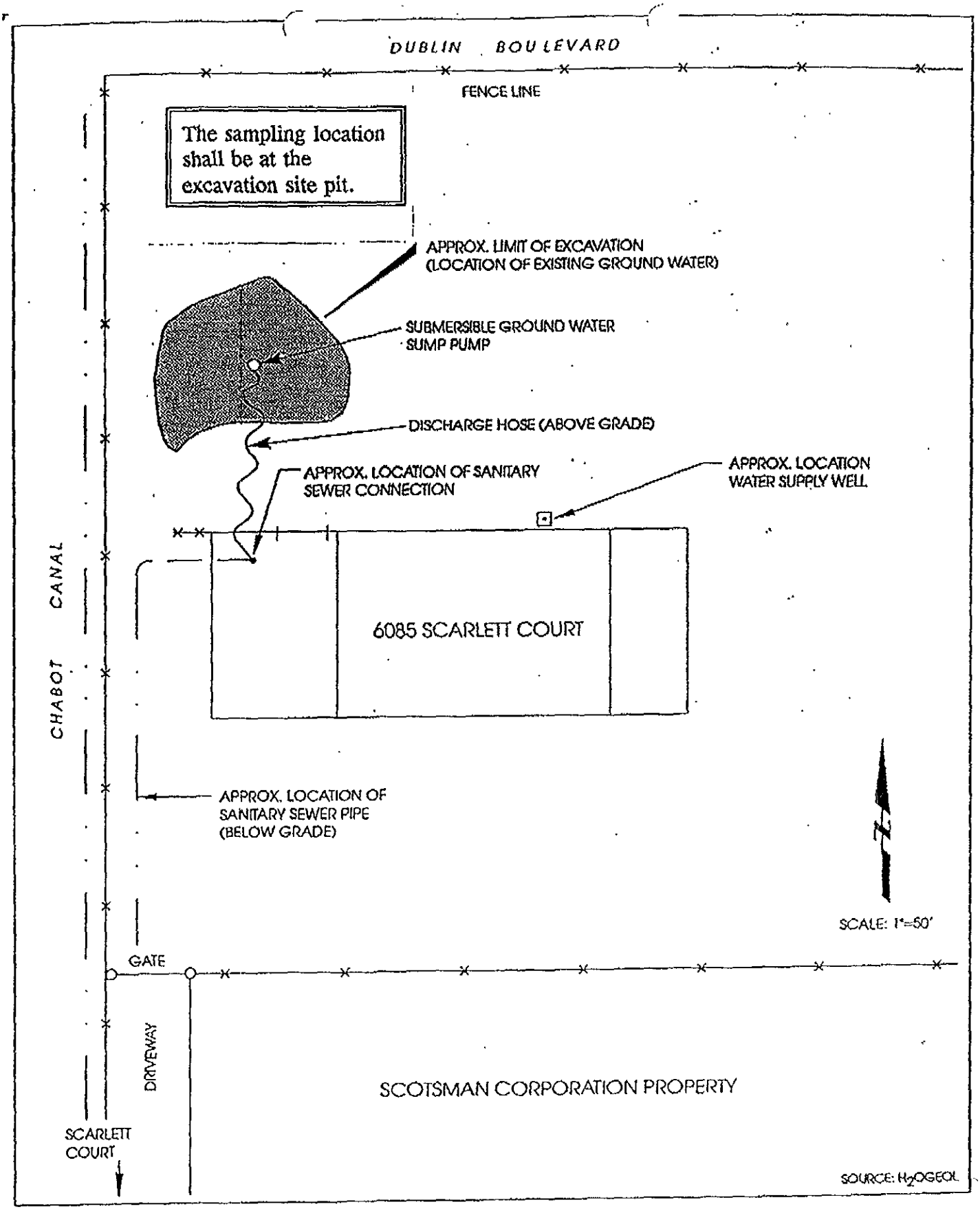


Figure 2 : SITE PLAN

APPENDIX C

SIGNIFICANT NONCOMPLIANCE

SIGNIFICANT NONCOMPLIANCE

Instances of Significant Noncompliance (SNC) are industrial user violations which meet one or more of the following criteria:

1. Violations of the wastewater discharge limits.

   a. Chronic violations. Sixty-six percent or more of the measurements which exceed (any magnitude of exceedance) the daily maximum limit or the average limit during a 6-month period for the same pollutant parameter.

   b. Technical Review Criteria (TRC) violations. Thirty-three percent or more of the measurements, for the same pollutant, which exceed the product of the daily maximum limit or the average limit multiplied by the applicable TRC, during a 6-month period.

   There are two groups of TRC's:

Group I for conventional pollutants (BOD, TSS, fats, oil and grease)	TRC	=	1.4
Group II for all other pollutant	TRC	=	1.2

   c. Any other violation(s) of an effluent limit (average or daily maximum) that the District believes has caused, alone or in combination with other discharges, interference (e.g., slug loads) or pass-through; or endangered the health of the sewage treatment personnel or the public.

   d. Any discharge of a pollutant that has caused imminent endangerment to human health/welfare or to the environment and has resulted in the District's exercise of its emergency authority to halt or prevent such a discharge.

2. Failure to meet, within 90 days after the compliance date, compliance schedule milestones contained in a permit or enforcement order for starting construction, completing construction, or attaining final compliance.

3. Failure to provide reports for compliance schedules, self-monitoring data, or categorical standards (baseline monitoring reports, 90-day compliance reports, and periodic reports) within 30 days from the due date.

4. Failure to accurately report noncompliance.

5. Any other violation or group of violations that the District considers to be significant.

APPENDIX G

STATISTICAL ANALYSIS FOR STOCKPILE SOIL SAMPLING

Appendix G

Equations Used in Statistical Calculations

Mean of measurements generated by previously collected sample ($\bar{x}$)

$$\bar{x}=\frac{\sum_{i=1}^{n}}{n}$$

Variance of sample population (s^2)

$$s^2=\frac{\sum_{i=1}^{n} x_i^2-(\sum_{i=1}^{n} x_i)^2/n}{n-1}$$

Appropriate number of samples to collect from the soil stockpile (n)

$$n=\frac{t_{.20}^2 s^2}{\Delta^2} \qquad With \Delta = RT-\bar{x}$$

Source: USEPA SW-846 Volume II, Table 9-1

Assumptions:

1) Concentrations reported as being below analytical detection limits are taken as having a concentration of 1/2 the detection limit.

2) The regulatory threshold (RT) for benzene in the soil stockpile is 2.5 ppm. This level represents approximately 5 times the RCRA regulatory level for a leachate from TCLP extraction and thus represents a conservative assumption.

Statistical Analysis of Soil Sample Concentrations Data for Benzene
6085 Scarlett Court, Dublin, California
LF 3186.95

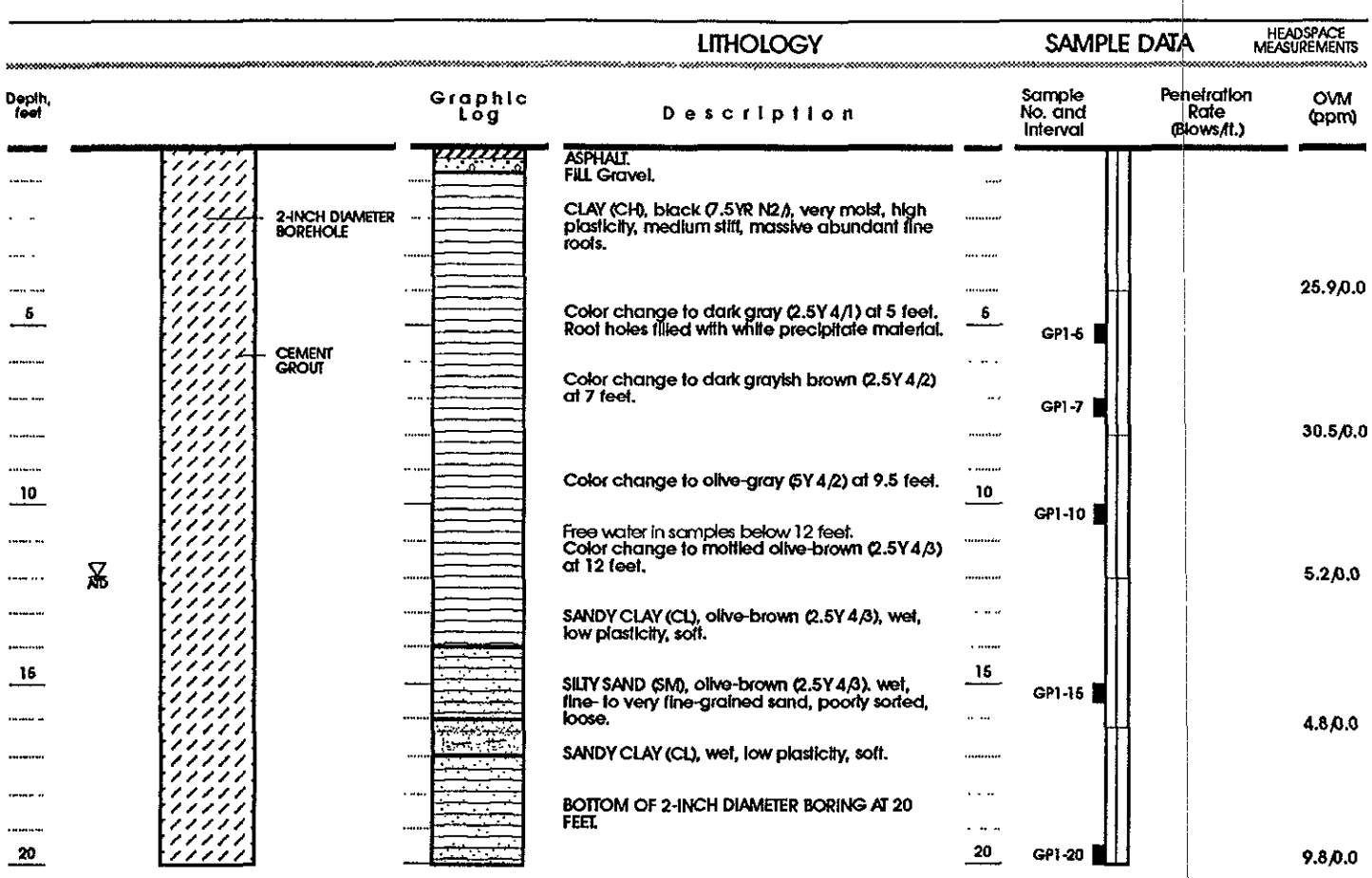
Sample Number	Date	Benzene Concentration (ppb)	
SS-1	30-Jan-95	2.5	*
SS-3	30-Jan-95	2.5	*
SS-4	30-Jan-95	15	*
SS-6	30-Jan-95	2.5	*
SS-8	30-Jan-95	2.5	*
SS-9	30-Jan-95	2.5	*
SS-10	30-Jan-95	15	*
SS-12	30-Jan-95	2.5	*
SS-17	30-Jan-95	15	*
SS-18	30-Jan-95	5	*
SS-20	30-Jan-95	2.5	*
SS-23	30-Jan-95	2.5	*
SS-26	30-Jan-95	710	
SS-27	30-Jan-95	25	*
SS-29	30-Jan-95	2.5	*
SS-31	30-Jan-95	5	*
SS-32	30-Jan-95	2.5	*
SS-33	30-Jan-95	2.5	*
SS-37	30-Jan-95	2.5	*
SS-38	30-Jan-95	2.5	*
SS-40	30-Jan-95	2.5	*
SS-42	30-Jan-95	2.5	*

sum of concentrations	827.5
number of samples _	22
average of values (x)	37.61
variance of values (s)	22591.36
t.20 (12 degrees of freedom)	1.356
regulatory threshold (RT)	2500
standard deviation (s)	150.30
Number of samples to be collected (n)	0

Notes
* : 1/2 the analytical detection limit was used for samples where benzene was not detected

APPENDIX H

LITHOLOGIC AND WELL CONSTRUCTION LOGS



Date boring drilled: January 25, 1995
Drilling Company: Vironex
Driller: Todd
Sampling method: Continuous Core - Geoprobe
Geologist: Michael Bombard

EXPLANATION

Clay
Silt
Sand
Gravel

Interval sampled using Geoprobe Sampler
Sample collected for possible analysis
AD Depth first water was encountered in borehole
OVM 25.9/0.0 = Sample/Ambient

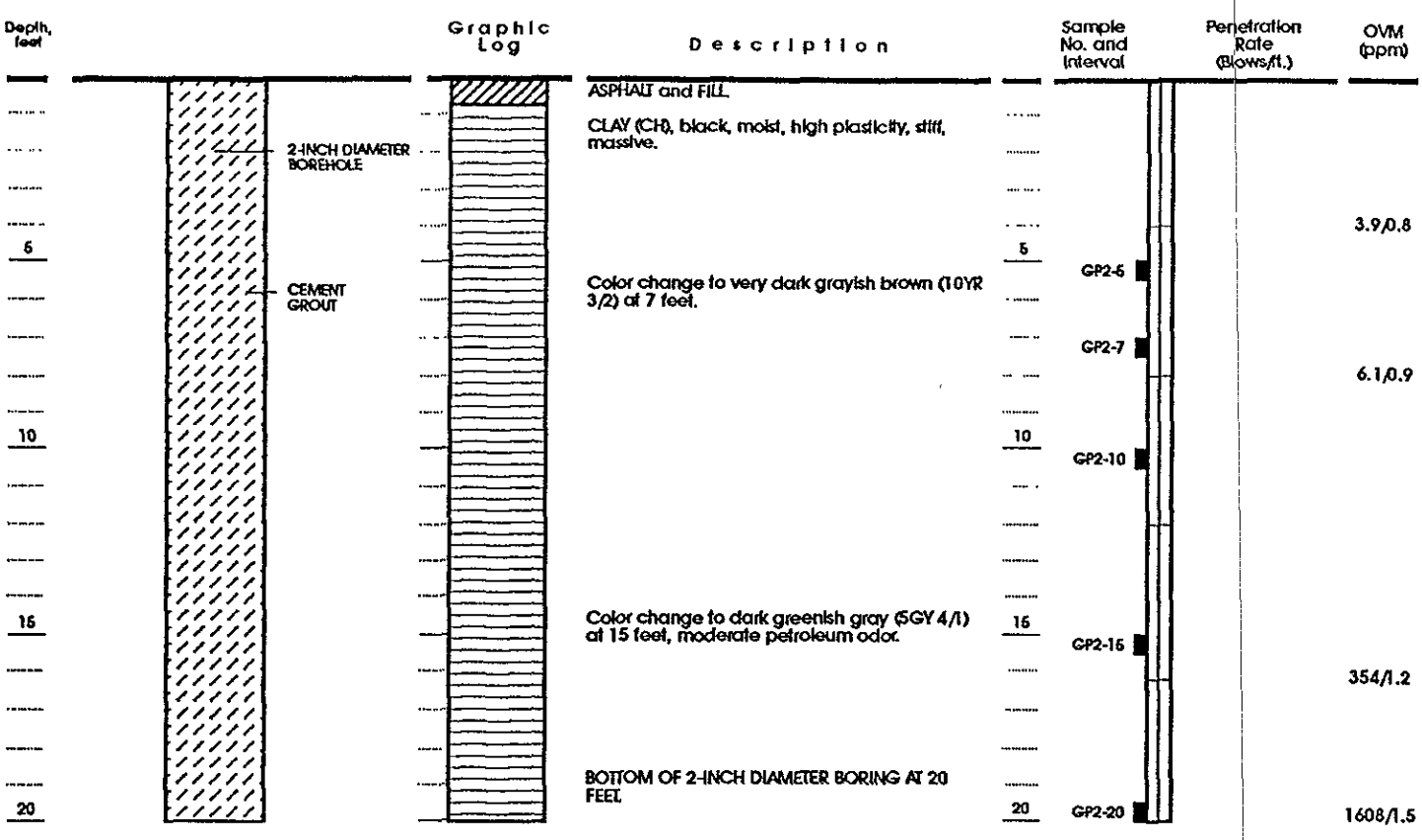
Approved by:

Figure : LITHOLOGY AND SAMPLE DATA FOR SOIL BORING GP-1

Project No. 3186.95
6085 Scarlett Court, Dublin

LEVINE•FRICKE
ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

3186.95-10.MJB:JSC 072495 GP-1



EXPLANATION

Clay

Silt

Sand

Gravel

Interval sampled using Geoprobe Sampler

Sample collected for possible analysis

OVM 3.9/0.8 = Sample/Ambient

Date boring drilled: January 25, 1995
Drilling Company: Vironex
Driller: Todd
Sampling method: Continuous Core - Geoprobe
Geologist: Michael Bombard

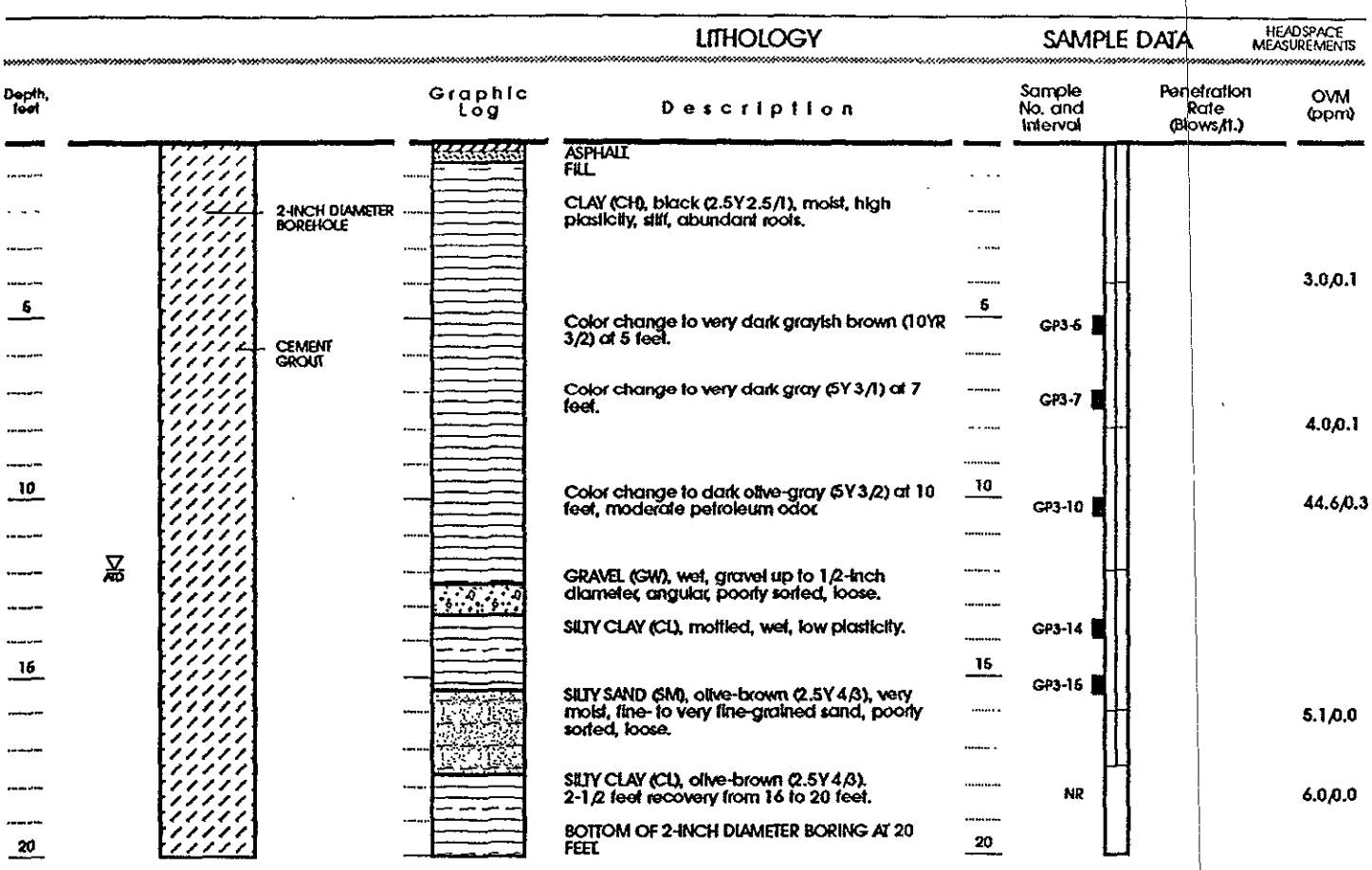
Approved by:

Figure : LITHOLOGY AND SAMPLE DATA FOR SOIL BORING GP-2

Project No. 3186.95
6085 Scarlett Court, Dublin

LEVINE•FRICKE
ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

3186.95-10.MJB:JSC 072196 GP-2



EXPLANATION

Clay

Silt

Sand

Gravel

Interval sampled using Geoprobe Sampler

Sample collected for possible analysis

ATD Depth first water was encountered in borehole

NR No Recovery

OVM 3.0/0.1 = Sample/Ambient

Date boring drilled: January 25, 1995
Drilling Company: Vironex
Driller: Todd
Sampling method: Continuous Core - Geoprobe
Geologist: Michael Bombard

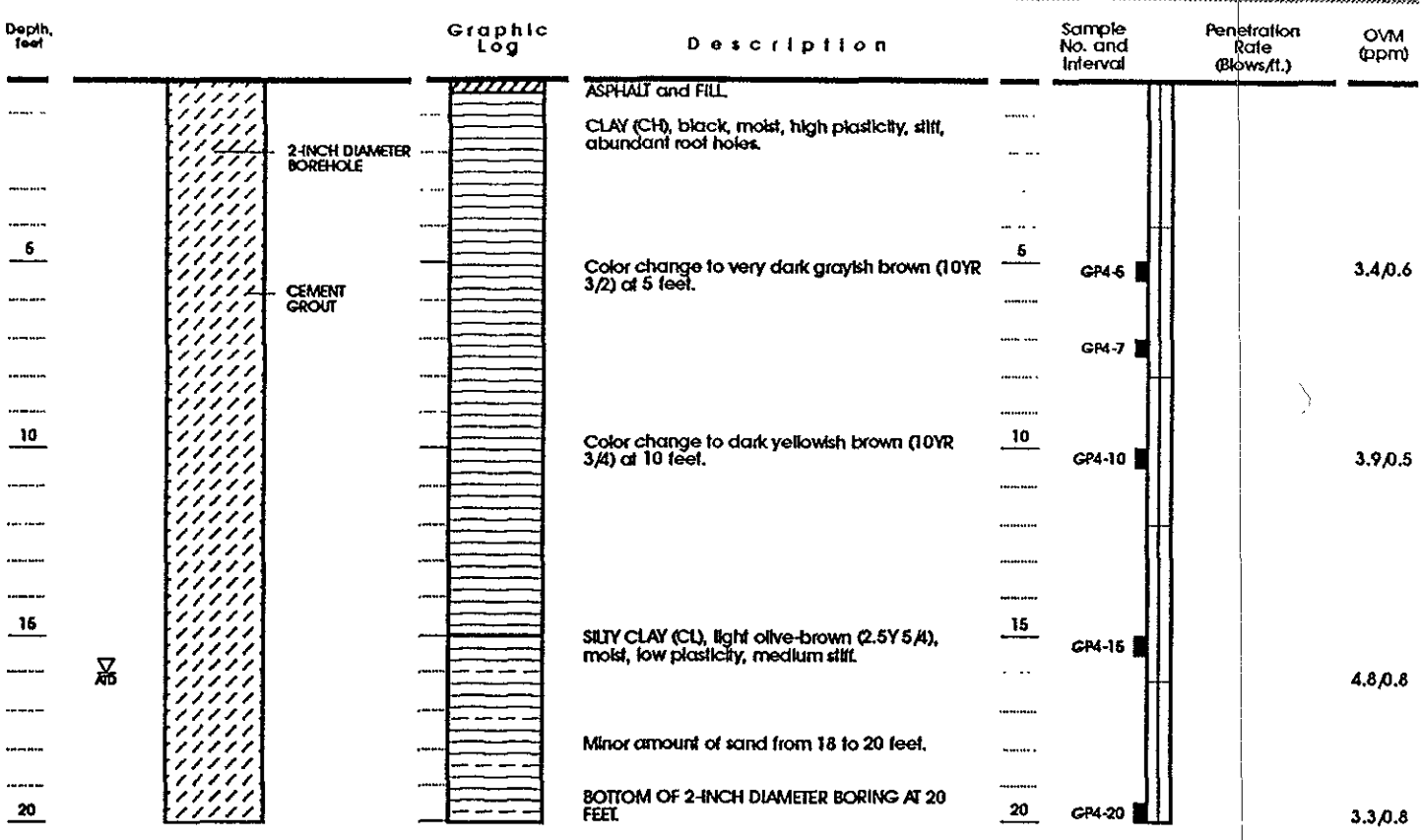
Approved by:

Figure : LITHOLOGY AND SAMPLE DATA FOR SOIL BORING GP-3

Project No. 3186.95
6085 Scarlett Court, Dublin

LEVINE•FRICKE
ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

3186.96-10.MJB:JSC 072196 GP3



EXPLANATION

- Clay
- Silt
- Sand
- Gravel

Interval sampled using Geoprobe Sampler

Sample collected for possible analysis

AD Depth first water was encountered in borehole

OVM 3.4/0.6 = Sample/Ambient

Date boring drilled: January 25, 1995
Drilling Company: Vironex
Driller: Todd
Sampling method: Continuous Core - Geoprobe
Geologist: Michael Bombard

Approved by:

Figure : LITHOLOGY AND SAMPLE DATA FOR SOIL BORING GP-4

Project No. 3186.95
6085 Scarlett Court, Dublin

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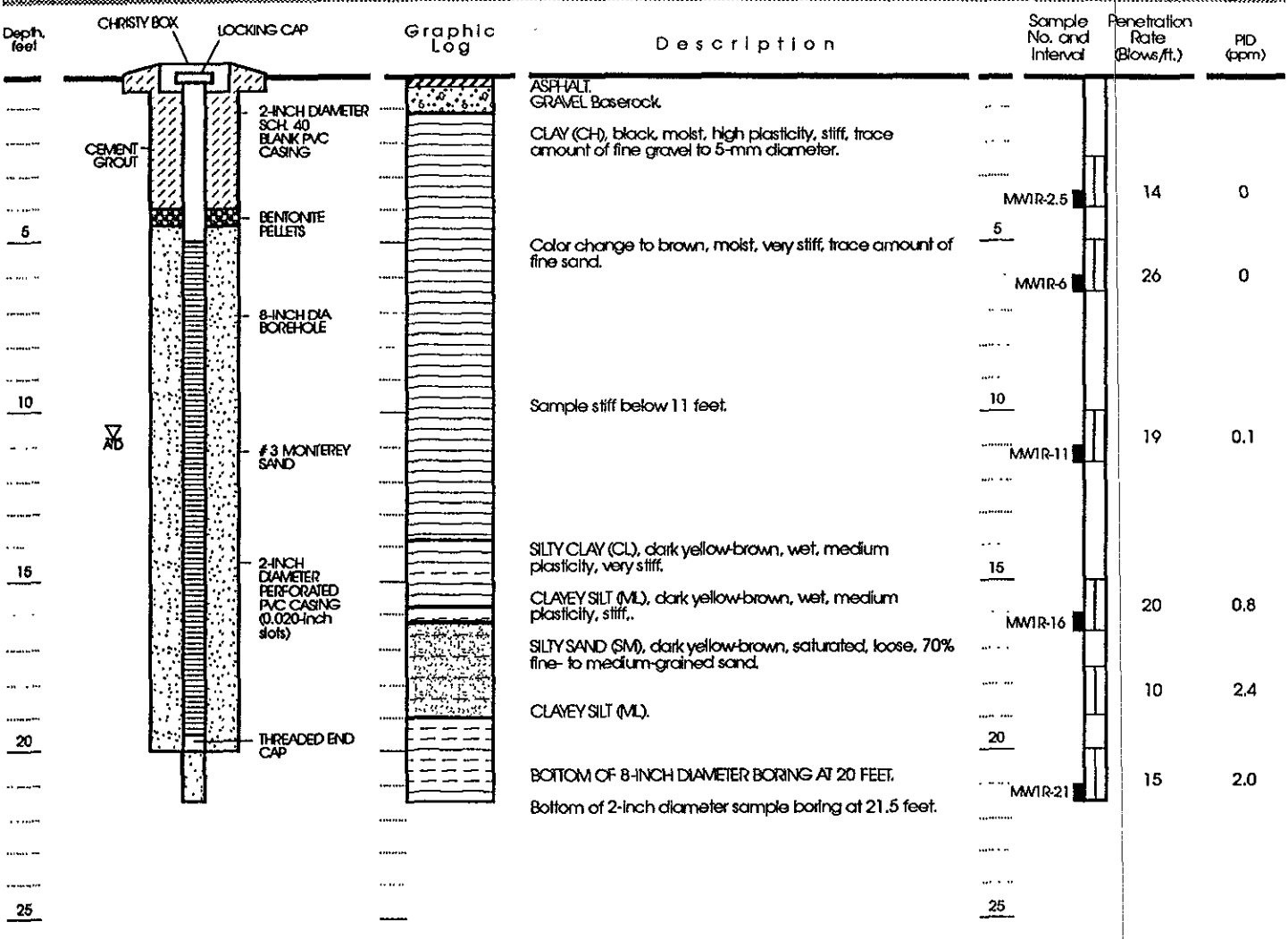
ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

3186.95-10.MJB:JSC 072195 GP-4



Permit No.: 95037
Drilling method: Hollow Stem Auger
Date well drilled: January 30, 1995
Date water level measured: February 1, 1995
Drilling company: Gregg Drilling
LF Geologist: Robin Barber

Approved by:

EXPLANATION

- Clay
- Silt
- Sand
- Gravel
- Modified California Sampler
- Sample retained for chemical analysis
- ATD — Depth first water was encountered in borehole

Figure : WELL CONSTRUCTION AND LITHOLOGY FOR WELL MW-1R

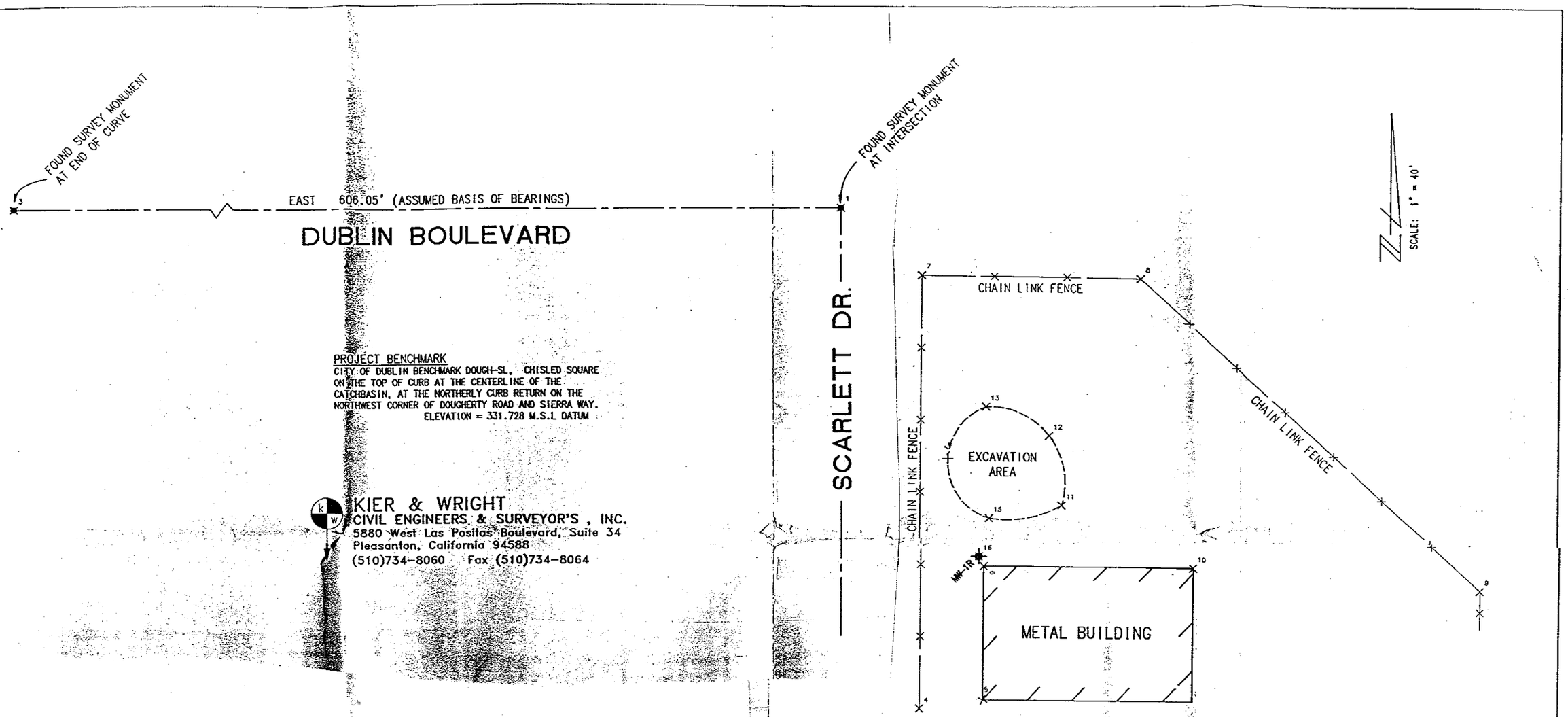
Project No. 3186.95
6085 Scarlett Court, Dublin

LEVINE•FRICKE
ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

3086.95-10.MJB:JSC 072195 MW1R

APPENDIX I

SURVEYOR'S REPORT



KIER & WRIGHT
CIVIL ENGINEERS & SURVEYOR'S , INC.
5880 West Las Positas Boulevard, Suite 34
Pleasanton, California 94588
(510)734-8060 Fax (510)734-8064

MONITORING WELL AND EXCAVATION SURVEY
FOR
LEVINE-FRICKE
6085 SCARLETT CT
DUBLIN CALIFORNIA

TABLE OF ELEVATIONS AND COORDINATES

POINT	NORTH	EAST	DESCRIPTOR	ELEV
1	5000.0000	5000.0000	FND SURVEY MON	335.51 TOP OF MON BOX (TBM)
3	4999.9971	4393.9496	FND SURVEY MON	0.00
4	4700.4265	5050.0030	FENCE	0.00
5	4705.8883	5088.7913	BLDG COR	0.00
6	4786.1479	5088.7749	BLDG COR	0.00
7	4959.5169	5050.5892	FENCE	0.00
8	4958.5123	5183.5517	FENCE	0.00
9	4773.9596	5390.1580	FENCE	0.00
10	4785.9125	5215.6040	BLDG COR	0.00
11	4822.5438	5137.1427	EDGE OF PIT	330.1 GROUND SURFACE
12	4864.1016	5129.1708	EDGE OF PIT	329.9 GROUND SURFACE
13	4881.1269	5090.4114	EDGE OF PIT	330.2 GROUND SURFACE
14	4849.9019	5067.2059	EDGE OF PIT	331.4 GROUND SURFACE
15	4814.3586	5092.7260	EDGE OF PIT	330.2 GROUND SURFACE
16	4791.9336	5085.6219	MON WELL MW-1R	330.58 CHISLED X ON NORTH RIM OF BOX 330.91 CUT X ON TOP NORTH SIDE OF PVC CASING

SURVEY DATE: 2-1-95
JOB NO.: 95506
DRAWING FILE: Z:\DRAW\95506.DWG